Preface

This report is partly the result of a three-month internship in Willemstad, Curaçao, where I did qualitative research on sustainable tourism for the Department of Environment and Nature of the ministry of Public Health and Social Development of the Netherlands Antilles. Additional literature research and the final report were finished in the Netherlands upon my return from Curaçao. During the four months in total that I spent on Curaçao, I learned many things about the issues and subjects that had to do with the subject of this report, but I also learned many things about many other subjects that did not. All in all, it was an amazing experience.

For this, I would like to thank the people that have made this experience possible. My first supervisor Anne Jelle Schilstra of IVEM who has helped me from the start to find an institution and supervisor on Curacao where I could do my research; Bart van Geleuken my supervisor on Curaçao; Tim van den Brink of the BPM (Bedrijven Platvorm Milieu); the other members of the BPM; my second supervisor Henk Moll of IVEM; and of course all my family members, friends, and loved ones who have helped and supported me along the way.
# Table of contents

1 Introduction...................................................................................................................... 9  
2 Methods.......................................................................................................................... 11  
3 Literature analysis ........................................................................................................ 13  
   3.1 Problems concerning tourism ................................................................................. 13  
   3.2 Theories on the impacts of tourism ....................................................................... 16  
   3.3 Sustainable tourism ............................................................................................... 20  
   3.4 Eco-certificates ....................................................................................................... 24  
4 Case study: Curaçao ....................................................................................................... 35  
   4.1 Research .................................................................................................................. 37  
   4.2 Methods ................................................................................................................... 38  
   4.3 Results ..................................................................................................................... 40  
   4.4 Bottlenecks and solutions ....................................................................................... 42  
   4.5 Conclusions ............................................................................................................. 45  
5 Discussion ...................................................................................................................... 47  
   5.1 Impacts of tourism .................................................................................................. 47  
   5.2 Sustainable tourism and eco-certificates ................................................................. 51  
6 Conclusions .................................................................................................................... 57  
   6.1 Sustainable tourism ................................................................................................. 57  
   6.2 Eco-certificates ....................................................................................................... 58  
   6.3 Problems concerning tourism ................................................................................ 59  
   6.4 Applicability of eco-certificates ............................................................................. 60  
   6.5 Contributions of eco-certificates .......................................................................... 61  
7 Recommendations .......................................................................................................... 63  
8 References ...................................................................................................................... 65  
9 Appendices ..................................................................................................................... 71  
   Appendix A ................................................................................................................... 73  
   Appendix B ................................................................................................................... 103  
   Appendix C ................................................................................................................... 127  
   Appendix D ................................................................................................................... 139
Summary

Many developing countries depend to a certain degree on their tourism industry for their economic development. The development and survival of the tourism industry in turn, depends for a large part on the environment and the culture at the destination, because these ‘assets’ of a destination draw tourists. However, tourism often has negative effects on precisely these assets of tourism destinations. Sustainable tourism is described as a means to keep the necessary economic benefits of tourism, without the ultimately possibly destructive harms to the environmental and cultural assets of the destination (in this research we also call something ‘sustainable’ if it brings the goal of achieving sustainability in the end closer, e.g. using solar cells). Eco-certificates could possibly contribute to sustainable tourism. However, the applicability of eco-certificates in general to achieve sustainable tourism is under debate, and possible contributions of different eco-certificates may vary. Their effectiveness can depend on several factors ranging from their scope and focus to the type of country in which they are applied; opinions vary on whether developing countries could use eco-certificates achieve sustainability, because of their specific situations and problems. Our main research question for this study is therefore: “To what extent and how can eco-certificates contribute to sustainable tourism in developing countries?” To answer this question we did a literature analysis about the various impacts and problems associated with tourism, eco-certificates, and the specific benefits and problems associated with the use of eco-certificates in developing countries. In addition to this, we also used a case study to help answer the main research question. This case study was based on research we did on the island of Curaçao, which is part of the Netherlands Antilles (N.A.), a developing country in the southern Caribbean. This research explored the possibilities to use environmental standards and criteria (for water consumption, energy consumption, waste and wastewater) from eco-certificates, to set environmental standards to achieve sustainable tourism in the N. A., and the possible role of the government of the N. A. in this. The main part of the field research on Curaçao (which had a qualitative nature) consisted of interviews on the island. Respondents at ten hotels were asked questions about the hotels’ plans for an eco-certificate. The opinions of respondents on environmental issues and the possible role of the government were also asked, as well as questions about the hotels’ present environmentally friendly concerning the subjects: energy, water, waste, and wastewater. In addition to these interviews several other stakeholders in tourism were interviewed. From the literature analysis and the case study we concluded that some of the main problems concerning tourism in developing countries are social/cultural and environmental degradation, free riding behaviour and overuse of resources, leakages of tourism earnings, a lack of linkages with the rest of the economy leading to low multiplier effects, foreign employment, and possibly above all: a lack of (environmental) awareness. To find out which eco-certificates could be suitable to contribute to sustainable tourism we analyzed several different eco-certificates. Based on their characteristics (e.g. the type and content of standards, performance criteria, and evaluation) we concluded that Green Seal and ISO 14001 are less suitable than Green Globe 21, Green Key and the European Ecolabel. We also concluded that eco-certificates can have a role to play, although membership of eco-certificates should increase for them to have a significant impact, and issues like e.g. the lack of consumer awareness and consumer demand, combined with the local people’s lack of awareness and several problems that are inherent to developing countries, are currently standing in the way of an increase in members. The educational function of eco-certificates including their possibilities for increasing environmental awareness; the incentive they give tourism businesses to keep improving their performance; and the possibilities for increased communication between tourism businesses, are some of the main possible contributions of eco-certificates to sustainable tourism. All in all, we can deduce from this study that sustainable tourism can not be achieved by using eco-certificates without the backup of legal environmental standards (and their enforcement), or
government intervention. Without the actual implementation and adoption of eco-certificates by a larger share of tourism businesses, their potential to achieve sustainable tourism currently mainly exists on paper and not in reality. On the other hand, if eco-certificates can contribute even a little to a more sustainable tourism sector in developing destinations like Curaçao, where environmental awareness and thinking about sustainable development is only in its infancy, this is arguably an important achievement in itself.

1 “A form of tourism (development) that balances the economic, ecological and social-cultural needs of the people in the destination countries, without jeopardizing the needs of future generations” (The Dutch Guide to Sustainable Tourism, 2003).
2 “voluntary instruments to improve the environmental, social and economic performance of tourism companies” (UNEP, 2006)
Samenvatting

Veel ontwikkelingslanden zijn economisch gezien tot op zekere hoogte afhankelijk van toerisme. De ontwikkeling en het overleven van de toeristische sector in toeristische bestemmingen is op zijn beurt weer voor een groot deel afhankelijk van de cultuur en de natuur op de bestemming. Juist deze ‘attracties’ van bestemmingen trekken namelijk toeristen. Toerisme heeft echter juist vaak negatieve effecten op dit soort ‘toeristische attracties’. ‘Duurzaam toerisme’ is beschreven als een oplossing hiervoor die de economische voordelen van toerisme in stand houdt en ondertussen geen schade berokkent aan de natuur en cultuur van de toeristische bestemming. Eco-keurmerken zouden een bijdrage kunnen leveren aan het bewerkstelligen van duurzaam toerisme. Er zijn echter verschillende meningen over hoe bruikbaar eco-keurmerken zijn om duurzaam toerisme te bevorderen. Bovendien kunnen de bijdragen van verschillende eco-keurmerken onderling verschillen. De effectiviteit van een eco-keurmerk hangt af van een aantal factoren, variërend van de focus van de verschillende keurmerken, tot het soort land waar ze worden ingezet: de meningen verschillen over de vraag of eco-keurmerken überhaupt gebruikt kunnen worden om duurzaam toerisme te bevorderen in ontwikkelingslanden, vanwege de specifieke situatie en problemen in dit soort landen. Onze hoofdvraag is dan ook: In hoeverre en op welke manieren kunnen eco-keurmerken een bijdrage leveren aan duurzaam toerisme in ontwikkelingslanden? Om antwoord te kunnen geven op deze vraag hebben we literatuur geanalyseerd over de impacts en problemen die geassocieerd worden met toerisme, over eco-keurmerken en over de specifieke voordelen en nadelen die een rol spelen bij het gebruik van eco-keurmerken in ontwikkelingslanden. In aanvulling hierop hebben we ook een casus geanalyseerd om onze hoofdvraag te beantwoorden. Deze casus was gebaseerd op een onderzoek dat gedaan is op het eiland Curaçao, een onderdeel van de Nederlandse Antillen (N.A.); een ontwikkelingsland in de zuidelijke Cariben. In dit onderzoek werden mogelijkheden onderzocht om milieu standaarden en criteria (m.b.t. de onderwerpen water en energiegebruik, afval en afvalwater) uit eco-keurmerken te gebruiken om wettelijke standaarden vast te stellen, met als doel het bevorderen van duurzaam toerisme. Ook de mogelijke rol van de overheid van de N.A. hierin was onderzocht. Het belangrijkste deel van het onderzoek op Curaçao bestond uit interviews die waren afgenomen bij tien hotels op het eiland. Respondenten waren gevraagd om vragen te beantwoorden over het eventuele eco-keurmerk van het hotel of de plannen van het hotel om wel of niet te streven naar een eco-keurmerk. Ook werd respondenten gevraagd naar hun mening over milieu zaken en de mogelijke rol van de overheid. Verder werd er gevraagd naar de implementaties die de hotels al gedaan hadden op milieu gebied, vooral m.b.t. energie en water besparing, afval, en afvalwater. In aanvulling op deze interviews werden ook nog andere partijen met belang in toerisme geïnterviewd. Uit de literatuur en de casus studie werd de conclusie getrokken dat er een aantal belangrijke problemen zijn m.b.t. toerisme in ontwikkelingslanden: degradatie van natuur en cultuur; ‘free riding’ en het overmatig gebruik van hulpbronnen; het ‘weglekkeren’ van de verdiensten van toerisme; een gebrek aan verbindingen met de lokale economie waardoor er lage ‘multipliereffecten’ zijn; ‘foreign employment’, en vooral: een gebrek aan milieu bewustzijn. Om te zien welke eco-keurmerken geschikt zouden kunnen zijn om duurzaam toerisme te bevorderen hebben we enkele eco-keurmerken geanalyseerd. Onze conclusie, die gebaseerd was op verschillende karakteristieken van de keurmerken (bijvoorbeeld het type en de inhoud van de keurmerkstandaarden, de criteria voor prestaties, en de manier van evaluatie) was dat Green Seal en ISO 14001 minder geschikt waren om duurzaam toerisme te bevorderen dan Green Globe 21, Green Key en het Europese Eco-keurmerk. Een andere conclusie was dat er wel een rol weggelegd kan zijn voor eco-keurmerken, maar dat het aantal leden dan wel een stuk groter zou moeten worden, om te zorgen voor een significante impact. Zaken als het gebrek aan bewustzijn (en de vraag) van consumenten, gecombineerd met het
gebrek aan bewustzijn van de lokale bevolking en een aantal andere problemen die typisch zijn voor ontwikkelingslanden, staan op dit moment een vermeerdering van het aantal leden in de weg. De onderwijsfunctie van eco-keurmerken; hun mogelijkheden om het milieubewustzijn te vergroten evenals de aanmoediging die ze geven aan toeristische ondernemingen om hun prestaties te blijven verbeteren, en de mogelijkheden om communicatie tussen stakeholders te vergroten, zijn een aantal van de belangrijkste bijdragen die eco-keurmerken kunnen leveren aan duurzaam toerisme. Al met al kunnen we uit dit onderzoek afleiden dat aan de ene kant duurzaam toerisme niet kan worden bereikt met alleen maar vrijwillige middelen, zoals eco-keurmerken, zonder de inmengingen van de overheid en zonder wettelijke standaarden vast te stellen. Als eco-keurmerken namelijk niet meer leden krijgen dan ze nu hebben, bestaan hun potentiële positieve bijdragen aan duurzaam toerisme alleen op papier, en niet in de realiteit. Maar aan de andere kant is onze mening dat als eco-keurmerken zelfs maar een beetje kunnen bijdragen aan het bevorderen van duurzaam toerisme in ontwikkelingslanden zoals Curaçao, landen waar het denken over duurzaamheid nog in de kinderschoenen staat, dit ook al een belangrijke prestatie zou zijn.
1. Introduction

Tourism, “the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes” (UN/WTO 1994, p. 5), is one of the largest and fastest growing economic sectors in the world (UN report Cancun, 2002; Hunter, 2002). It is also said to be the largest source of foreign exchange earnings (Neto, 2003). Some even claim that travel and tourism is now the world’s largest industry (Synergy for WWF-UK, 2000).

Because of its economic benefits, tourism has become an important source of foreign exchange and economic growth for many developing countries (Brohman, 1996; Sasidharam, Sirakaya, Kerstetter, 2002), especially in small island states (Neto, 2003) and in the Caribbean region (Holder, 1988; Dixon, Hamilton, Pagiola, Segnestam, 2001).

Although tourism has once been described as “an industry without smoke stacks” (Sustainable Tourism Stewardship Council, 2003) it is now widely recognized that it can also have serious downsides and negative effects for the destination (e.g. Holder, 1988; Cater, 1995; Briassoulis and van der Straaten, 2000; Synergy, 2000; Dixon et al. 2001; Hughes, 2002; Neto, 2003; Lim and McAleer, 2005; Tsaur, Lin and Lin, 2006).

The development and survival of tourism depends for a large part on the availability of attractive natural and man-made resources (Briassoulis and van der Straaten, 2000), or more briefly, the environment and the culture at the destination. It is those resources for which people go through trouble and expense to travel from home and often do the same things they could do at home, or closer to home (Holder, 1988). Especially the environment is considered by many to be tourism’s main resource and a major pull factor of tourist movements (Holder, 1988; Lim and McAleer, 2005). However, tourism often has negative effects on both environment and culture; there are several theories on how and why this can happen (e.g. Holder, 1988; Healy, 1994; Butler, 1998; Briassoulis, 2002).

For the last decades, since the publication of Our Common Future in 1987, the term ‘sustainable development’ ("Development that meets the needs of the present without compromising the ability of future generations to meet their own needs", WCED, 1987) has been used more and more, and ‘sustainability’ is mentioned as the answer to many environmental, economic, and social problems (e.g. WCED, 1987; Briassoulis and van der Straaten, 2000; Synergy, 2000; Buckley, 2002). Sustainable tourism can be seen as a segment of the broader idea of sustainable development and as a means to keep the economic benefits of tourism, without the harms to the environment and culture at the destination. There are however many different (and sometimes contradicting) theories on how to define, achieve, and measure sustainable tourism (e.g. Hodge, 1997; Briassoulis and van der Straaten, 2000; Synergy, 2000; Dixon et al., 2001; Hunter, 2002; Ko, 2005; Yaw, 2005).

One possible way described in literature toward achieving sustainability for tourism is by using eco-labels (Synergy, 2000; Toth, 2000; Font & Tribe, 2001; Dixon et al., 2001; Buckley, 2002; Font, 2002; Sustainable Tourism Stewardship Council, 2003). A label gives a description of something, for example a tourism product, to provide information to a (potential) purchaser or user (Buckley, 2002). Eco-labels or eco-certificates are voluntary instruments that are supposed to tell something to the consumers concerning the environment (Lee, 2001). They can be broadly divided into two categories: those that give information about the environmental quality at the destination, and those that give information about the environmental performance of a business (Buckley, 2001). The United Nations Environment Programme describes eco-certificates for tourism as: “voluntary instruments to improve the environmental, social and economic performance of tourism companies” (UNEP, 2006). The means by which eco-certificate programs aim to do this varies (Synergy, 2000; Font & Tribe, 2001; Buckley, 2002; Font, 2002). For
example, some programs require certain environmental standards to be met, while others require continuous improvement and the implementation of an environmental management system (Synergy, 2000; Font & Tribe, 2001; Buckley, 2002). The effectiveness of eco-certificates depends for an important part on consumer demand: when consumers choose certified products, tourism businesses are encouraged to apply for an eco-certificate (Synergy, 2000; Font & Tribe, 2001; Font, 2003). A problem is the plethora of these eco-certificates for tourism: in 2002 there were over a hundred (Font, 2002). Different certificates operate differently and have different standards. Some may therefore contribute more to sustainable tourism than others. In addition to this, the applicability of eco-certificates in general to achieve sustainable tourism is also much debated (Synergy, 2000; Toth, 2000; Font & Tribe, 2001; Dixon et al., 2001; Buckley, 2002; Font, 2002; Sustainable Tourism Stewardship Council, 2003). Even if the adoption of eco-certificates would contribute to sustainability in developed countries, whether they are also applicable to developing countries is still a concern (Sasidharam et al., 2002), as some studies suggest that certifications programs may be best suited for those countries with “Well-established infrastructures and the finances to support industry to reduce its negative impacts” (Font, 2003). Since many developing countries depend on tourism for their long-term economic development and survival, and therefore need their tourism industry to be (literally) sustainable, the main research question of this research is the following:

To what extent and how can eco-certificates contribute to sustainable tourism in developing countries?

To study a topic as large and diverse as tourism in an in-depth manner, system boundaries are indispensable. For example, is tourism a viable (or sustainable) option at all, if we look at it from an environmentalist point of view? The answer would be open to debate and depends on the point of view that is taken. In this study we specifically look at tourism destinations. In many destination countries, especially those in developing regions, tourism cannot be missed as an economic activity. The option to forsake tourism altogether is not realistic for these countries, not in the foreseeable future at least. Because of the focus on destinations we will also not look deeply into matters concerning travel. Especially air-travel is often regarded as an unsustainable activity, but many developing countries do not have other options. Sustainable development is defined after all as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Developing countries ‘need’ the tourists and the tourists need transport. In this study the discussion about whether or not tourism at a destination can be sustainable will therefore not include discussions about no-tourism options or issues about the journey to the destination. In the subsequent paragraphs some additional system boundaries will also be defined and explained.
2. Methods

To answer this research question an elaborate literature analysis will be given on the relevant issues. In this literature study the various environmental and social impacts and problems associated with tourism, and different theories on how and why these impacts and problems occur will be discussed. An elaborate analysis of different theories and definitions on sustainable tourism, and a description of relevant literature on eco-certificates, on differences between the certifying programs, their scope, standards, and assessments of their supposed potential to work toward sustainable tourism, will also be given. There will also be a focus on literature about specific problems and issues concerning the subjects mentioned above, that are important for developing countries in particular.

Besides a literature study, a case study will be used to help answer the main research question. This case study is based on research done on and about the island Curaçao of the Netherlands Antilles. It included besides a literature study also various interviews done with stakeholders in the tourism sector on Curaçao, including ten hotels and resorts on the island. The methods used for the case study will be elaborated in the description of the case study.
3. Literature analysis

3.1 Problems concerning tourism

Tourism is an increasingly important source of income and employment in many countries (UN report Cancun, 2002; Hunter, 2002). While domestic tourism basically involves a regional redistribution of wealth, international tourism is now said to be the largest source of foreign exchange earnings (Neto, 2003). It contributes about 10% to the total GDP globally (World Travel & Tourism Council, 2006) and accounts for larger share in export earnings than any other industry (UN report Cancun, 2002). Today, tourism is no longer pursued solely by the privileged of the industrialized countries, but considered a right and necessity for all people (Briassoulis and van der Straaten, 2000). International tourist arrivals increased from 25.3 million in 1950 to 443.5 million in 1990, while tourism spending increased from $2.1 billion to $254.8 billion over the same period (World Tourism Organization, 1989, 1993; Brohman, 1996). Some say that even if only modest predictions of tourism growth are achieved the industry will also double in size over the next decade (Synergy, 2000). All in all, tourism can generate direct and indirect economic benefits, in both countries of origin and the countries of destination, in the form of income, employment and economic activity (Briassoulis and van der Straaten, 2000).

However, there can also be a downside to tourism. Tourism has inevitable and often negative effects on the environment and society/culture of the destination (Holder, 1988; Briassoulis and van der Straaten, 2000; Lim and McAleer, 2005; Northcote and Macbeth, 2005). The main negative effects of tourism on the environment are: pressure on natural resources, pollution and waste generation, and damage to ecosystems (Neto, in: UN report Cancun, 2002; Neto, 2003). Pressures on natural resources include the high demand on energy and freshwater resources associated with tourism (Dixon et al., 2001) and the demand for building materials, food (e.g. fresh seafood; Holder, 1988) and other consumer goods. Pollution and waste generation can be divided into three categories: solid waste, liquid waste (including waste-water) and emissions. These waste streams are not caused by tourism activities exclusively, of course. However, in the Caribbean for example, tourists have been estimated to generate twice as much solid waste per capita as local residents per unit of time (Dixon et al., 2001). Solid waste that is not disposed of properly can have serious environmental effects, but liquid waste (with oil pollution as an unpleasant example) and untreated wastewater that ends up in the environment, can have an even larger impact, especially in coastal areas, where it may lead to damage of the coral reefs for example. Emissions (including greenhouse gasses) can cause air pollution and haze (Holder, 1988; Dixon et al., 2001; Neto, 2003). Damage to ecosystem can occur when tourism developments are built in environmentally sensitive areas, or by deforestation and erosion because of tourism development. The construction of artificial beaches and sand mining, for example, can have major effects on the coastal ecosystems (Dixon et al., 2001; Neto, 2003). Ecological damage can also result from the sum of many small effects, none of which appears to be serious by itself. In the Caribbean, a common example is the combined impact on coral reefs from various recreational users (Dixon et al., 2001). Besides these effects, noise and visual impacts, e.g. a large hotel in a formerly unspoiled scenery but also ‘light pollution’ at night (Mohonk Agreement, 2000), are also mentioned as negative environmental effects of tourism (Lim and McAleer, 2005).

Negative socio-cultural effects include the (perceived) loss of control and social identity in the host countries (Brohman, 1996; Mohonk Agreement, 2000) caused for example by changes in the character of villages, the loss of local skills, changes in attitudes to sex, race, personal relationships, drugs and crime, and changes in consumption patterns (Holder, 1988). Other problems are induced settlement in tourism areas without the infrastructure to support it, changes in land prices due to tourism development, changes in accessibility of certain places (e.g. national
parks and private beaches), congestion or over-crowding (Holder, 1988), and the inequitable distribution of the costs and benefits of tourism (Brohman, 1996; Synergy, 2000). In some cases spatial polarization occurs, resulting in resort enclaves in the most desirable coastal and agricultural locations. All this can create a perception among the local residents that they take second place to the tourists in a competition for services et cetera (Holder, 1988). O’Reilly (1986) also mentions as a potential risk that the carrying capacity of a destination, i.e. the ability to absorb tourist functions without squeezing out desirable local activities, may be overstepped because of tourism developments.

Since the main subject of this research is tourism in developing countries, it is self-evident that the consequences of tourism (development) in developing countries are explored in some more dept. Developing countries can be very attractive for tourism because they can have some comparative advantages over developed countries, for example low wages and prices, beautiful unspoiled scenery, and a warm climate (Brohman, 1996). Most of the general effects of tourism we described above also play a role in developing countries, but there are some specific and additional issues that deserve some attention. Tourism can have some positive effects in developing countries. For example, it is the only service sector in which developing countries have consistently registered trade surpluses in comparison to the rest of the world (Neto, 2003). It can also contribute to economic diversification. Many developing countries still depend on a few traditional exports because they lack possibilities for rapid industrialization (Brohman, 1996). In addition to this, tourism is an important source of employment, because it is a quite labor-intensive industry, and suitable for unskilled labor. Especially women and part-time workers can find an occupation in tourism, and it can therefore contribute to alleviating poverty and empowering women (Neto, 2003). Another observation by Neto (2003) is that tourism in developing countries is often accompanied by modern infrastructure developments that do not only benefit the tourists but also the local populations.

However, there are also a number of downsides to tourism that are specifically relevant for developing countries. These downsides include for example the risk of foreign domination and dependency because of high rates of foreign ownership (Brohman, 1996). Local businesses and governments in developing countries often do not have the financial means to invest in the tourism industry, so they have no choice but to leave projects in the hands of foreign investors. An important problem associated with this is the so-called ‘leakage’ of tourism earnings (Brohman, 1996; Neto, 2003). The profits of tourism may ‘leak’ abroad, for example because of foreign ownership of tourism services (e.g. international hotel chains, or travel agencies), but also because of imports of consumer (luxury) goods and products that tourists demand but that are not manufactured in the host countries. The leakages to imports of e.g. foodstuffs can be aggravated if other parts of the local economy, especially agriculture, are underdeveloped or neglected (Brohman, 1996). Tourism needs products from other business sectors, and one of the reasons for the relatively large leakages that are typical for developing countries can be the lack of so called ‘linkages’. Broadly based development that spreads the benefits of growth, e.g. the raising of living standards, can only take place if there are linkages between the other sectors of the economy (like agriculture for example) and the tourism industry (Brohman, 1996). Most tourism sectors in the developed world are much better linked to their local economies than those in developing countries. Tourism sectors in the developed world consequently have significantly lower leakages. The internationally (foreign) owned tourism establishments in developing countries often have relatively few linkages with the local economy. These establishments are characterized by higher leakages because of this, and because of their relatively high percentage of foreign employment, especially in higher (management) functions. This is one of the reasons that Brohman (1996) states that “The apparent advantage of higher revenues offered by concentrated, foreign-controlled mass tourism over more dispersed, smaller-scale, and locally owned tourism alternatives may be illusory”. Small, locally owned hotels for example can
sometimes be more successful in generating local income, and local employment than larger, internationally owned hotel chains, and they also have lower leakages.

One of the effects these high leakages is that tourism in developing countries can have a relatively weak local multiplier effect (Brohman, 1996). The notion behind multiplier effects is that the expenses on tourism facilities -the economic input- should lead to an increased need for infrastructure, consumer goods and other tourist facilities and products -the economic output-. In the end the increased returns because of the spin off effects should be larger than the initial expenses, thus creating a multiplier effect (Frechtling and Horvath, 1999). Linkages allow the revenues of tourism to circulate through the domestic economy, producing larger multiplier effects in terms of both employment and income for the local population. However, if there is a lack of linkages and the returns from the economic output mainly end up in the pockets of foreign investors and companies, this leads to a relative weak local multiplier effect. An example of a tourism activity with a low multiplier effects is cruise tourism: tourists often sleep, eat and find their entertainment on the cruise ship, and their arrivals consequently create relatively few economical spinn-off effects, because they do not go to local restaurants, visit theaters and so on. The negative effects of these issues can even be magnified because earnings generated by tourism are subject to fluctuations resulting from factors such as the seasonality of tourism and global recessions. Developing countries are often quite distant from the developed countries, and therefore relatively expensive to travel to. During periods of economic recession the tourists from developed countries may switch their vacations to closer, less expensive destinations (Brohman, 1996).

All in all, tourism can demonstrable have many negative environmental and socio-cultural effects at a destination. It is not a one-way interaction, however, between tourism and the environment and culture. Tourism affects these assets of tourism destinations, but it is also the other way around. The environment and culture at a destination provides the setting for the tourists to enjoy their vacations (Briassoulis and van der Straaten, 2000; Lim and McAleer, 2005). This setting is comprised of e.g. natural, unspoiled scenery, beaches, coral reefs, forest, mountains, ancient monuments, and traditional, picturesque towns and villages. A decrease in the attractiveness of these settings decreases the attractiveness of the destination and lowers tourists’ willingness to revisit (Tsaur et al., 2006) because it is the experience and enjoyment of these that the tourism industry promotes and sells and that tourists demand and pay for (Holder, 1988; Briassoulis and van der Straaten, 2000). Without adequate protection of these so called ‘tourism resourses’ (Holder, 1988), the present and future prospects at the tourism destinations are undermined (Cater, 1995). For example, Dixon et al. (2001) argue that two out of the three the main central selling points of Caribbean tourism and of tourism in many other destinations, the so-called “three ‘S’s” (Sun, Sand, and Sea, e.g Weaver, 1993) can be subject to damage and depletion. Only the Sun is inviolable. Both the Sand and Sea resources, which stand for the availability of attractive beaches and seas, are vulnerable to pollution, erosion and over-crowding. Since the 1980s systematic academic research has been done to study the relationship between tourism and the environment and culture (Holder, 1988; Briassoulis and van der Straaten, 2000). It has become clear that there can be a tension between the 3S packages often offered to and demanded by tourists and the 3P’s (People, Planet, and Profit) that can be seen as a central point of sustainable development. Different theories on how they impact each other (especially negatively, although positive impacts can also occur), as well as why impacts occur have been published. In the following paragraph some of these theories will be analyzed.
3.2 Theories on the impacts of tourism

The paradox of tourism
Tourism is in many ways a ‘positional good’ (i.e. a product or service of which the desirability depends on the comparison to substitutes or alternatives, see e.g. Carlsson, Johansson-Stenman, and Martinsson, 2003), and massification decreases its value (RMNO, 2006). The more popular a destination is, the more people will come to visit it, and the less exclusive and ‘special’ the destination becomes. In addition to this, the more tourists visit a destination, the more the effects of tourism will become noticeable. As was described in the previous paragraph tourism can have major negative impacts on the environment at the destination. Massification of tourism only aggravates these effects, up till a point where they seriously decrease the attractiveness of the destination. The popularity of a destination, however, is often due to its attractiveness (Briassoulis and van der Straaten, 2000; Lim and McAleer, 2005). Tourists visit and revisit places partly because of their natural and cultural beauty; if that is gone, so are the tourists (Tsaur et al., 2006) or at least: the ‘high quality’ tourist that bring in the most economic benefits. By destroying these tourism assets, the tourism industry in a popular (‘successful’) destination is thus destroying part of its own foundations. Very simply put: successful tourism is bad for tourism. This phenomenon is also called the ‘paradox of tourism’ (RMNO, 2006). This ‘paradox of tourism’ has been analyzed and described in various studies. One of the best know and most often used theories on how tourism develops over time and may even ‘self destruct’ eventually, is the theory of the Tourism Lifecycle (Butler, 1980; Holder, 1988; Tooman, 1997; Baum, 1998; Butler, 1998; Hovinen, 2002; Moore and Whitehall, 2004).

The Tourism Lifecycle
It was Butler (1980) who first described the Tourism Lifecycle (also called the Tourism Area Life Cycle). He distinguished six phases that a tourism destination can go through over time once tourists start visiting (Moore and Whitehall, 2004). These phases Butler called Exploration, Involvement, Development, Consolidation, Stagnation, and Decline and/or Rejuvenation. The succession of these phases over time can be pictured as a curve (see Figure 1).
During the *Exploration phase* there is only occasional visitation to a remote and exotic destination by a few adventurous people. Attractions and facilities built specifically for tourists do not exist, so the visitors often have contact with the locals and use their facilities. Social and economic impacts are still small.

In the *Involvement phase* more tourists start to visit and some locals offer facilities and services especially for the tourists. Contact with the locals is still frequent and some social patterns may be changed because of the changing conditions. In this phase advertising is initiated and a tourism destination is born.

In the *Development phase* growth is the key word. Advertisement increases, and outside investment and imported labor is attracted to the destination to support the rapidly growing tourism industry. More and more hotel accommodation and tourist facilities are built to attract and accommodate more and more tourists. Attractions specifically for tourism are being developed at a high rate, and more elaborate and up-to-date facilities displace local ones, while artificial attractions replace original ones. The increasing rates of growth benefit the destination economically, but there is also a decline in local participation and control.

During the *Consolidation phase* growth slows down and the infrastructure at the destination starts to age. Older facilities have become second-rate and mostly undesirable. A large part of the local economy is tied to the tourism sector, but major (international) chains dominate the sector. Marketing efforts still increase, and are widened to attract off-season tourism and tourists from more far away.

In the *Stagnation phase* the growth in arrivals stops, and there is excess supply of facilities over demand, as the destination has become unfashionable. Economic, social, and/or environmental problems have become evident. Artificial attractions surpass original ones.

After stagnation, the destination either rejuvenates or enters a *Decline phase*. In case of a decline, tourists are drawn away by newer destinations. The destination can become a tourism slum, as the price and quality of facilities drops along with the market decline. Or it may abandon tourism activity altogether, as tourism facilities become replaced by non-tourism businesses.
If the destination enters a Rejuvenation phase in stead, the resource base for tourism will change. This can mean the creation of man-made artificial attractions, like casinos, as well as the use of previously unexploited natural resources (Holder, 1988; Tooman, 1997; Moore and Whitehall, 2004).

Acclaim for the tourism lifecycle of Butler was e.g. due to its recognition of constant change within the tourism environment and limits to growth in tourism destinations, which both were relatively new concepts at that time (Baum, 1998). Butlers’ lifecycle, however, was directly based on a product lifecycle that is recognized in marketing literature. In this lifecycle a new product is launched, after which it achieves acceptance and accomplishes growth until competitors gain market share and profit stagnates and declines (McElroy, 2003). Hovinen (2002) points out that Butlers’ model may be flawed, because a tourist destination is not a single product. In stead it is comprised of many different elements (hotels, parks, attractions), which all have their own lifecycle including phases of growth, stagnation, decline, and rejuvenation. In a mature tourism destination (at the highest point of the curve in Figure 1) these may all coexist (Hovinen, 2002).

Besides, Butlers’ theory focuses mainly on the popularity of the destination, expressed by sheer numbers of visitors, and disregards to a large extent the type of visitors. This may not be an issue in a product lifecycle, for which it makes not so much difference who buys the product, as long as the quantity of buyers increases. For tourism on the other hand, the type or ‘quality’ of visitors can be just as important as the quantity of visitors.

Healy (1994) for example puts forward in his ‘self-destruct theory of tourism’, which consists of four phases that describe the discovery of a destination in the beginning and its destruction in the end, that the type and even the ‘quality’ of visitors may also change over time. According to him, the first visitors that arrive at a new destination are often part of the relatively rich that look for a high quality ‘escape paradise’ and are willing to pay for it. When tourism promotion attracts persons of middle income, and the original ‘escape paradise’ character is diminished, more and more visitors will arrive, but the rich will move on elsewhere and the profit per one visitor will decrease. In the third phase of Healy’s theory mass tourism sets in, attracting persons of lower economic power and often of lower standards of social behavior. This phase is accompanied with social and environmental degradation of the tourist destination. In the final phase all the tourists leave, and the destination is left to clean up their environmental and socio-cultural mess. In Healy’s theory, it is actually the quality of the type of visitors that decreases, not as much as their quantity, until the very end. Instead, the generated profits per visitor decrease, while in the mean time the negative impacts of the large amounts of visitors on the destination increase.

However, the role of (the quality of) the environment at a destination is not eminent in either Butlers’ tourism lifecycle model or Healy’s self-destruct theory, as they both focus mainly on social and economic (growth) aspects of tourism development. There is another theory, in which the environment has a more prominent position. This theory also attempts to explain tourism problematic and the phenomenon that occur over time when tourism develops. It does so by describing tourism as a commons dilemma (Healy, 1994; Dixon, Hamilton, Pagiola, and Segnestam, 2001; Briassoulis, 2002).

Tourism as a commons dilemma

The basic notion behind the view as tourism as a commons dilemma is that tourism resources possess the characteristics of “common pool resources”. When someone consumes common pool resources, this reduces the amount available for others, but it is practically impossible to exclude users (Briassoulis, 2002). A well-known example is a public pasture, on which any farmer in the neighbourhood can let his or her sheep graze. It is impossible to exclude anybody, as the land belongs to no one. However, every sheep that grazes there decreases the amount of grass available for the other sheep. This causes each farmer to let his sheep eat as much as possible, while there is still some grass left. Without interventions, the land will soon be devoid of any
grass, and the farmers have to move their herds elsewhere. This is an example of what is called the 'tragedy of the commons' (Hardin, 1968). There are two major problems associated with common pool resources: the 'overuse' problem, and the 'investment incentive problem' (Healy, 1994). The 'overuse' problem is explained in the example of the farmers and the pasture, where short-term maximum gains destroy long-term benefits. The investment incentive problem exists because common pool resources have as a characteristic that there is no incentive to invest and engage in activities that would reduce their overuse and destruction, because many of the benefits of the investments would go to so called 'free riders' (Healy, 1994). Free riders basically 'do nothing' so that others bear the cost of addressing the problem while they still enjoy the benefits of the enhancements, because the use of common pool resources is unrestricted. If the number of actors is greater, the incentive to free ride will increase, because it is harder to coordinate the actors and because individual contributions are relatively small (Dixon et al., 2001). However, the cumulative effect of many small increases in environmental degradation, none of which appears to be serious in itself, can result in substantial damage (Pigram, 1992). If the commons are small in size (like islands) their sensitivity to change increases, because the cumulative impact of its users occurs sooner and is more visible (Briassoulis, 2002).

It is because of these problems that common pool resources are often privatized or put under a common property regime in order to improve management (Healy, 1994). But even then people in the tourism business might take advantage of lax regulations and lack of enforcement and use resources without contributing to the costs of their maintenance, upgrading, or restoration (Dixon et al., 2001). Which group of users has rights over a given resource can also cause problems because of the (cultural) differences between the locals and the tourists or tourism developers. For example when local people have sold their properties to foreign tourism investors, and these have different perceptions and interests from those of the host community (Briassoulis, 2002).

But what exactly are these tourism common pool resources that are in danger of over-use and mismanagement? They are not simply one of the conventional examples of common pool resources like e.g. the air and the atmosphere, water resources, oceans, ecosystems, fisheries, forests, wildlife, and grazing fields (Briassoulis, 2002). According to Healy (1994) the “background tourism elements” are the resources of tourism to which the concept of common pool resources is applicable. Healy (1994) defines these background tourism elements as the natural and built elements of a destination, for example the landscapes (e.g. beaches or mountains) or townscapes (e.g. historic towns), but also socio-cultural elements (e.g. festivals). He argues that it is the appeal of the background tourism elements that motivates many tourists to visit a destination; they want to view beautiful or interesting natural and man-made scenes. These ‘resources of tourism’ can include anything from mountains, beaches, and coral reefs to traditional festivals, monumental buildings, scenic views, et cetera.

There are two main consequences of the overuse of tourism resources (Healy, 1994); one is congestion, the other is damage to the resource. Congestion is not the same as "crowding." For some tourists (and for some levels of visitation) adding another visitor will actually add to the quality of the experience (Healy, 1994). Only a few tourists especially want isolation, most enjoy the company of some others, and are of the opinion that it adds to the holiday experience. However, beyond a certain number of visitors and beyond a certain tourist/non-tourist ratio, the problem of congestion or over-crowding will occur. At this point the maximum capacity for tourism of the destination, which thus depends on how many tourists are wanted, rather than on how many tourists can be attracted (O’Reilly, 1986), is reached and extra visitors do not contribute in a positive way any more. They may actually drive away especially the tourists who demand high quality and are willing and able to pay for it (Healy, 1994). An example of a tourism resource that can suffer from congestion is a beach. One or two parasols on a beautiful beach provide an idyllic view, certainly something that appeals to most tourists. However, when instead of the beautiful, romantic, white-sand beach with palm trees, visitors see a beach filled with rows and rows of parasols, part of the tourism background element ‘beach’ is gone. The quality and the
appeal of the tourism resource ‘beach’ are diminished, which can have negative effects for the tourism destination.

The other consequence of overuse of tourism resources is resource damage (Healy, 1994). A polluted atmosphere or ocean lowers the quality of the tourism product (Briassoulis, 2002). Environmental, cultural and social damage, e.g. damage to coral reefs, abandonment of traditional crafts and customs, and increase of crime, do the same. Non-tourism activities can also have large impacts on these resources; outweighing the impacts of tourism itself sometimes (e.g. coral mining has much larger impacts on coral reefs than a few scuba-divers). But the opposite pattern, in which non-tourist activities suffer indirectly from the environmental impacts of tourism, can also occur (Briassoulis, 2002), for example when sewage from beach hotels decreases the population of certain fish species that local fishermen depend on. Regardless of who causes the damage, the original quantity and quality of the destinations resources diminishes, and because of the so-called investment incentive problem we mentioned earlier that is so typical to common pool dilemmas, it is often difficult to do something about it. The destination may thus slowly but surely lose its appeal to tourists, a situation similar to that in the lifecycle model of Butler (1980) we described above.

The previous theories paint a quite grim picture of tourism development. The scenarios describe mainly the negative effects of tourism and developments that are detrimental for the destination in the long term. But is there an alternative? Some believe that, while tourism demonstrably can destroy environments, it can also be a force for protection (Hughes, 2002) and contribute in a positive way to a destination. Holder (1988) gave some examples of this including improvement of transport possibilities and communications systems; revenues to fund better health care, education and other social services; development and upgrading of national parks; and preservation, beautification, and restoration of historical sites, public places, monuments and natural attractions. According to many experts this is only possible if tourism is developed and managed in accordance with the principles of ‘sustainable development’. Sustainable Tourism could be a course to prevent the undesirable scenarios described above, and achieve desirable effects instead (Hodge, 1997; Briassoulis and van der Straaten, 2000; Dixon et al., 2001; Buckley, 2002; Hunter, 2002; The Dutch Guide to Sustainable Tourism, 2003; Ko, 2005; Yaw, 2005).

### 3.3 Sustainable tourism

What exactly is sustainable tourism? One of the main reasons for criticism on the concept is that there are so many definitions and interpretations possible while no real consensus has been reached yet, which hinders actual implementation (Twining-Ward and Butler, 2002). The definition that is probably the closest to the original definition of sustainable development we mentioned in the introduction ("Development that meets the needs of the present without compromising the ability of future generations to meet their own needs", WCED, 1987) is the definition of the World Tourism Organisation (here as quoted by Briassoulis and van der Straaten, 2000) which defines sustainable tourism as: “tourism which meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future”. What those ‘needs’ and ‘opportunities’ might be, are not clear from this definition, and whether it means that we have to prevent environmental damage or minimize it (enough so that the needs of future generations are not compromised) can also be open to interpretation. Yaw (2005) defines sustainable tourism as a process “that allows tourism growth while at the same time preventing degradation of the environment, as this may have important consequences for future quality of life”. Apparently the need of the present is considered to be tourism growth (in contrast to the definition of the WTO this is arguably only a need of the host regions and not of the tourists themselves). The prevention of degradation of the environment seems to have the function of ‘protecting and enhancing opportunities for the future’ in this definition, and is the key issue to sustainability. Buckley, (2002) places the environment even more importantly at the centre of the
definition of sustainable tourism, as according to him sustainable tourism means “Tourism at any scale with practical and proactive design, engineering, and management to reduce environmental impacts”. According to Cater (1993) any truly sustainable form of tourism should aim for meeting the “needs of the host population in terms of improved living standards both in the short and long term”, satisfying “the demands of a growing number of tourists and continue to attract them”, and safeguarding “the natural environment”. In this definition the improvement of living standards instead of tourism growth is the present (and long term) need of the host population. Hodge (1997) also described the goal of sustainability as maintaining or improving human and ecosystem wellbeing. And Ko (2005) emphasized that in a sustainable tourist destination the human system and the ecosystem both have to be sustainable simultaneously.

Sustainability can thus be considered as more than the combination of economic growth and the environment. The focus on the environment is extended to human well-being. This is the basic notion of the concept of the three pillars, the three P’s (People, Planet, Profit; i.e. the Triple Bottom Line, Elkington, 1997) that can be seen as a central point of sustainable development. When a tourist development is economically feasible and desirable, but environmentally or socially damaging, it thus cannot be sustainable (O’Reilly, 1986). The SNV (Foundation of Netherlands Volunteers) and CBI (Center for the promotion of imports from developing countries) define sustainable tourism as: “A form of tourism (development) that balances the economic, ecological and social-cultural needs of the people in the destination countries, without jeopardizing the needs of future generations” (The Dutch Guide to Sustainable Tourism, 2003).

However, different types of tourism can be desired. This leads to different interpretations of sustainability in practice, depending on which priorities someone has and which of the three P’s are regarded as the most important. For example, pro-poor tourism (Neto, 2003) has as its overriding goal to provide net benefits to the poor, rather than focus on environmental sustainability. While community-based tourism development above all promotes the economic, social, and cultural well being of the community and its inhabitants by local participation (Brohman, 1996).

There are apparently different kinds of Sustainable Tourism. Ko (2005) for example, distinguishes between a scenario in which sustainability means “indefinite continuation of a situation” versus one where it means “improvement in people’s quality of life and the natural environment”. Hunter (2002) calls this the difference between sustainable tourism which goal is to survive over the long term for its own sake, and sustainable tourism which goal is to contribute to the more general principles of sustainable development. The latter has of course a much broader perspective.

As we mentioned, there are also different opinions concerning which P of the three P’s is the most important. Some interpretations of sustainable tourism focus on the importance of continued economic growth, and environmental and social quality is only important insofar it supports tourism and is sufficient to ensure the continued growth and survival of the tourism product (Hunter, 2002). In these interpretations the profit-P is the most important. Other interpretations stress the importance of the other two P’s (People and Planet) and emphasize the use of precautionary principle (Hunter, 2002) preventing damage like natural resource depletion, pollution, and ecosystem damage instead of minimizing it. In many cases the tourism industry has advocated the first, more development-oriented approach to sustainability, while the conservation movement has advocated the second approach, focusing often on ecological preservation (McKercher, 1993).

One of the types of sustainable tourism that focuses especially on ecological preservation is eco-tourism. Just like sustainable tourism it is seen as an alternative to conventional mass tourism. Eco-tourism is therefore often used interchangeable with sustainable tourism. However, although the concepts of sustainable tourism and eco-tourism have some characteristics in common, they are not the same concepts. Some of the main characteristics that are often ascribed to eco-tourism
include that it is based on the enjoyment, understanding and appreciation of the natural and socio-cultural assets of the host destination; that it is non-consumptive, minimizes effects on the host environment and culture; that it contributes to environmental protection and to the economic and social wellbeing of the local people, sustainable, and mainly focused on relatively undisturbed areas (Diamantis, 1998; Sirakaya; Sasidharan; Sönmez, 1999) and expects a high level of human responsibility (Orams, 1995). Eco-tourism is distinguished from the wider concept of sustainable tourism because it focuses specifically on travelling to enjoy nature and culture, while also actively contributing to their conservation (Quebec declaration on ecotourism, 2002). Sustainable tourism is much broader than that, as it concerns the tourism industry as a whole and not just the part of it that has (the protection of) the environment and culture of a place as its key element. This is also expressed by the SNV (Foundation of Netherlands Volunteers) and CBI (Center for the promotion of imports from developing countries) in their statement that “sustainable tourism is not connected to a particular form of tourism such as eco-tourism, community based tourism or cultural tourism. It is also applicable to forms of mass tourism that traditionally are labeled as not sustainable” (The Dutch Guide to Sustainable Tourism, 2003).

All in all it could be concluded, based on various literature presented in this paragraph, that sustainable tourism is applicable to the tourism industry as a whole and supports the concept of the three P’s in a balanced way by preventing environmental degradation, taking into account and integrating economic, social and cultural interests of host communities while providing rewarding experiences to the tourists, in the short term as well as the long term. When we want to measure (progress toward) sustainable tourism and find ways to actually achieve it, however, we still run into a problem; the problem of spatial discontinuity (Cater, 1995). What is sustainable for one place may be unsustainable for another place, or from a broader perspective. For example, the use of a certain type of paint that does not cause any problems locally, but that pollutes a river at the site of production cannot really be called sustainable. According to some researchers, the concept of sustainability should be considered from the perspective of the whole supply chain that is needed to manage and maintain tourism activities (Maccarrone-Eaglen and Font, 2002).

A method to assess sustainability that aims to incorporate the whole supply chain is the ecological footprint analysis. The ecological footprint method expresses the impact of a certain lifestyle or activity in space equivalents. Using these space equivalents, the area required for the lifestyle or activity is compared to the area that is actually available. This provides a measure for the sustainability of that particular lifestyle or activity. For tourism the categories transport, accommodation, and (food and fiber) consumption can be distinguished for example. Each of these categories accounts for a certain space equivalent of a tourist’s ecological footprint (Gössling, Hansson, Hörstmeier and Saggel, 2002). The ecological footprint analysis also includes effects outside of the tourism destination, e.g. effects on the wider biosphere (Hunter, 2002). An example is the contribution of long-distance travel to the global warming (Gössling et al., 2002). Transport has a major impact on the ecological footprint. According to Gössling et al. (2002) 97% of the energy footprint of tourism is due to traveling to and from destinations by air travel. This implies that even if tourism within destinations becomes sustainable, unsustainable transport and traveling to and from these destinations would still make the vacation as a whole unsustainable when the ecological footprint method is used. Gössling et al. (2002) even conclude in their study that any tourism based on air traffic is unsustainable per se. We recognize that this is a very critical matter in itself.

However, since the focus of this study is tourism in developing countries and air-travel is almost always necessary for tourists to reach these regions, sustainable tourism at a local and regional scale is our principal subject, instead of sustainability issues at a global level, and the ‘traditional’ ecological footprint method is not a useful method as such. A ‘local’ footprint that excludes the journey to the destination and only takes into account the space equivalents that are needed for
tourism at the destination itself may be a more suitable way to measure and assess the sustainability of tourism in a developing country. The environmental impacts that occur because of the journey could be mentioned separately. To assess the space equivalents needed for all the tourism activities and requirements at the destination, all the impacts from ‘cradle to grave’ of these tourism activities and requirements have to be taken into account and these impacts have to be converted to space equivalents to paint a complete picture. This analysis does not stop at the border of the country. For example, at least part the food that tourists eat has been processed and cultivated abroad, fertilizers needed for cultivation have possibly been purchased from even another country and the sources of the energy needed for the whole process may also have come from somewhere else entirely. The impacts of all these steps in the production process, of waste generated during their production or their use, and of the disposal of the products after their use, have to be taken into account for an ecological footprint analysis.

The ‘cradle to grave’ approach is similar to the Life-cycle analysis method. A life-cycle assessment evaluates the environmental burdens associated with a product, process or activity. It identifies and quantifies energy and materials used and wastes released to the environment, and it evaluates opportunities for reducing these impacts (UNEP, 1996). However, identifying the entire scale, magnitude, and range of environmental impacts generated by tourism enterprises, involving tour wholesalers, retailers and a variety of other private and public sector services and facilities, and taking into account that many services required for tourism are also used by local residents, is an overwhelming task and therefore not a practical method for assessing sustainability (Hunter, 2002; Sasidharam, Sirakaya, and Kerstetter, 2002). A single product (e.g. a refrigerator) can be analyzed using the LCA approach, but even this is a very large effort, to analyze a whole industry, and one as diverse and broad as tourism would be an overwhelming task. Moreover, even if it could be done, the analysis would only take into account the environmental/ecological impacts. However, sustainable tourism also includes social, cultural, and economical impacts. We therefore conclude that there are probably too many obstacles to use the life-cycle assessment technique (which is also needed to construct an ecological footprint) for a multi-resource dependent industry with such far-reaching impacts as tourism. This was also concluded by Sasidharam, Sirakaya, and Kerstetter (2002).

That leaves us with the problem on how to achieve and measure sustainability. Unfortunately, very little practical methodology has been developed, to do this (Ko, 2005). Without practical implementation methodologies and sustainability indicators, however, the term ‘sustainable tourism’ is in danger of being no more than a slogan for propaganda (Ko, 2005). Some core indicators of sustainable tourism have been developed, although they are often still difficult to measure. They include the number of tourists visiting a site per year or peak month; the intensity of use in peak periods in persons per hectare; the ration of tourists/locals; the existence of environmental and site control procedures; the percentage of sewage from a site that is treated (i.e. waste management); the existence of a plan for tourism development; the number of rare and endangered species; the level of satisfaction of visitors and locals; and the proportional contribution of tourism to the local economy (Twining-Ward and Butler, 2002).

Other core indicators also exist, but there is no general agreement on what indicates a sustainable tourism industry. In our opinion, one of the reasons for this may be that the goal of sustainable development relates specifically to the future; future generations still have to be able to ‘meet their needs’. However, whether sustainability has actually been achieved can only be judged in hindsight, because only future generations can truly know whether they can still ‘meet their needs’. This poses some problems for defining what we can call ‘sustainable’ in the present. This could be one of the reasons for the troubles researchers have with deciding what indicates a ‘sustainable tourism industry’. We argue that defining progress in achieving sustainability may be just as, or even more important than defining sustainability itself. Achieving sustainable tourism somewhere in the future is an abstract goal, a ‘final destination’ that always lies just
beyond the horizon. Progress towards that goal on the other hand may consist of many different concrete actions and changes (e.g. decreasing fossil fuel use, preventing coral reef damage). In this research we therefore also call something ‘sustainable’ if it brings the goal of achieving sustainability in the end closer (e.g. using solar cells).

However, defining what indicates that a destination is becoming more sustainable than it was is still only a place to start. To achieve sustainability, all the different groups of stakeholders that are important to the tourist industry have to commit themselves to a certain degree and assume responsibility (Dixon et al., 2001). These stakeholder groups can be divided in four categories: the tourists, who need to be aware of the consequences of tourism and may have to modify their behavior; the tourism enterprises, like hotels and travel agencies, that have to ensure that their operations are sustainable; (the governments of) the destination areas, that have to make informed decisions on the scale, ownership, location and timing of tourism developments; and last but not least the local population, that should also be involved in decision making and sustainable management of ‘their’ tourism resources (Cater, 1993).

How to move the tourist industry toward sustainability is still a difficult question, but there are some forces, according to the report of Synergy for the WWF-UK (2000) that could help contribute to sustainable development. These include: cost savings (or eco-savings) from saving resources; environmental regulations, e.g. ‘polluter pays’ or ‘pollution prevention’ principles; and increased valuation and raised awareness by governments, businesses and consumers on the subject of sustainability. Kirk (1995) described the driving forces toward sustainable tourism as the five ‘forces for change’: legislation, fiscal policies, public opinion, consumer pressure and financial benefits from resource savings. Twining-Ward and Butler (2002) add to this that monitoring is also crucial for the progress to sustainability, to assess the effectiveness of these forces for change and identify successes and problem areas.

One possible method to help achieve sustainable tourism that is described in various literatures is eco-labeling or eco-certification (e.g. Synergy, 2000; Dixon et al., 2001; Font & Tribe, 2001; Drakopoulou and Gössling; Toth, 2002; Maccarrone-Eaglen & Font, 2002; Font, 2002; Buckley, 2002; Font, 2003; Sustainable Tourism Stewardship Council, 2003). Eco-certification is described as a way to use, influence, and integrate many of the factors that are needed for sustainable tourism according to the theories we described above. This is because, among other things, it includes and influences different stakeholder groups, uses en encourages monitoring, has its own regulations, can lead to cost savings, and deals with public opinion and consumer pressure. Eco-certificates for tourism are described by the United Nations Environment Programme (UNEP, 2006) as: “voluntary instruments to improve the environmental, social and economic performance of tourism companies” (i.e. the three P’s).

### 3.4 Eco-certificates

The term certification is often used interchangeable with the term labeling. It would be possible to make a small distinction between the two and describe a certificate as something that provides written assurance that a product or a management system meets the requirements specified in an applicable standard (Toth, 2000), while a label is something that communicates (this assurance) to potential purchasers or users, thus providing them with information based on that label, rather than on the object itself (Buckley, 2002). For example, certification programs can label their product, often by using a certain logo, when their standards are met (Synergy, 2000; Font, 2002). We will not dwell further on supposed differences between certificates and labels as it is not especially relevant for our research question and use them as similar concepts, like it is also done in other studies (Font & Tribe, 2001; Buckley, 2002; Font, 2002).

Certification is specifically designed as a voluntary instrument (Lee, 2001) and labels are used to show high standards of performance beyond compulsory standards that are described in
legislation (Font, 2003). The idea is that such a label can be a source of competitive advantage for businesses that are certified. When eco-certificates are coupled with training (manuals) that can help businesses make the necessary improvements to meet the prescribed standards, they can have a simultaneous role as marketing as well as management tools (Font, 2003).

A standard can be defined as a prescribed set of rules, conditions or requirements, approved by a recognized body (Toth, 2000). Eco-certificates can examine, measure, test, or otherwise determine whether businesses conform to their standards. This process is called assessment (Toth, 2000). An assessment on whether or not standards are met can be done by self-evaluation (1st party evaluation), which may be the cheapest and easiest type of evaluation. However, it poses no regulation to limit which tourism businesses can self-declare themselves as being sustainable or environmentally friendly (Font, 2002). Second-party evaluation is done by the organization that gives out the certificates itself, the awarding body. Second-party evaluation is more reliable than 1st party evaluation, but a problem is that the awarding body also has an interest in increasing membership. Independent evaluation (3rd party evaluation) is the most expensive type of evaluation because an outsider has to be paid to do the evaluation. However, it is also the most reliable type of evaluation, because it is undertaken independently of either the applicant or the awarding body. Maccarrone-Eaglen and Font (2002) therefore prefer this type of evaluation. The ideal certification process is therefore also described as the procedure by which a third party evaluates a product or management system and gives written assurance to potential purchasers or users that this product or management system conforms to the specified standards (Toth, 2000).

In the case of eco-certificates environmental standards are crucial, and an environmental label is supposed to tell something to (potential) purchasers concerning the environment (Buckley, 2002). Based on the information eco-certificates provide about the environment, they can be divided into two different categories. The first category provides information on the current state of the (natural and sometimes also social/cultural) environment at a tourism destination, and is also called an environmental quality label or certificate. The second category gives information about the efforts of tourism providers to consider the environment, and is also called an environmental performance label or certificate. Few programs cover both categories (Buckley, 2001). Environmental quality labels are mainly used to tell tourists that a destination is beautiful and unspoilt, while environmental performance labels are mainly used to signal that the tourism operations that take place do not harm the environment (Font & Tribe, 2001).

There is a plethora of eco-certificate programs for tourism: according to Font (2002) there were over a hundred eco-certificate programs around the world in 2002. There can be significant differences between these programs. The difference between environmental quality and environmental performance is already described. But even if we leave out the environmental quality labels and focus solely on environmental performance labels as a group, their goal, scope, and mode of operation may still vary substantially. An example is geographical scope: eco-certificates can be regional, national, or international. Different programs can also reward different types of performance based on different criteria, sometimes used simultaneously. Some of these criteria can be called relative performance criteria, and others objective performance criteria. Eco-award programs are a means of measuring environmental performance whereby (only) the best performance is acknowledged. The outcome of one product depends on its performance relative to the performance of others, and the main criterion to win such an award is to perform better than the rest (Buckley, 2002). Hence an eco-award is not based on objective criteria but uses a ranking system instead to evaluate relative performance. This may be a disadvantage when it comes to the applicability of eco-awards (and other relative performance criteria) as a means to measure sustainability, because absolute (environmental, social and economic) standards on sustainability may be needed for that. The best performer may still be far from sustainable when tested against those standards. Furthermore, small businesses
often cannot compete with larger businesses because they do not have the same time and expense to spend. The second-best performer may actually run its business in a more sustainable way over the long term, but since only best performance is rewarded, an eco-award would not show this to consumers. Eco-awards do single out and may encourage leadership and best practice, however, and create awareness among consumers. They can have a significant public relations value as such, and can create competition between businesses to adopt better to sustainability principles (Synergy, 2000), and may thus encourage progress toward sustainability in the tourism sector in that way. They are also relatively cheap to maintain because the organisation only has to justify the choice of the winner against the other participants, and not the ranking of each participant (Font & Tribe, 2001). Eco-awards therefore have relatively low application costs and if more businesses apply as a result they may consequently have a broader reach.

Another example that indicates relative performance is called benchmarking. Benchmarking is comparing achievements of tourism businesses with the performance of others, including the ‘best practice’ businesses (HOK, 2000). Benchmarking does not use absolute standards, and measures relative performance, just like eco-awards. Hence the same critics that may apply to eco-awards may also apply to benchmarking. Similar to eco-awards, benchmarking also often lacks third party verification (Synergy, 2000). In contrast to eco-awards, however, benchmarking includes more than just the best performance. It can also be used to acknowledge above average or minimal required performance for example. In general, it will therefore be more expensive than best performance systems (Font & Tribe, 2001) because it rates and ranks all participants. However, it also paints a much more complete picture, and it could provide businesses with goals that may be less ‘out of reach’ than the goal of trying to be or beat the best performer. Benchmarking can be useful for an individual business to compare its performance year by year to other businesses and to plan for continual improvements. Eco-certification programs can also use it: with the use of benchmarking a ‘base line’ of (above) average or minimal required performance can be constructed. This baseline can be used as one of the standards (not the sole standard) that businesses have to meet in order to obtain an eco-certificate; this is done by e.g. Green Globe 21.

Some programs use performance criteria that do not depend on a comparison with the performance of others. Instead, they look at the improvements compared to past performance of the business itself. These programs focus on ‘continuous improvement’, and reward performance that is relatively better than past performance (Font & Tribe, 2001). Continuous improvement programs do not use objective criteria to rate performance, just like eco-awards and benchmarks, and are susceptible to the same criticism. They also allow inconsistencies between recipients' performance, which can confuse consumers (Font & Tribe, 2001). An advantage is that recipients often have to commit to the environment for a longer term, because only then improvement can be demonstrated. This can result in fewer applicants for such a program, but once a business applies, it will have to stay committed for some time. However, the (minimal) required level of improvement, which is often difficult to agree on, has a large influence on how effective the program is (Font & Tribe, 2001). A specific type of program for self-improvement is an Environmental Management System (EMS). The focus of an Environmental Management System is on running the company in an environmentally friendly way. In a good EMS a continuous environmental cycle of plan-do-review must be established so that the process that a company follows to carry out day-to-day activities should be environmentally sound. An EMS can be designed for all types and sizes of tourism organizations to accommodate diverse geographical, cultural and social conditions (Font & Tribe, 2001).

In contrast to relative performance criteria, objective performance criteria assess the efforts of a company to consider the environment independent of other company’s performances or past performance. Assessment is made against fixed standards. These standards refer not to the
practices undertaken to improve performance (i.e. environmental management systems), but to the actual outcomes (i.e. water use and energy use) of these practices (Buckley, 2002). Standards based on EMS’s can be described as management-oriented or process-based standards, while objective or fixed standards can be called output-based or performance based standards. To prevent confusion between environmental performance labels (the antithesis of environmental quality labels) and performance based standards we will use the terms ‘process-based’ and ‘output-based’ standards. Process-based standards like EMS’s indirectly describe and test environmental impact, whereas output-based standards directly describe and test the environmental impacts caused by a company. Both types of standards are used by eco-certificates, sometimes simultaneously. Some eco-certificates that use output-based standards may require little more than compliance to a checklist of environmentally friendly measures, like the use of energy saving light bulbs. More elaborate programs also include performance standards like a maximum amount of water that may be used per day per guest. Checklists are ‘small-business friendly’ because members of staff with a limited level of training or knowledge can implement them and they do not require a lot of time or money that small hotels do not have (Synergy, 2000). The problem is that businesses of different sizes, different degrees of luxury and in different regions require different sets of standards. It is useless to judge a five star hotel in Alaska and a 2 star hotel in Barbados by the same standards.

The main criticism on process-based certification programs is that no minimum threshold has to be achieved to guarantee a certain degree of sustainability (Sustainable Tourism Stewardship Council, 2003). It is also argued that implementing, monitoring and continually improving a management system, which is required by process-based certification programs like ISO 14001, does not mean that a company is sustainable. A company that has an excellent environmental management system in place could still be relatively polluting. Green Globe for example has been criticized in the past because they used to certify purely improvement and not performance, and allowed companies to use their logo without certification, based on just commitment (for improvement). In response they added a benchmarking system with a baseline that businesses had to reach before they could become certified (Font, 2002).

There is also a second drawback of process-based certification programs: businesses that are certified on the basis of process standards do not have similar environmental or sustainability qualities (Sustainable Tourism Stewardship Council, 2003). A certified company’s performance is not always necessarily better or more sustainable than that of another company that is not certified. It may even be the other way around if an uncertified business is exceeding the certified business’s targets but just does not have a formal management system in place (Synergy, 2000). For tourists, choosing the most sustainable product based on such eco-certificates is consequently not reliable. Another drawback of process-based certification programs is that they require close monitoring by experts, because each business’s EMS is site specific. This can also lead to more required documentation and higher application costs than benchmarking, for example, or a simple checklist of compulsory measures require (Font & Tribe, 2001). In the workshop for the Mohonk agreement participants therefore emphasized the need to meet performance, and not improvement standards (Font, 2002). It was argued that conformance to universal standards (environmental, social and economic) is needed as a prerequisite to become certified, and a process alone is insufficient if eco-certificates want to promise something like sustainability. From this point of view the output-based approach offers consumers a genuinely more sustainable choice (Synergy, 2000).

On the other hand, there are some advantages of process-based certifications, for example that they are self-updating. Year after year improvement is an integral aspect of such programs. They are also much easier transferable geographically than output-based certification. A hotel in the tropics will use less energy on heating and more on cooling than a hotel in a colder region. If output-based certification were used, different performance standards would be needed for each hotel, but because the emphasis of process-based certification is not on reaching specific
outcomes but on making improvements, process-based certification standards can be applicable to both.
All in all, both process-based and output-based strategies have advantages and disadvantages. Some studies therefore suggest that if certification programmes combine management systems and defined performance criteria (e.g., for water consumption per guest per night) they will sooner contribute toward sustainable tourism. Businesses are encouraged to establish effective management systems to tackle sustainability issues, while still meeting consumer expectations that certified companies really are more environmentally friendly and more sustainable (Synergy, 2000).

As becomes clear from the previous paragraph, the effectiveness of different eco-certificates as a means to actually contribute to (more) sustainable tourism can vary depending on the characteristics of the certificate. Some eco-certification schemes can therefore be regarded as ‘more sustainable’ than others (e.g. Synergy, 2000; Toth, 2000; Mohonk Agreement, 2000; Buckley, 2002; Font, 2003; Medina, 2005). The effectiveness of eco-certificates to contribute to sustainable tourism can depend on several factors. The differences between management and performance based certificates we described above are for example an important factor, but other characteristics of eco-certification schemes make a difference as well. There are several additional factors that are mentioned in literature as important characteristics of eco-certificates. These include what we will call the ‘basis’ of the eco-certification scheme and its specific social/cultural, ecological, and economic standards. We will first discuss the ‘basis’ of eco-certificates, and then the specific standards of eco-certificates.

According to the reports of the Mohonk Agreement (2000), the ‘basis’ of the eco-certification scheme can be regarded as ‘good’ i.e. leading to more sustainable tourism, if it incorporates the following; an eco-certification scheme should require companies to comply with national and regional regulations as an absolute minimum, and it should be developed with multi-stakeholder participation. Furthermore, a good eco-certificate provides tangible benefits to tourism providers, local communities as well as to conservation. It should set minimum standards while also encouraging and rewarding best practice, meanwhile providing technical assistance for businesses that are certified and motivation for continual improvement (Mohonk Agreement, 2000). It should also have a process to withdraw certification in the event of non-compliance of a business and have control over the use of its’ logos.

The integrity of an eco-certificate is also an important part of its basis. The integrity of an eco-certificate scheme depends for example on its transparency, and mechanisms for consumer and local community feedback. An eco-certificate needs transparent criteria and procedures, with detailed information readily available to the public as a backup for the labels themselves (Buckley, 2002). Public reporting of the results of their environmental or sustainable development would ensure that those businesses that claim false credentials are clearly identified (Synergy, 2000). An integer eco-certification scheme should also have a certification body that is independent of the parties being certified (i.e. third party evaluation), and process for appeal (Mohonk Agreement, 2000). Furthermore, Buckley (2002) argues that an eco-certificate should be customized to eco-system and tourism activity to provide enough technical detail to reduce impact of individual tourism operations. In addition to this it should also be customized to country, because in that way each countries different social, cultural, economic, and legal frameworks can be taken into account (Buckley, 2002). Medina (2005) suggests that national certification schemes are also likely to produce more concrete, measurable criteria that are more sensitive to the issues of local people.

The main focus of the standards of eco-certificates can be divided into three categories: social/cultural standards, ecological/environmental standards, and economic standards. These three types of standards should all be represented in an eco-certificate for it to agree with the
main principles of sustainability, the three P’s for People, Planet, and Profit. Social standards however, are often overlooked in eco-certificates, because most of them focus mainly on the natural environment. Social standards in eco-certificates should for example address the impacts upon social structures, culture and economy (on both local and national levels) of a tourism business. Some activities, such as sex tourism, are often banned altogether because of their negative impacts. Also, the appropriateness of land acquisition and land access processes (an example is private beaches of hotels, where local people are not allowed to come, or only at a relatively high entrance fee) is an important issue. In a broader sense, this type of social standards dictates that the rights and aspirations of local should be recognized. This includes the local people’s rights to access to water and energy resources. Provision of information about appropriate behaviour and dress codes to guests and the implementation of a local employment policy while paying staff at or above minimum wage levels, are also possible subjects of social standards.

A problem is that social issues are hard to measure. Objective indicators do not tell the full story. Social issues are often subjective issues, which can make the application of these standards on a practical level difficult (Font, 2003). If an eco-certificate that claims to take social issues into account is missing important aspects, this may lead to the ‘naming and shaming’ of certified companies that do not meet some basic social standards, dragging down the credibility of the whole program (Font, 2003). Font therefore argues that tourism eco-certificates should not per se be criticized for not including social criteria.

Economical standards are the least mentioned in certification programs of the three types of standards. For tourism businesses economic issues are very important, because making profit is often their main goal. Economical requirements like that may therefore often not be a subject for eco-certificates, because the fact that e.g. a hotel wants to make profits is a given. The other side of economical standards is often very similar to issues concerning social standards. They both try to help achieve ‘what’s best’ for the local people. Specific economic standards can be requirements for ethical business practice, for example, and mechanisms to ensure labour arrangements and industrial relations procedures are not exploitative (including issues like e.g. child labour, and equal wages for men and women), and conform to local laws and international labour standards. Economic standards can also include subjects such as mechanisms to ensure potential negative economic impacts on local communities are minimized and preferably that there are substantial economic benefits to local communities (Mohonk Agreement, 2000). As becomes clear from these examples, economical standards can have many overlaps with social standards.

Ecological or environmental criteria are often regarded as the most important standards for eco-certificates. They can include very general issues like energy use and wastewater disposal, but also very specific standards on the type of plants species that should be used in the gardens. We can distinguish between standards concerning the ‘grey’ environment (somewhat similar to ‘environmental hygiene standards’); these are standards for e.g. energy use, water use and waste (water), and standards concerning the ‘green’ environment (somewhat similar to ‘ecological standards’); these are standards for e.g. biodiversity, and the protection of certain species. Some general issues that could be addressed in the environmental standards (based on the Mohonk Agreement, 2000 and Synergy, 2000) are the following; Biodiversity conservation and integrity of ecosystem processes, for example by promoting the non extraction of flora and fauna by tourists or other individuals, and educating guests about local endangered species; Site disturbance, landscaping and rehabilitation, for example by using native plants are in the hotel’s gardens; Drainage, soils and storm water management; Sustainability of energy supply and minimization of use; Sustainability of water supply and minimization of use; Sustainability of wastewater treatment and disposal; Noise and air quality (including greenhouse emissions); Waste minimization and sustainability of disposal, for example by avoiding the use of fertilizers, pesticides and herbicides; Visual impacts and light, for example by making sure the lighting
system does not produce changes to the natural environment or to wild animal behaviour; Sustainability of materials and supplies (recyclable and recycled materials, locally produced, certified timber products, etc.); and finally Minimal environmental impacts of activities (e.g. excursions and water sports).

The impacts of an eco-certificate depend for a large part on how many businesses apply for the eco-certificate and certified as a result. If only a handful of businesses are certified be a certain eco-certificate the contribution toward sustainable tourism of that eco-certificate is relatively small, even when its standards are very sustainable. When a larger number of businesses are certified on the other hand the recognition of that particular eco-certificate will also increase and the wider the recognition, the more new businesses will probably apply for certification (Toth, 2000), creating a positive feedback cycle. An eco-certificate with a lot of members can have a larger influence on tourism sustainability than one with only a few members. Unfortunately, less than 1% of all tourism businesses currently belong to a credible certification program and four of the best-known eco-certification programmes taken together have less than one thousand members (Synergy, 2000). Apparently, obtaining an eco-certificate is currently often not attractive enough for tourism businesses.

According to Font & Tribe (2001) there are four main factors that influence businesses in their decision to apply for an award. The first is whether they see it as a necessary requirement to keep trading. For example, 75% of tourism professionals consider that the lack of an environmental standard can have a negative impact on corporate image (SGS, 1998). The second factor is whether businesses perceive it will make a difference and they will gain an advantage over competitors. The third factor is the difficulty of achieving the eco-certificate (which depends mainly on the requirements and standards of an eco-certificate), and the fourth the relation between the cost of applying and being registered and the competitive advantage gained. The first two factors have a lot to do with consumer demand and consumer recognition. The third factor is closely related to the (type of) standards the eco-certificate has, which were explained already above: checklists are easier than management systems, and therefore businesses may sooner apply for a program that uses these. Eco-certificates that have different levels of ambition also can make the impediment to become certified smaller. They can e.g. have a low or ‘starters’ level that can be a basic, mass-market, relatively easily-obtainable label for above-average level sustainability or environmental performance, and an additional higher or best-practice level that is much more detailed and hard-to-get and therefore restricted to top performers (Buckley, 2002).

The factor of (application) costs is one of the main impediments for many businesses. There are three types of costs that a business has to pay to be certified: the cost for application or membership of the eco-certificate itself, the cost of the initial implementations necessary to achieve certification and the cost of the longer term operation of the program (Font, 2003). The initial implementation costs and membership fee can be a significant barrier for many businesses, especially smaller ones. But even for large businesses eco-certificates have to be cost effective in a relatively short term, to still be interesting. The danger in that is that some certificates focus primarily on those issues that will deliver cost savings to businesses. Other aspects that are important, like noise reduction and non-renewable resource use, are much less directly addressed (Synergy, 2000). Above that, even though some implementations will be repaid in around five years through eco-savings, they still require initial investments, and some costs cannot be recovered afterwards, e.g. the man-hours needed to fill in and keep up with the (sometimes extensive) paperwork (Font, 2003).

But as was mentioned before: costs are not everything. Consumer demand and consumer recognition are also needed to make certification interesting for businesses (e.g. Font & Tribe, 2001). Tourism businesses have to make the improvements and put eco-certified products on the market; but they often only do so to the extent that their own particular customers are prepared to
pay for such improvements (Buckley, 2002). According to the report of Synergy (2000) consumer demand is actually the key to encouraging tourism businesses to join eco-certification initiatives. Eco-certificates are a mechanism for consumer choice, and only when tourists accept an eco-certificate as meaningful and reliable they may use it in choosing individual products (Font & Tribe, 2001; Buckley, 2002). A problem is that despite the potential power of the ‘consumer demand’ approach, very few eco-certificates are truly successful in gaining consumer recognition. Many consumers do not know about environmental issues and are not willing to pay the extra cost that eco-certification may entail (Font & Tribe, 2001).

In addition to this, Lubbert (2001) demonstrated in his research that interviewed consumers perceived the characteristics of an eco-certificate different: 35% of them thought that an eco-certificate should cover environmental quality and 27% environmental protection. Another 13% perceived an eco-certificate not in terms of environmental quality or protection but in terms of cleanliness and hygiene (Maccarrone-Eaglen & Font, 2002). A single eco-certificate can therefore often not agree with every consumer’s expectations. Probably even more important is that the strongest determining factors in choosing a destination are often price, health and safety (Synergy, 2000), not environment.

A strong example is what happened to TUI, the largest tour operator in Europe, when they started a project to communicate environmental performance of businesses in their brochures through their label: the Green Thumb. The bookings for those hotels with the Green Thumb logo were actually much lower than for other hotels without it. This was probably because customers thought the green products would also be more expensive. In the end TUI decided to withdraw the Green Thumb messages from their brochures (Sustainable Tourism Stewardship Council, 2003).

Another issue that stands in the way of consumer recognition may be that the benefit of eco-certified products is ‘diluted’. The more tourists who choose not to buy eco-certified products, the smaller the benefit gained by those who do, because the improvements in environmental quality are less than they would be if everyone had contributed. Tourists that buy a certified product enjoy only part of the benefits and people who have not paid enjoy the rest (Buckley, 2002). This phenomenon is quite similar to the free riding problem that occurs in common pool resources, which we mentioned earlier.

Another problem that is mentioned quite often is that there is such a plethora of eco-certificates (in 2002 there were over a hundred). They all have different meanings, criteria, and geographical scope, which give confusing messages to the consumers (Synergy, 2000; Font, 2002). A single global tourism eco-certificate scheme could have more effect, because it would have advantages in recognisability, by tourism companies and consumers alike. However, it would be almost impossible to customize a global eco-certificate to all the different countries, ecosystems, and tourism activities (Buckley, 2002). A possible alternative is the creation of a (global) umbrella body overseeing all eco-certificates (Synergy, 2000). This could be a so called ‘accreditation body’. Accreditation is the process by which the ‘auditor is audited’ and the ‘certifier is certified’. When a certain eco-certificate program has been accredited by a (globally) recognized accreditation body, this indicates to everyone that the certifier is capable of performing specified certification procedures correctly. This could both increase recognisability for consumers, the reliability of the individual certification bodies and the comparability amongst them (Synergy, 2000; Toth, 2000; Font, 2002; Font, 2003).

Other problems mentioned by experts that stand in the way of large scale application of eco-certificates by businesses are that marketing and promotion of eco-certificates are often neglected (Toth, 2000; Sustainable Tourism Stewardship Council, 2003) and the fragmented nature of the industry itself, which makes decision making and cooperation among businesses more difficult and slower (Synergy, 2000). There are no clear-cut solutions for these problems. There may be a few leads, though. For example, eco-certification could help tourism businesses minimize governmental control by increasing self-regulation (Drakopoulou and Gössling), which may be
appealing to some hotels or hotel chains. Another example is that certification programs associated with well-known (inter)national organizations are usually more readily accepted by tourists (Toth, 2000). Also, public reporting of progress, especially by larger companies, would increase awareness of the benefits of certification and improve confidence in the credibility of certification initiatives (Synergy, 2000).

On the whole, most studies conclude that sustainability issues are not perceived to be a key factor in tourist decision-making processes, and sustainable tourism credentials alone do not offer significant marketing benefits over other tourism products of similar price and quality (Synergy, 2000). There is some evidence, however, that some consumers and tour operators are increasingly regarding eco-certificates as an essential part of a quality product (Synergy, 2000). According to Buckley (2002) the end point in the evolution of any eco-certificate should be that they have to become such a routine part of normal business relations between company and customer and become perceived as an automatic requirement. There are some signs that care for the environment is becoming a more standard issue in people’s vacation ‘package of demands’. Because of the Internet, tourists can more and more handpick their own travel packages. In light of this, an assembly of different tour operators has already started to develop an Internet Travel Database, with information on the environmental performances of all their hotels (OAD, personal communication). A point Dixon et al. (2001) raise is that it is easier to acquire a bad reputation for poor environmental quality than to establish a good reputation. Over time the role of eco-certificates may thus become more defensive in nature, in the sense that non-certified destinations may find that they simply cannot attract visitors, or can only do so at great discounts (Dixon et al., 2001). At present this is already the case for some products. For example, in the Netherlands canned tuna without the certificate ‘dolphin friendly’ is almost not sold anymore. If the same could become true for tourism, then maybe in the future each consumer can decide on the ‘shade of green’ of their certificate, depending on how important good environmental performance is to their purchase behaviour (Font & Tribe, 2001), but no certificate at all equals a poor choice in any case.

Apart from consumer acceptance and the standards that eco-certificates set, there is one additional factor that can influence the success of eco-certificates, and their potential to contribute to (more) sustainable tourism. According to Font (2003), there is evidence that suggests that certification is most suited to those countries with well-established infrastructures and the finances to support industry to reduce its negative impacts. For developing countries this may pose a problem. Developing countries often have underdeveloped infrastructures and governmental structures. Government input can be very important for eco-certificates. Sustainable tourism and ecotourism certification programs rely to a great extent on government support, according to the Sustainable Tourism Stewardship Council (2003). Half of the eco-certificates receive government support (Font, 2003) and would probably not survive without it (e.g. Dixon et al., 2001). It could be said therefore that it would be impossible for sustainable tourism standards to be implemented in many countries without the support of the government (Sustainable Tourism Stewardship Council, 2003). Because governments in developing countries often do not have the funds to set up their own national certification programs or to operate low interest loans for efficiency improvements, certification may not be equitable for developing countries (Font, 2003).

The international eco-certificates are often based upon the interests in developed countries and do not take developing countries and their local industry perspectives into account. The small-scale tourism enterprises of developing countries would have a very difficult task to reach the process and output standards of many eco-certificates that have originated in developed countries (Sasidharam et al., 2002). A risk is that the decisions considering eco-certificates will mainly reflect the judgments of the group with adequate time and resources (personnel and financial) to participate. This may exclude small and medium enterprise stakeholders. Resulting standards may be too low to provide adequate protection for the environment and too high for small and medium
enterprises in developing countries to meet, so that only the international hotel chains can achieve them (Medina, 2005).

A solution to this could be that the certification standards are lowered even more to increase the number of participants. The result of this, however, would be that in the end one way or another eco-certificates in developing countries provide tourists only with a subjective and filtered image of the environmental impacts produced by a particular tourism enterprise. In this way, rather than contributing to sustainable tourism development, and protecting the natural resources of developing countries from the possible detrimental impacts of tourism, eco-certificates might become merely marketing tools without much meaning in such countries (Sasidharam et al., 2002).

All in all, it becomes clear that the question to what extent and how eco-certificates can contribute to sustainable tourism in developing countries is a complex one. It is very possible that regarding different countries the answers may be different. Therefore, we use a case study of one country (the island of Curaçao, of the Netherlands Antilles) in a developing region (the Caribbean) to illustrate and discuss the practical and theoretical issues that are important. This is done as a means to answer the main research question for that particular situation, as well as in a broader context. The following chapter will give an overview of the case study done on Curaçao, and the results and conclusions of that case study. Based on this case study and the literature analysis in the previous chapter, we will discuss to what extent and how eco-certificates could contribute to sustainable tourism in developing countries, and draw conclusions based on this discussion.
4. Case study: Curaçao

Figure 2: The island of Curaçao

Curaçao is an island, approximately 60 kilometers away from the South American mainland (Venezuela), in the southern part of the Caribbean Sea (see Figure 2). It has a surface of approximately 444 km², and in 2005 it had approximately 136,000 inhabitants (CBS, 2007). Curaçao is part of the Leeward Islands of the Netherlands Antilles. The islands of the Netherlands Antilles form a federation within the Kingdom of The Netherlands. In spite of this, Curaçao does not have a developed economy (Dinica, 2006-b). However, it’s GDP per capita (approximately $12,400) and relatively low inflation rate imply that it has a better economic situation than many other developing countries in the Caribbean region (Dinica, 2006-b). The island of Curaçao makes its own fresh water out of seawater by reverse osmosis. Despite the potential for e.g. wind and solar energy, the island depends on imported oil to generate electricity.

Although the case study in Curaçao was used to illustrate sustainable tourism in developing countries, the island of Curaçao is currently not a country by itself, but part of the country ‘the Netherlands Antilles’. It could be argued that it would therefore be more concisely named as a developing region or developing island. Curaçao does have its own island government, but it falls under the administration of The Netherlands Antilles, which is also located on Curaçao. Some subjects on the other hand, constitutionally fall completely under the island government administration. An example of such a subject is tourism. Because of this, and because the future governmental and administrative status of Curaçao is currently under debate (see e.g. the Slotverklaring, 2005) we will often align Curaçao with a developing country, instead of a developing region or developing island.

Few parts of the world are as directly dependent on tourism for their economic survival as the Caribbean, which is one of the most tourism intensive regions in the world. Tourism contributes almost 15 % to the total GDP of the Caribbean (World Travel & Tourism Council, 2006). Caribbean governments often have high expectations of the tourism sector for earning foreign exchange, generating revenues and creating jobs (Holder, 1988). Criticism on government tourism policies often arises because much of the focus is on an absolute increase in visitor arrivals (Yaw, 2005). However, a problem is that islands in general and those in less developed countries in particular seem to be especially vulnerable to the negative impacts of (mass) tourism (Kokkranikkal, McLellan and Baum, 2003). The conflicts between high volume, international mass tourism and small fragile insular ecosystems and social structures can lead to rapid environmental degradation and socio-cultural disruption (McElroy, 2003). Through the “sun, sand, and sea” tourism, the countries of the Caribbean rely directly on the environment and their
other natural and socio-cultural resources for economic growth and development (Dixon et al., 2001), and their degradation would be cause major problems to the tourism industry. Although a little later than in some other countries in the Caribbeab, tourism is gradually becoming one of the most important business sectors on the Netherlands Antilles (Dinica, 2006-b). According to the Curaçao Tourism Bureau, the share of tourism in the GDP of the Netherlands Antilles has increased greatly over the last years and is expected to increase in the future. This growth is shown in the number of hotels on the Netherlands Antilles and the number of tourists that visit the islands. However, the same problems that may arise in the rest of the Caribbean are also threatening the Netherlands Antilles and Curaçao. If in the future Curaçao only maximizes economic benefits and ignores environmental issues, it may experience the pitfall of unsustainable mass tourism described in the introduction (e.g. the self destruct theory of tourism, Healy, 1994). On the other hand, turning Curaçao into a large natural reserve and eco-tourism destination, by maximizing ecological values and forsaking economic benefits is also not an option if the island wants to further develop its economy. Sustainable tourism development that balances the three P’s (People, Planet, Profit) is therefore crucial to Curaçao and the rest of the Netherlands Antilles.

To achieve sustainable tourism the government of the Netherlands Antilles has taken some actions. An example is the ‘Sustainable Tourism Policy for the Netherlands Antilles’ that was issued in 1997 (Department of Environment & Nature Conservation, 2004). However, many of the goals set by the 1997 policy have not been met (Dinica, 2006-a). One of the focus points of the 1997 policy that was not implemented, for example, was the adoption by island governments of “standard legal or voluntary environmental requirements” for existing hotels and tourism companies (Dinica, 2006-a). Legal environmental requirements are for example the standards set by the ‘Hinderverordeningen’. To receive a ‘Hindervergunning’, businesses have to meet these standards (see: Department of environment and nature, ministry of public health and social development; mina.vomil.an). Businesses need nuisance licenses for most of their activities. These nuisance licenses are based on the nuisance ordinances of the island. In a standard nuisance license for hotels and pensions (Hinderverordeningen Curaçao, 1994) regulations can be found on wastewater (e.g. it is forbidden to discharge untreated wastewater into the ocean), on pipelines, swimming pools (e.g. they have to be filled with tap water), and tanks for gas oil storage, for example. Most of these regulations concern safety measures. Only very few regulations, like the one for wastewater, deal with environmental issues. There are some regulations that forbid pollution of the soil, and some that deal with waste disposal, but that is all. Many environmental issues are not regulated altogether in these nuisance licenses.

One of the reasons that more standard legal requirements for tourism businesses have not been adopted into the Hinderverordeningen by the (island) government(s), according to Dinica (2006-a) is that some politicians considered legal requirements as harmful to the tourist industry because of regional competition considerations; tourism is a footloose industry and investors may go elsewhere if legislation is too strict (RMNO, 2006). Therefore, Dinica (2006-a) argues that in the past some politicians favored a legislative vacuum. However, recently the need for (more) legal environmental criteria has been increasingly acknowledged. In 2005 the project ‘Environmental standards and criteria for the Netherlands Antilles’ was started. The project’s goal was to set legal environmental standards for the Netherlands Antilles, to ensure the (minimal) requirements for the quality of the environment. These standards had to provide a basis to create an effective environmental policy for the Netherlands Antilles. The protection of human beings was a first priority in this; the protection of the environment itself was a second priority. For both of these goals, but especially for the former, clear guidelines on environmental hygiene issues like water quality, air quality, and waste (water) were needed.

From preliminary research (Pronk, 2006) it became clear that knowledge on existing environmental policies was minimal. The importance of more and especially of clear environmental standards however was acknowledged in general by the businesses that were
interviewed. The general opinion was that the existing regulations were not always clear and that there were also too few regulations. Without clear environmental regulations and standards to comply with, hotels claimed that they did not know what they could and could not do, and how they could consider the environment (Pronk, 2006).

A possible alternative to legal standards to provide clear regulations and standards to comply with for hotels is the use of voluntary standards. Voluntary environmental standards are for example those set by eco-certification programs. In addition to setting legal standards, the government of the Netherlands Antilles was therefore trying to achieve sustainable tourism and to improve the environmental performance of the tourism sector, by encouraging tourism businesses to apply for eco-certificates (see: Department of environment and nature, ministry of public health and social development; www.mina.vomil.an).

A project initiated by the government of the Netherlands Antilles to inform hotels, tour operators, and diving schools about the environment, was the project ‘Environmentally-Aware Tourism’ (‘Natuurlijk Antillen’). This project was started up in cooperation with the Dutch Association of Travel Companies (ANVR). Together with the NGO Unique Curaçao, and the federal environment agency MINA. The project Environmentally-Aware Tourism developed a set of ten ‘Golden Rules’ as a pilot certification program. Participants could voluntarily comply with these golden rules and get a certificate that was recognized by the CYB, the tourism board. However, the certification component of the project failed, in so far that companies did not consider environmental-friendly measures, except those companies that were already trying to acquire an international eco-certificate (Dinica, 2006-b).

4.1 Research

The practical part of this research was done during a three-month internship on Curaçao for the Department of Environment and Nature at the ministry of Public Health and Social Development of the Netherlands Antilles, in the period between the 1st of December 2006 and the 1st of March 2007 (see Appendix A for the full report). The assignment for the internship was to formulate an advice on the implementation of environmental standards for hotels and resorts on Curaçao in a policy report. The research was part of the project ‘Environmental standards and criteria for the Netherlands Antilles’ of Geleuken (2006).

The basic notion of the research project was closely related to the observation of Font (2003), that governments can use eco-certificates by integrating them with their own sustainability targets, and use them to implement national agreements. In that way, the standards set by voluntary eco-certification programs can also be used as standards in legislation policies. However, as was mentioned above, too many legal requirements were seen as harmful to the tourist industry because of regional competition considerations. Completely voluntary projects on the other hand like the ‘Environmentally-Aware Tourism’ project had failed in the past. This raised the question where legal and voluntary targets and requirements should meet, and what the role of the government of the Netherlands Antilles could be.
In sum: it was hypothesized that eco-certificates could possibly make contributions to sustainable tourism on Curaçao and the Netherlands Antilles, because they could be used to set legal and/or voluntary standards, for example. However, it was unclear which standards could be used, what the contribution of eco-certificates to sustainable tourism could be. Furthermore, the intent of the government was that they would have a role to play in the implementation of suitable eco-certificates, but it was yet unclear how the government could fulfill this role. The main research questions of the research done during the internship on Curaçao were:

Which concrete environmental demands (for water consumption, energy consumption, waste and wastewater) from which eco-certificates, are applicable to the Netherlands Antilles and useful to set environmental standards to achieve sustainable tourism and how can the government of the Netherlands Antilles fulfill its role in achieving sustainable tourism?

4.2 Methods

To answer these questions a literature study was performed. One of the goals of that study was to make an inventory on eco-certificates. There is such a plethora of eco-certificates that it was necessary to start with inventorying which certificates are suitable for the Netherlands Antilles, which environmental standards these certificates aim for, and what the conditions to obtain these certificates are. Only after doing that it would be possible to determine which eco-certificates could contribute to a (more) sustainable tourist industry. Some certification programs that were studied were Green Globe 21; Green Key/Environmental barometer; European Eco-label; Green Seal and ISO 14001.

Interviews constituted the other part of the research. Some preliminary interviews and conversations were done with stakeholders in the tourism industry on Curaçao, to establish the current situation and their views on the subject of environmental standards, legislation and eco-certificates for the tourism industry (for the accounts of these interviews: see Appendix C). In addition to this, structured face-to-face interviews were done with respondents that had functions at hotels on Curaçao. Not all hotels on the island were included, however. Because of time limitations and practical obstacles ten of the largest hotels on Curaçao were interviewed for this project. All the interviews were done in Dutch, because it is an official language of Curaçao and because many managers and people in similar (high) functions in the hotels, and many people working for the government and NGO’s on Curaçao were Dutch or Dutch speaking.

Several different (groups of) stakeholders were interviewed in addition to the hotels, including for example governmental bodies, but also NGO’s and certain businesses (see Appendix C). Some of the most important of these stakeholders were interviewed at the beginning of the project. This was done to pinpoint the most important environmental issues in tourism, to get an overview of the situation (for example past, present, and future projects), and to be able to make a list of questions for the hotels. Stakeholders that were identified and interviewed were: the energy and water company Aqualectra, the garbage service Selikor, The NGO Uniek Curaçao, The environmental consultancy company Ecovision, the Curaçao Tourism Development Board CTDB, the Curaçao Hotel And Tourism Association CHATA, and the Environmental service (the ‘Milieudienst’) of Curaçao. Representatives of the international travel agencies OAD and TUI had already been interviewed in the Netherlands.

The tourism industry as a whole includes many different businesses, e.g. hotels, restaurants, souvenir shops, and dive schools. However, this is such a broad and diverse group of businesses that for this project it was decided to focus only on hotels and resorts, which were both be referred to under the denominator ‘hotels’. It was also decided that social implications of sustainable tourism and eco-certificates were not dealt with specifically in the interviews.
Furthermore, out of the many different possible environmental issues, we regarded mainly the subjects of energy use, water use, waste and wastewater. This was necessary because of time constraints and feasibility issues. From the preliminary interviews with different stakeholders it became clear that these four environmental issues were of special importance for the tourism industry on the Netherlands Antilles. Another factor in the decision for these specific four issues was the ‘Profit’ aspect of the three P’s that are the pillars of sustainable development. Environmental measurements can be costly. However, measurements that increase efficiency can save money in the longer run. Energy and (fresh) water on the Netherlands Antilles are relatively expensive; the cost of energy for private clients on Curaçao is approximately 0.5 NAF/kWh (approximately 0.28 USD/kWh), the costs of water for private clients are approximately 15 NAF/m³ (approximately 8.38 USD/m³). Because of this, implementations to save energy and water have a relatively short payback time. Measurements to decrease energy and water use were therefore expected to meet relatively low resistance from the tourist industry. According to stakeholders waste and wastewater are two of the largest environmental problems originating from tourism on the islands; landfills are filling up, and nutrients and chemicals from wastewater end up in the ocean, where they can damage the corals surrounding the islands (Department of Environment & Nature Conservation, 2004). Since the largest environmental problems on Curaçao are waste and wastewater, but hotels were expected to be more positive toward energy and water (efficiency) measures, it was decided to focus on these four (‘environmental hygienic’) issues. These topics were also focus points in the “sustainable tourism for the Netherlands Antilles” paper of 1997.

For the interviews at the hotels appointments were made with employees of the hotels. Because of difficulties with respect to the low response levels of the hotels and because of time restraints, the only restriction for the person that was to be interviewed was that he or she should know something about the environmental policies and practices of the hotel. A total of ten hotels were visited (for a list of the hotels, the questions and the accounts of the interviews: see Appendix B). In the following table (Table 1) the division of the posts at the hotels of the participants of the interviews is shown.

<table>
<thead>
<tr>
<th>Position participants interviews</th>
<th>Number (total of 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner/ shareholder</td>
<td>3</td>
</tr>
<tr>
<td>General manager</td>
<td>1</td>
</tr>
<tr>
<td>Assistant general manager</td>
<td>1</td>
</tr>
<tr>
<td>Maintenance manager</td>
<td>1</td>
</tr>
<tr>
<td>Facility manager</td>
<td>2</td>
</tr>
<tr>
<td>Financial manager</td>
<td>1</td>
</tr>
<tr>
<td>Resort manager</td>
<td>1</td>
</tr>
</tbody>
</table>

From this table it becomes clear that the positions of the respondents in the hotels were quite diverse. Because of this, it is possible that the answers and comments given by these respondents in the interviews reflect those differences and are therefore colored by perception.

Also, it became clear during the interviews that many of the respondents at the hotels were originally Dutch, and not Antillean or Caribbean. Six out of the ten respondents were from the Netherlands originally. This is an interesting observation in itself, but it may also have had an influence on the point of view of the respondents, and consequently on their answers. For example, compared to the Netherlands the infrastructure of Curaçao could be regarded as relatively poor, while someone originally from the Caribbean might rate the same infrastructure as relatively good.

The order of the questions (see appendix B for all interviews of hotels, in Dutch) of the interviews was such that first some general questions were asked about the environmental policy of the hotel.
and the opinion of the respondents on environmental standards, possibilities interventions by the
government, and legislation. Thereafter followed some questions about the four main subjects of
this research; energy, water, waste, and wastewater. At the end some questions about eco-
certificates were asked. The concept of the elaboration of the interview was sent back to the
respondents, so that they could make corrections, and the elaboration of the interview could be
adjusted.

4.3 Results

As was mentioned above, at the beginning and the end of the interviews the participants were
asked some questions to find out what the general opinions of ‘hotels’ on eco-certificates and
environmental policies were. Participants were asked whether their hotel had (plans for) an
official environmental policy or not and whether it had an eco-certificate or plans to apply for an
eco-certificate in the future. The following Table summarizes the responses of the ten hotels.

Table 2: Division of the policies of the hotels

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental policy</td>
<td>1</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Eco-certificate</td>
<td>1 (green key)</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

As becomes clear from this simple summary only one hotel out of the ten interviewed on Curaçao
had an eco-certificate (and from other interviews became clear that it was in fact the only hotel on
the island with an eco-certificate). This hotel had the Silver level of the ‘Green key’ (formerly
known as the Milieubarometer), an eco-certificate with output-based standards, and three levels
of ambition; bronze, silver, and gold. They were of the opinion that the gold level would decrease
their luxury standards too much (e.g. by restricting the amount of water/minute that can come out
of showers), so they had no plans to achieve that level in the near future. Another hotel had been
certified in the past by Green Globe, a process based eco-certificate, which also includes
benchmarking. However, because of the large amount of work involved, the high costs, a lack of
recognition of the certificate by their guests, and the lack of enthusiasm from the current
management, they had not applied for re-certification. They were considering applying for the
Green Key in the future, however.

Something else that becomes clear from Table 2 is that most hotels did not have an official
environmental policy. The only hotel that did have an official policy also had an eco-certificate.
However, this doesn’t mean that nothing was done with respect to the environment: some
respondents mentioned that their hotels did have plans to apply themselves to receive an eco-
certificate in the future, or adopt an official environmental policy. Some of the others argued that
eco-certificates and official policies were too much paperwork, and that they applied themselves
to environmental improvements and awareness on an ‘unofficial’ basis. The respondents at the
hotels mentioned several different motivations for (not) having or planning on achieving an eco-
certificate. Some of these motives, e.g. the amount of (paper) work, were already mentioned. The
different motivations the respondents at the hotels mentioned are summarized in Table 3.

Table 3: Motivations of hotels in favor of and against eco-certificates

<table>
<thead>
<tr>
<th></th>
<th>Too much (paper) work</th>
<th>Too expensive</th>
<th>No perceived benefits</th>
<th>Competitive value</th>
<th>Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why (plans)</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Why not</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Apparently, the perceived negative aspects of eco-certificates were mainly the amount of paperwork and regular work that had to be done before the hotel could apply for and receive an eco-certificate. Lack of time and of human and financial resources also prevented the hotels to apply for an eco-certificate. The costs of certification, including the costs of the implementation of necessary measures was also a reason not to apply for eco-certificates. The most important reason given however was that the hotels did not think that an eco-certificate would bring benefits to the hotel, with regard to e.g. higher occupations of rooms. They were of the opinion that their (potential) guests did not know or care about the eco-certificates. The reasons that the hotels gave that made them apply for or consider an eco-certificate were the competitive value such a label might have, and the expertise that was already available in eco-certificate programs which they could benefit from if they joined.

**Standards of eco-certificates**

To find out whether the hotels on Curaçao could possibly reach the standards prescribed by eco-certificates in the relatively near future, eco-certificates were studied to determine their standards on the four main subjects (energy, water, waste, and wastewater). Combined with data from literature, these standards were used to formulate general standards on the four main subjects, including if possible three different levels of ambition for these standards. The notion behind the different levels of ambition was that standards with a low level of ambition were relatively easy to achieve, and standards with a high level of ambition were a lot stricter and harder to achieve. It was expected that a high level of ambition would not be feasible for the Netherlands Antilles in the near future. Lower levels of ambition on the other hand could possibly be feasible in the relatively short term. The full description of the different levels of ambition of the standards for energy, water, waste, and wastewater can be found in the original report (Appendix A).

**Environmentally friendly**

After the initial general questions, the respondents were asked questions about each of the four main subjects. The respondents were asked which environmental policies and implementations the hotels already had with regard to these subjects. In the policy report (appendix A) a full account of these interviews is given. Here, we will only give a summery of the main results. A notable fact was that there were many differences between the hotels. Some hotels already had a number of environmentally friendly practices in place; others were only just starting to consider environmental issues. Implementations and practices to save energy and water were the most popular. Wastewater recycling systems like septic tanks were also used a lot. They can save a lot of water, especially at resorts with large gardens. Only a few hotels had taken measures that did not directly pay themselves back financially, e.g. the use environmentally responsible cleaning products and waste-separation schemes. Most hotels did have some plans for environmentally friendly: e.g. to use environmentally friendly practices in newly build hotel sections, or after renovations of older sections, because they knew it could save them energy and water (and therefore money) in the future. Only a minority of the hotels really had a clear overview of their water and electricity use per day/week/month, and most hotels knew even less about their waste production, and wastewater production. Another observation was that there was almost no significant mutual consultation between hotels on what they were doing with regard to environmentally friendly and practices.

Based on the interviews a comparison between standards from literature and eco-certificates, and present situation in the hotels on Curaçao was made. The goal of this comparison was to see what the ‘matches’ and ‘mismatches’ between the standards from literature and eco-certificates and the existing implementations and practices of the hotels on Curaçao were. This is discussed in more detail in the original report (see Appendix A). Some of the main conclusions are mentioned here.
Regarding the subject of energy use it became clear that there was quite a large difference between the ten hotels concerning how well they measured up against eco-certificate standards. However, for almost every hotel some progress had to be made on all aspects of energy use, to live up to standards of eco-certificates. Only a couple of hotels already had the implementations and practices that the ‘normal’ level of ambition would require. However, some hotels also had energy saving implementations and practices that were not mentioned directly in eco-certificate standards. These were for example timers on the swimming pool filters, various types of air-conditioning sensors, and 'master switches' in the rooms to turn off all the lights in the room. With respect to these implementations some hotels were even a little ahead of eco-certificate standards.

The main conclusions with respect to water use were that most of the hotels were still behind on eco-certificate standards with respect to implementations to save water (like water saving showers). The same was observed for the purchase of water saving appliances. Similar to the subject of energy use, there was also a noticeable difference between the hotels concerning how well they measured up against eco-certificate standards. Remarkably, the water use of the hotels appeared relatively low, and most hotels could live up to the standards of the ‘normal’ level of ambition. However, there were only very few hard data available on water use. With respect to the subject of waste it became clear that all ten hotels were therefore falling behind compared to eco-certificate standards with respect to the handling of waste. Most hotels distinguished one or two waste categories. They did not monitor the amount of waste that they produced.

The main conclusions with respect to wastewater were that there were large differences between the hotels on how well they handled their wastewater: some hotels were not even connected to the sewer system; others had elaborate grey water systems connected to septic tanks. Only very few hotels used environmentally friendly detergents and cleaning products. Most hotels could not measure up against eco-certificate standards.

All in all, the largest mismatch in general between standards from eco-certificates and the present situation in hotels on Curaçao was that the hotels had very few hard data available. Eco-certificates can set standards at certain ‘levels’, also called benchmarks. These are levels of e.g. energy or water use that a hotel must reach to be awarded the eco-certificate. Most hotels on Curaçao however, did not keep records on how much water or energy they use. They often did have water and energy saving implementations and practices, but since usage was not closely monitored, the costs and benefits of these implementations and practices were often unknown.

From the interviews we constructed an overview of the current situation of the hotels and resorts on Curaçao. Some of the main observations were that most hotels were already active with regard to two environmental subjects: water and energy saving. Especially saving water was a high priority item, possible because the Netherlands Antilles has quite high water prices, and the water (and electricity) bill was high for many hotels. This did not mean, however, that every hotel that was interviewed dealt with water and energy in an efficient way. Some implementations were used successfully by about half of the hotels, but were ignored by the other half for some reason. Environmentally friendly dealings with waste and wastewater on the other hand occurred only very scarcely, and not structurally at all. In sum, most hotels still had a long way to go before they could live up to the total package of standards that eco-certificates demand.

4.4 Bottlenecks and solutions

In addition to the information on the ‘gap’ between the standards from literature and eco-certificates and the existing implementations and practices of the hotels on Curaçao with regard to the four main subjects, we also wanted to know what the different stakeholders on Curaçao perceived as necessary for sustainable tourism on Curaçao. Therefore, the different stakeholders were asked where they thought bottlenecks occurred that prevented progress toward sustainable
tourism, what they would describe as essential to achieve sustainable tourism (e.g. legislation as well as voluntary initiatives), and which category of stakeholders (including public as well as private stakeholders) should be responsible for changing the present situation. Something many stakeholders mentioned for example was that new rules have to be feasible in the eyes of the people of Curaçao, because if they feel otherwise they will just ignore them. The complete description of the “pre-conditions for implementations according to stakeholders” can be found in the original report (Appendix A); the main results will be summarized below. We have broadly divided these main results into different ‘categories of bottlenecks’. These bottlenecks were perceived by the stakeholders on Curaçao to stand in the way of sustainable tourism development. The categories include: the internal structures of hotels; the tourists; and finally characteristics of Curaçao as a (developing) ‘country’.

From the interviews it became clear that internal management (structures) in the hotels caused some problems. The implementation of new environmentally friendly measures was sometimes discouraged or hindered by the lack of clarity towards the employees with respect to the environmental policies and rules of the hotel, and the lack of internal consultation within the hotels. The general manager for example often knew things the maintenance manager didn’t and visa versa. As a consequence someone with limited knowledge of environmental issues could make ‘bad’ decisions regarding environmentally friendly without prior internal consultation, in which someone else could have intervened before the decision was made final.

Another observation was that it was important according to some stakeholders that the hotel owners or shareholders, the managers, and the rest of the staff (including e.g. housekeeping and the kitchen staff) were all aware of the environmental policies of the hotel and involved in their implementation. The managers were often responsible for the environmental policy, but some complained that they did not have the right of say to make certain key decisions, and that they did not have the ‘on site’ influence of the staff.

Another problem that was mentioned in the interviews was caused by the current manager system in some hotels. Some managers stay at the hotels for an average of only 3 years. After that they often move on to another hotel and/or another function. This can result neglect of long-term gains, because managers want to optimize the hotels profits in the time they are in charge, and short-term gains are preferred over long-term gains. These managers may therefore forsake projects that have a longer payback time and require high initial investments, because their successor would pick the fruits of that labor.

Another observation made was that according to the Curaçao Tourism Bureau (Nita, personal communications, 2006) international hotels were receiving tax cuts, so they would establish themselves on Curaçao. International tour operators prefer large hotels, and often do not do business with smaller ones. Also, the large hotels were occupied for 80 to 100% on average, and that number is much lower for small hotels. According to Nita, the international hotel chains already have their own high international environmental standards to comply with, which could set an example for the rest of the hotels on Curaçao. However, van den Brink (chairman of the local environmental consultancy agency Ecovision; personal communication, 2006) mentioned that in his experience small, local hotels are more environmental aware and more willing to cooperate with environmental projects than international hotel chains.

From the interviews also became clear that the attitude of some of the tourists could create a bottleneck. According to several respondents at the hotels, guests from the US were regarded as much less environmentally aware and willing to make environmental considerations than guests from Europe. In their view, the Americans demanded luxury and comfort above all else, and were less willing to make compromises on, for example, the temperature of the air-conditioning, and timers for the air-conditioning. Guests from European countries were regarded as more environmentally aware. Hotels with mainly European guests could therefore do more environmentally friendly implementations before their guests complained about a loss of comfort, than hotels with mainly guests from the US, according to some of the hotels. However, it was also
mentioned that even the European tourists knew very little about eco-certificates. In the opinion of most respondents eco-certificates would be much more interesting for hotels if they were better known.

Most of the bottlenecks that were standing in the way of sustainable tourism development according to the respondents, however, were related to the specific characteristics of Curaçao as a (developing) ‘country’. According to some stakeholders, for example the CTDB, the tourism sector on Curaçao has gone through some tough times, in which day-by-day survival was the main goal of many of the hotels, and an increase in tourist arrivals was the main goal of the government. There was no time or money to spare to invest in sustainability and long-term goals.

Now, the tourism industry was doing better; there were more flights to Curaçao and higher occupancy rates of hotel rooms, etcetera. Some stakeholders argued that that this was a reason why the hotels on Curaçao and the government have only recently started to address environmental issues. However, many hotels still do not have enough money available to invest in environmentally friendly implementations. Some of these implementations would ultimately not even cost any money; they could even save a lot of money in the longer run. For example, there are implementations to save water and energy that pay back for their investment costs, because of the eco-savings they produce, in less than 6 months. However, the initial investments are such that many hotels still had to refrain from making these implementations. According to the respondents the government did too little to help them make these implementations, there were no subsidies available for example.

Another point that was raised in the interviews by some stakeholders was the fragmented character of the tourism industry on the island and the lack of communication between the hotels. Many hotels could have improved a lot with respect to environmental issues just by implementing measures other hotels already had, but this kind of information was almost never shared, although some potential platforms for this did exist. Because of this the hotels could miss important opportunities. There was a company, for example, that had set up a project enabling hotels to borrow money to make certain environmentally friendly, and then pay back the borrowed sum in eco-savings (i.e. the financial savings that result from reducing e.g. water and energy use). In that way they did not have to make the initial investments, and after their debt was paid off, they could benefit from the eco-savings themselves. Only a few hotels made use of the project, however, and many of the respondents at the hotels that were interviewed had not heard of it.

There were also problems mentioned that had to do with the utility companies Selikor (garbage) and Aqualecra (water and electricity). Aqualecra has a monopoly position on electricity and tap water. Many hotels had negotiated special price deals with Aqualecra, on condition that they would not generate their own electricity or make their own fresh water. Because of this, initiatives like the ‘Grey water’ project, which entailed that hotels could buy back wastewater to use (for irrigation for example), after it was cleaned, had failed. The price of the cleaned water was higher than the water price the hotels had negotiated with Aqualecra, so none of the interviewed hotels were interested. Also, the possibilities to separate different fractions of waste were very limited. Glass and batteries were not collected separately. According to the respondents the options did not exist. According to the garbage company Selikor some options for waste separation did exist, but the respondents did not know about them. All respondents agreed that better infrastructure was needed to facilitate environmentally friendly practices. A respondent at one hotel reported that the hotel did not have access to the sewer system, and was therefore ‘forced’ to discharge its wastewater into the sea.

According to many stakeholders more legislation and stricter enforcement of this legislation by the government were also important. They emphasized that this new legislation had to be realistic and applicable for the Netherlands Antilles, with regard to its a limited access to certain products and appliances. They stressed that if legislation would seem too difficult to obey, it would just be ignored. Many respondents said that the Environmental service (Milieudienst) had the task to keep the environmental laws up to date, and to let people know they are reinforcing the law
including check ups at the hotels, which they were not doing. The maximum fine for offences on environmental issues at that moment was 5000 NAF (roughly 2500 Euro), but higher fines and information campaigns announcing these fines were necessary according to some respondents. By far the largest perceived bottleneck, however, was the mentality of the people of Curaçao. Some stakeholders argued that before anything else could change, the people of Curaçao had to understand the importance of sustainable tourism. One respondent argued that if the (Antillean) employees of hotels were not environmentally aware, and a (Dutch) owner came with rules and regulations on environmental issues, this would only create a field of tension between owner and employee, instead of creating more environmental awareness. Education is therefore a prerequisite for sustainable tourism development on Curaçao. A good place to start with this could be the studies at the tourism school that will open soon, or in courses and studies at the University of Curaçao.

4.5 Conclusions

Some of the main conclusions of the project on Curaçao are that it becomes clear from the interviews with the stakeholders that the goal of sustainable tourism on the island could not be achieved by using only voluntary measures (e.g. eco-certificates). Apparently there are too many ‘bottlenecks’. These include e.g. the internal structures of the hotels, environmentally unaware tourists and locals and a number of problems associated with the characteristics of Curaçao as a (developing) ‘country’. Many hotels did not make the implementations that were cost effective and had payback times of less than 2 years, or even less than 6 months, voluntarily. Legal standards are therefore also required. It is expected that the hotels on Curaçao could reach the normal level of ambition that was based on eco-certificates and literature, but only if this is enforced through legislation. The additional responsibilities of the government could be to inform the hotels on the legal standards, to enforce the legislation, and to provide infrastructure and subsidies to enable the hotels to reach the standards. Platforms for the hotels to exchange knowledge could also play an important part in this. Increased and improved education and awareness programs are another necessity to achieve sustainable tourism. Eco-certificates could be a means for hotels that were willing to ‘go the extra mile’ and reach higher levels of ambition to stand out amongst the other hotels, and promote themselves accordingly. The high level of ambition would in this case thus remain a voluntary (extra) effort, while basic environmentally friendly implementations would have to be ensured by legal measures.
5. Discussion

The main objective of this research was to assess the possible contributions of eco-certificates to sustainable tourism in developing countries. In the first part of this research report we introduced several concepts and theories that are important for this assessment. The research project on Curaçao was introduced in the second part of this report as a case study that could be used to illustrate some of the main concepts that we introduced, and to demonstrate some of the issues that could be encountered in practice. However, the research project on Curaçao was done as an internship project and part of the more expansive project ‘Environmental standards and criteria for the Netherlands Antilles’ by Geleuken, under the instruction of the Department of Environment and Nature of the ministry of Public Health and Social Development of the Netherlands Antilles. Consequently, the main research question was formulated according to the goal of that project. Instead of the possible contribution of eco-certificates to sustainable tourism, the focus of the project on Curaçao was mainly on the concrete environmental standards from these eco-certificates that could be implemented by hotels, and the role that the government of the Netherlands Antilles could fulfill in this implementation.

The differences between the main focuses of the two projects resulted in some discrepancies between the subjects and issues that were studied on Curaçao, and the subjects and issues that are important for this research. The time that was available on Curaçao was limited, and priorities had to be made with respect to the issues that were studied there. For example, in the project on Curaçao it was decided to focus mainly on the subjects of water consumption, energy consumption, waste and wastewater. Also, as was mentioned in the chapter about the case study, we did not specifically look into social and cultural factors and standards of eco-certificates in the project on Curaçao. We recognize that because of these reasons the scope of the research done on Curaçao may have been too narrow in some cases to draw well founded conclusions about sustainability in a broad sense.

5.1 Impacts of tourism

In the literature analysis we mentioned two main different categories of negative impacts that can occur because of (unsustainable) tourism development; environmental impacts and social/cultural impacts. Neto (2002, 2003) divided the environmental impacts into three categories: pressure on natural resources, pollution and waste, and eco-system damage. The impacts of these categories do not occur separately in reality; instead they are influenced by each other. Pressure on natural resources is increased by high amounts of waste generation, and waste generation and pollution can in turn put extra pressures on resources, for example when water pollution decreases the amount of clean fresh water available. Another example is that pollution can damage ecosystems, but drought because of the withdrawal of too much fresh water can also do that. In some cases, we therefore expect that when any of these three categories of impacts is decreased, this would have a positive influence on the others. For example, energy use is linked to other environmental effects, e.g. through emissions and waste. Curaçao generates energy by burning IFO, Industrial Fuel Oil. This oil is often polluted, with sulphur for example. Although soot filters have been placed, these still capture only 40% or less of the soot (Austin Matina, personal communication, 2006. He was manager general affairs at Aqualectra.). This causes emissions as well as pollution, for example because of the oil residues that are left. Saving energy can therefore have positive effects on these other environmental impacts as well.

Unfortunately, the mutual influences of the three environmental impact categories (pressure on natural resources, pollution and waste and eco-system damage) do not cause only positive effects. One of the examples we observed of negative effects on Curaçao was the use of septic tanks for wastewater: the ‘grey’ water was used again for watering gardens for example, thus decreasing
the total use of fresh water and the amount of water ‘wasted’ into the sewers. These are the mutual positive effects. However, a danger of this system is that there can still be excess nutrients in this water, especially when ‘black’ water (water that includes the waste streams from toilets) is used in addition to ‘grey water’. If this water ends up in the ocean through the soil water, which is probable if the hotel is near the coast, these nutrients could be very detrimental to the coastal ecosystems, especially to coral reefs (Sien, 2001). Thus, while solving some environmental issues in the ‘resource use’ category and some in the ‘waste’ category, these measures could actually cause problems in the ‘pollution’ and ‘eco-system damage’ categories. If the streams of black and gray wastewater are separated, however, and if the quality of the septic tanks is high enough, then the quality of this recycled water would not be such a problem anymore and it could be a very effective and ‘sustainable’ measure. Therefore, either eco-certificates have to demand the additional measures necessary to ensure that the quality of the system is sufficient when they encourage hotels to implement a measure such as septic tanks, or the government should have legislation to ensure necessary measures are taken and a sufficient quality of the discharged wastewater is guaranteed. However, as became clear from the case study, Curaçao as of yet lacks this legislation. Many other developing countries are presumably not very different.

We recognize that other effects of tourism, e.g. noise and visual impacts (Lim and McAleer, 2005), sand mining, artificial beaches, the need for consumer goods and food, etcetera, are also important on Curaçao. However, because we mainly studied the subjects of energy, water waste and wastewater, on Curaçao, we will limit our examples and discussion to effects relating to these subjects.

The other category of negative impacts that can occur because of (unsustainable) tourism development is comprised of social/cultural impacts. Examples of social/cultural impacts are changes in accessibility of certain places (e.g. national parks and private beaches), spatial polarization resulting in resort enclaves in the most desirable coastal and agricultural locations, inequitable distribution of the costs and benefits of tourism, and congestion (e.g. Holder, 1988; Brohman, 1996; Mohonk agreement, 2000; Synergy, 2000). Social/cultural impacts can also include the (perceived) loss of control and social identity in the host countries (Brohman, 1996). It could be argued that these problems all currently exist on Curaçao to some degree. However, since we did not look into social issues in our case study, it is difficult to make hard statements on account of these issues. One example that was mentioned by one of the respondents on Curaçao that illustrates the difficulties social issues can cause is the influence that the colonial history of Curaçao still seems to have on the attitude of some Curaçaoans. If a ‘westerner’ tells them what to do, they sometimes perceive this as patronizing behavior. Some Curaçaoans do not want a westerner to ‘meddle in their businesses’; irrespective of the company or organization this ‘westerner’ works for, and irrespective of the message that is brought.

As we mentioned in the literature analysis, some (mainly social, cultural and economical) problems are regarded as especially relevant for developing countries. Examples are foreign domination and dependency (Brohman, 1996), the leakage of tourism earnings (Brohman, 1996; Neto, 2003), and low multiplier effects because of a lack of so-called linkages between the tourism industry and other industries and businesses. High rates of foreign ownership and a relatively high percentage of foreign employment, especially in higher (management) functions, can both lead to leakage of tourism earnings, because the profits made are not always reinvested into the local economy; especially not if the owner of the hotels lives abroad, or when the e.g. manager relocates to another country after a couple of years, and spends his or her earnings there. High rates of foreign ownership and a relatively high percentage of foreign employment can also lead to foreign domination, because the key decisions in the hotels are made by outsiders, and not by Curaçaoans.

A problem that was pointed out by many people in the case study on Curaçao was that there is a lack of environmental awareness amongst the local inhabitants, which was preventing the
improvement of many environmental problems. However, many of the people that were showing willingness for more environmental regulations and that were trying to decrease the environmental impacts of tourism on Curaçao, were not Curaçaan but Dutch. In the case study, 60% of the respondents at the hotels were Dutch. Apparently, the issue of foreign employment has two sides. In developing countries, it can lead to negative social/cultural and economic effects (e.g. leakages and foreign domination), but because foreigners may also be more environmentally aware, and in that case foreign employment can have positive environmental effects. Therefore it is hard to decide on a verdict on foreign employment versus local employment and their effects on sustainability. We did not examine social issues in dept enough in the case study to draw well founded conclusions on this matter; this would be an interesting subject for further research.

From this example it becomes clear that social issues are often very complex. Another example of their complexity is the following observation. In the literature analysis we explained that according Brohman (1996) to small, locally owned hotels could be a more beneficial tourism option for developing countries than larger, internationally owned hotel chains. This is because they have more linkages to the local economy, and (consequently) lower leakages. The tourism board on Curaçao, however, is actively trying to attract large multi-national hotel chains (these chains can receive tax cuts for example). One reason to attract international hotel chains is that according to the tourism board they are more beneficial to the economy than small businesses. One of the board’s arguments for this is that large tour operators often do not include small businesses in their brochures and small businesses cannot bargain for cheap airline seats, and therefore can not offer the low prizes to tourists that large hotels can. Consequently, the large hotels on Curaçao have much higher occupancy rates than small hotels (Nita, personal communication 2006, she was director of marketing Curaçao Tourism Board). Another reason to attract international hotel chains according to the tourism board is that these hotels have their own international environmental policy to comply with, and can thus bring international environmental standards to Curaçao (Nita, personal communication 2006, she was director of marketing Curaçao Tourism Board).

However, this strategy of the tourism board to attract large international hotels does not take the previously discussed arguments of Brohman (1996) who recommends small, locally owned hotels, into account. In addition to this the strategy is also contradictory to the observation of van den Brink (personal communication, 2006) that small local hotels are more inclined to care for the environment and participate in local initiatives. Whether large international hotels or small local hotels are better able to help achieve sustainable tourism in developing countries is hard to say. More research on this subject would be required.

The lack of linkages with non-tourism businesses and activities was also described as an obstacle that developing countries might encounter. A lack of linkages can result in lower multiplier effects and higher leakages. Instead of ‘circling through’ the domestic economy, creating local job opportunities and other economical beneficial local spin off from tourism -because the tourists and the tourism businesses each in turn need (consumer) goods, (building) materials, and services- the profits from tourism end up in part in the hands of foreign businesses that supply the local tourism industry with its requirements. On Curaçao this is also a problem. One example is the fact that almost all the food that is consumed on Curaçao, and especially in hotels, is imported, because the size of the agricultural sector on Curaçao is quite limited (Department of Environmental & Nature Conservation, 2004). From the interviews with the respondents at the hotels on Curaçao, it became clear that many other goods have to be imported as well, from energy-saving light bulbs to energy efficient refrigerators.

This does not only mean that leakage of tourism earnings occurs, it also makes the implementation of some eco-certificate standards and e.g. environmental appliances more difficult. Expert knowledge about certain environmental friendly appliances (e.g. solar cells) is almost absent on the island, because there is no local manufacturer or distributor. If an e.g. solar cell is broken, the new parts as well as the expertise to fix it, have to come from abroad. It may
take a long time before a necessary part is available, and costs are often high. This is an obstacle for many hotels when they want to make environmentally friendly and purchase environmental friendly appliances. Because Curaçao is an island with an economy that is not fully developed yet, it consequently has a relatively small area of distribution, small financial reserves, and no benefits of scale to enable the development of such specialized industries.

Effects like seasonality, and global recessions that can magnify the previous problems were not researched in the case study on Curaçao. Therefore we cannot make any hard statements on these points. Seasonality does not seem to be a very large problem for Curaçao, as the climate is suitable for tourism all year round. Global recessions and other international effects could have significant influences (on Aruba the Natalee Holloway case is an example), but more research is needed to be able to really draw well founded conclusions on this subject.

In the literature analysis we also described various theories about how tourism could affect its own success and continued existence, because of environmental and social impacts. Examples are the tourism lifecycle model (Butler, 1980; Holder, 1988; Tooman, 1997; Baum, 1998; Butler, 1998; Hovinen, 2002; Moore and Whitehall, 2004) and the ‘self destruct theory of tourism’ (Healy, 1994). Regarding the phases in tourism development described in the lifecycle model, Curaçao is probably in the ‘Development Phase’ (see introduction). This is the phase in which growth of the tourism sector is increasing rapidly, and with that growth the negative effects of tourism also increase. This is also a phase in which local participation and control is decreasing.

In the following phase, the Consolidation Phase, the growth slows down again and the popularity of the destination decreases, but from the case study it became clear that Curaçao is probably not in this phase yet, because tourism arrivals are still increasing (Nita, Director of marketing Curaçao Tourism Board, personal communication, 2006).

If we consider Healy’s self-destruct theory of tourism, Curaçao is probably in the third phase. This is the phase in which mass tourism sets in, attracting a lesser quality of tourists, with regard to economical power and social standing. This phase is accompanied with social and environmental degradation of the tourist destination. The third phase in Healy’s model is the penultimate phase. In the fourth phase the tourism industry has already self-destructed. If the above theories are correct, and if Curaçao is really in the respectively ‘development phase’ or ‘third phase’, the danger of irreversible damage could be imminent. However, these theories are quite vague in describing how and why damage could occur and consequently give few answers on how it could be averted.

The description of tourism as a commons dilemma (Pigram, 1992; Healy, 1994; Dixon et al., 2001; Briassoulis, 2002) can give some more clues on these accounts. As was explained in the first literature analysis, according to the theory of tourism as a commons dilemma, tourism resources -the main assets of a tourism destination and the main reasons that tourists want to visit a destination in the first place- can suffer from an overuse problem and an investment incentive problem. From the interviews done for the case study it became clear that both of these problems occur on Curaçao.

The investment incentive problem occurs because so called free riders that do not invest still benefit from those actors that do invest. Consequently, being a free rider and not investing is a position many actors may prefer. One of the observations made from the interviews of the case study on Curaçao was that many different stakeholders pointed to other stakeholders that they thought should make the first move before they could do something. For example, respondents at hotels indicated that the government should provide e.g. infrastructure, subsidies and legislation before they could do something about their environmental performance or try to achieve an eco-certificate. Many stakeholders, for example from the utility companies, but also from the hotels and government bodies, responded that the general lack of environmental awareness and knowledge amongst the Curaçaoans and the tourists would have to be resolved first, before they could change. Respondents at hotels explained that they would not apply for an eco-certificate as
long as their (potential) guests were not demanding such a certificate. The travel agencies that were interviewed in the Netherlands also indicated that they would not be frontrunners (anymore), because it was not up to them to create environmental awareness, for example by mentioning eco-certificates in their brochures (TUI, personal communication, 2006). When the environmental awareness of their (potential) customers would increase, then they would react to that. Consequently, the stakeholders were ‘waiting’ for each other to be the first to invest, meanwhile taking advantage of lax regulations and lack of enforcement of regulations by using resources without contributing to the costs of their maintenance, upgrading, or restoration; i.e. by free riding. Dixon et al. (2001) argued that the greater the number of actors the greater the incentive to free ride. They argue that this is because the coordination of the actors is more difficult and because individual negative and positive contributions are relatively small. Although arguably the number of actors on an island such as Curaçao is relatively small, the lack of communication between the hotels we noticed in the case study may increase the incentive to free ride. The coordination of the actors is certainly lower because of this lack of communication. The lack of cooperation between hotels could increase the notion that the individual contribution of each hotel is relatively small, because the complete picture of the impact of all the hotels together is lacking.

The other problem associated with common pool resources, is the overuse problem. Healy (1994) distinguishes congestion and damage to the resource as the two main consequences of the overuse of tourism resources. As the ‘development phase’ of Butlers’ life cycle model advocates tourism growth, the maximum capacity for tourism of the destination is reached and extra visitors cause more and more congestion. The third phase of Healy’s self-destruct theory relates in part to the consequences of this congestion, predicting that the destination will lose its appeal to the more ‘lucrative’ tourists, that may have higher demands, but that also spend more money. Whether this is the case for Curaçao we do not know, and predictions are hard to make on the basis of the limited amount of data from the case study. More research on the purchasing power and consumer satisfaction of the tourists that are visiting Curaçao, over a longer period of time, would be needed, for example.

Resource destruction, the other expression of the overuse problem, may be an issue on Curaçao already. An example is the damage to coral reefs from scuba diving. Some tourism ‘resources’ on the other hand, have actually improved because of (revenues from) tourism, for example the Christoffel Park. The beautification and restoration of the historic city center of Willemstad could be another example of this. Some respondents mentioned the issue of solid waste and garbage lying around, decreasing the attractiveness of many places on Curaçao. Because hotels have to please their guests, they clean up a lot of this waste in their vicinity, on beaches for example. The advantage of this is a cleaner beach; the disadvantage is that entrance to these beaches is often not free anymore, which can cause friction with the local people that do not want to pay for going to the beach. In other words, this is a negative social effect caused by a positive environmental effect. However, we did not look into these subjects enough to draw other well founded conclusions about the positive and negative influences of tourism on the tourism resources on Curaçao.

5.2 Sustainable tourism and eco-certificates

One of the main goals of this research was to find out to what extent eco-certificates could be used to achieve sustainable tourism. In the first literature analysis we described various theories on what sustainable tourism entails and incorporates. The basic notion behind sustainable tourism is that the three P’s (People, Planet, Profit) have to be taken into account simultaneously, to meet the economic, ecological, and socio-cultural needs of the people in tourism destinations without jeopardizing the needs of future generations (The Dutch Guide to Sustainable Tourism, 2003).
We mentioned some core indicators of sustainability in the literature analysis (e.g. the ration of tourists/locals; the number of rare and endangered species; the level of satisfaction of visitors and locals; and the proportional contribution of tourism to the local economy, see introduction). These indicators were not researched in-depth in our case study, however, so we cannot use them to assess the sustainability of tourism on Curaçao. However, as was explained in the literature analysis, we supposed that eco-certificates could possibly also be used as voluntary instruments to improve the environmental, social and economic performance of tourism companies. Indicators of sustainability could thus be partially substituted by eco-certificate standards. In that way eco-certificates may help achieve sustainable tourism, preconceived that these eco-certificates qualify to certain conditions. We have already described in the literature analysis that it is expected that not all types of eco-certificates contribute equally to sustainable tourism. Depending on their standards and characteristics, some may be more effective then others. We will therefore analyze some important characteristics of five relatively well-know international eco-certificates: The European Ecolabel, Green Globe 21, Green Key, Green Seal, and ISO 14001.

We have described that there are different kinds of labels, performance criteria, and standards distinguished in literature. A distinction is often made between Environmental Performance Labels and Environmental Quality Labels, for example. In addition to this, an eco-certificate may measure objective and relative performance, and the standards for the businesses that apply may be Output-based or Process-based. We subdivided the eco-certificates that we considered, by specifying their type of label, performance criteria, and standards. The results are presented in Table 4.

Table 4: Specification of the eco-certificates European Ecolabel, Green Globe 21, Green Key, Green Seal, and ISO 14001, with respect to the type of label, performance criteria, and standards.

<table>
<thead>
<tr>
<th>Eco-certificate</th>
<th>Performance/Quality Label</th>
<th>Objective/Relative Performance</th>
<th>Output-based/Process-based Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Eco-label</td>
<td>Performance</td>
<td>Objective</td>
<td>Output-based</td>
</tr>
<tr>
<td>Green Globe 21</td>
<td>Performance</td>
<td>Relative</td>
<td>Both</td>
</tr>
<tr>
<td>Green Key</td>
<td>Performance</td>
<td>Objective</td>
<td>Output-based</td>
</tr>
<tr>
<td>Green Seal</td>
<td>Performance</td>
<td>Objective</td>
<td>Output-based</td>
</tr>
<tr>
<td>ISO 14001</td>
<td>Performance</td>
<td>Relative</td>
<td>Process-based</td>
</tr>
</tbody>
</table>

Table 4 shows that all the eco-certificates we regarded were Performance labels. This was not a coincidence. Environmental Quality Labels recognize only the situation, i.e. the environmental quality, as it is. Effort and performance of tourism businesses is not rewarded and the results of quality improvements that could be rewarded relate to the quality of the environment, and not to improvements of the quality of the tourism businesses themselves. When the goal is achieving sustainable tourism, the current situation and quality of the environment is only a starting point. Although Lubbert (2001) has shown that tourists do have a positive attitude towards quality labels, we therefore reasoned that they are not suitable instruments to contribute to the improvement of the environmental, social and economic performance of the tourism industry.

From Table 4 it also becomes clear that while most of the eco-certificates we regarded have Objective performance criteria, ISO 14001 and Green Globe 21 have Relative performance criteria. Green Globe 21 uses benchmarking as a first step in the certification process. Participants who want to become certified are also required to meet the provisions of the relevant Green Globe Standards, which are based on continuous improvement. ISO 14001 also does not specify objective levels of environmental performance, and instead it provides generic requirements for an environmental management system. Improvement of performance is one of the central points of the scheme.

Regarding Table 4 we can also see that the eco-certificates with objective performance criteria use Output-based standards, while the relative performance criteria of ISO 14001 and Green
Globe 21 are assessed with respectively process-based standards, and a combination of output-based and process-based standards. As we have discussed in the literature analysis, the (minimal) required level of improvement has a large influence on how effective a program with relative performance criteria is (Font & Tribe, 2001). However, depending on its ‘starting point’ a hotel that is certified by an eco-certificate scheme that has relative performance criteria may still be relatively environmentally damaging even if it improves its performance each year. Process-based standards cause the same problem, because the results of a ‘good’ process do not necessarily guarantee a certain degree of sustainability.

In addition to this, businesses (e.g. hotels) that are certified on the basis of relative performance criteria or process-based standards do not have similar and comparable environmental or sustainability qualities. This makes it difficult for consumers (tourists) to know which business is (more) sustainable. Programs with objective performance criteria and output-based standards can ensure that their members achieve a minimum ‘sustainable’ threshold. Therefore, it may be postulated that only such programs may be able to guarantee a certain degree of sustainability. Objective performance criteria and output-based standards are therefore sometimes preferred to relative performance criteria and process-based standards (e.g. Font, 2002; Sustainable Tourism Stewardship Council, 2003).

However, process-based standards also have some benefits because they ensure that an eco-certificate is self-updating, and that improvements are made continuously. They are also much easier transferable geographically, because environmentally friendly processes are similar and applicable all over the world, while output-based standards have to be adapted to the local situations (for example because of climate). Therefore, it has been argued that process-based standards alone may be insufficient to assess sustainability (Mohonk Agreement, 2000) but the combination of both output-based and process-based standards could be a suitable way to achieve sustainable tourism (Synergy, 2000). From Table 4 it becomes clear that only Green Globe 21 uses this combined approach. A possible drawback however is that as far as we could tell Green Globe’s performance criteria (benchmarking and continuous improvement) are relative and not objective. However, Green Globe does not give full insight to non-members in their benchmarking system. Therefore, it is hard to tell whether the benchmarking system Green Globe 21 uses merely compares achievements and performance between hotels, or whether it also includes some objective thresholds that have to be achieved.

In addition to the type of standards that the eco-certificates have, the evaluation of those standards has also been discussed in the literature analysis. 1st party (self-evaluation), 2nd party (evaluation by the eco-certificate) and 3rd party (independent) evaluation were mentioned. Generally, 1st party evaluation is the easiest and cheapest, but third party evaluation is the most reliable, and therefore preferred to the other two types of evaluation (e.g. Toth, 2000; Maccarrone-Eaglen & Font, 2002; Font, 2002), although it is also the most costly and time consuming type of evaluation. Many eco-certificates combine two or more types of evaluation. The benchmarking of Green Globe 21 for example is a form of self-evaluation (1st party evaluation), combined with a final monitoring by Green Globe itself (2nd party evaluation). To actually become Green Globe 21 certified an assessment by an independent party is required, which is a 3rd party evaluation. The European Ecolabel leaves the final evaluation in the hands of competent bodies in the European member states (3rd party evaluation) but the businesses that want to apply can do a test, to evaluate for themselves what they still have to do to achieve the label (1st party evaluation). The Green key and ISO 14001 use 3rd party evaluation. The Green Seal evaluates the data that the hotels send them (combined with the data from an on site audit) themselves, which is a 2nd party evaluation.

All in all we can conclude that only the Green Seal program does not require a form of independent evaluation before the eco-certificate is granted. However, businesses that have passed the benchmarking of the Green Globe 21 program are already allowed to use a Green Globe logo, although this logo is slightly different from the final certification logo.
The contents of the standards i.e. the issues the standards deal with are also important for the assessment of the possible contributions of different eco-certificates to sustainable tourism. We made an arrangement of the environmental, social/cultural and economical standards of the eco-certificate, to give an overview of the division of their standards between these three categories of standards (see Table 5). However, some specific standards (e.g. of ISO 14001 and Green Globe 21) have not been made public by the eco-certificate schemes, so these standards could not be included. We also did not include the specifics of the standards (e.g. how much water is allowed to come out of the faucets per minute) in this table, only the general subjects. Table 5 (next page) therefore illustrates mainly the general focus of the standards of the eco-certificates.

Various conclusions can be drawn from Table 5. First, we can conclude that most of the standards by far are about environmental issues. Social/cultural standards are rare, and economical standards are as good as absent. A possible explanation for the absence of economical standards could be that economic benefits and economic survival are prerequisites of all the actions hotels take. Arguably, the first priority of any business is often to make money. Standards on this topic may therefore be unnecessary, unless they have something to do with social issues (e.g. fair wages for local employees). However, the list of social standards is also very short. Only the Green Globe 21 eco-certificate demands more than a socially responsible purchasing policy; it requires active dedication to social/cultural issues through community commitment. However, ‘community commitment’ is still a vague term, open to many interpretations. Although in the literature analysis we discussed that Font (2003) defends the fact that eco-certificate often lack extensive social standards, the lack of those standards may arguably be one of the weakest points concerning sustainability of the eco-certificates we looked at, and possibly of eco-certificates in general. People, Planet, and Profit are all (equally) important to the concept of sustainable tourism and sustainability in general, and although Profit may ‘take care of itself’ regarding the tourism business, the factor of People may be under-represented in eco-certificate standards.

Something else that becomes clear from Table 5 is that ISO 14001 only has some guidelines with regard to energy, water and materials use, and that they are quite vague. This is probably because it is a solely process-based certificate and process-based eco-certificates often have no specific output standards. Eco-certificates with only output-based standards on the other hand, sometimes do have a standard referring to an environmental policy or an environmental coordinator. This is for example the case for the European eco-label and the Green Key. These types of standards have an interface with process-based standards, because they focus on the processes in the hotel and the management of the hotel and often require self-improvement. Of the eco-certificates we analyzed, only the Green Seal solely consists of a ‘shopping list’ of output-based requirements, without any demands on account of environmental management.

Regarding the environmental standards of eco-certificates the issues water, energy, waste and wastewater are represented in all the eco-certificates we analyzed that have output-based standards. However, more specific demands e.g. the quality of septic tanks, separation of grey water and black water, and the specific degree to which wastewater has to be treated, are often lacking. All in all, there are few differences between the environmental standards of the different eco-certificates.
Table 5: Main subjects of the environmental, social/cultural, and economical standards of the eco-certificates European Ecolabel, Green Globe 21, Green Key, Green Seal, and ISO 14001.

<table>
<thead>
<tr>
<th>Eco-certificate</th>
<th>Environmental</th>
<th>Social/Cultural</th>
<th>Economical</th>
</tr>
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<tbody>
<tr>
<td>European Eco-label</td>
<td>-Environmental policy</td>
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<td>-Food from local farming</td>
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<td></td>
<td>-Energy and water efficient equipment</td>
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<td></td>
<td>-Electricity from renewable sources</td>
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<td></td>
<td>-Thermal insulation</td>
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<td>-Automatic switch-off systems</td>
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<td></td>
<td>-Collection of energy consumption data</td>
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<tr>
<td></td>
<td>-Eco-labelled products</td>
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<td></td>
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<tr>
<td></td>
<td>-Recycling</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>-Waste separation</td>
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<td>-Wastewater treatment</td>
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<td></td>
<td>-Staff training on environmental issues</td>
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<td>-Information for guests on environmental issues</td>
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<td></td>
<td>-(Renewable energy sources)</td>
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<td>Green Globe 21</td>
<td>-Total energy consumption</td>
<td>Community commitment</td>
<td>(Local community activities)</td>
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<td>-Total water consumption</td>
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<td>-Total waste production</td>
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<td>-Water saving</td>
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<td>-Waste water management</td>
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<td></td>
<td>-Paper products</td>
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<td></td>
<td>-Pesticide use</td>
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<td>-Chemical products</td>
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<td>-(Carbon sequestration)</td>
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<td></td>
<td>-(Renewable energy consumption)</td>
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<td></td>
<td>-(Environmentally accredited operators)</td>
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<td></td>
<td>-(Habitat conservation)</td>
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<td>Green key</td>
<td>-Environmental program and coordinator</td>
<td>-Socially responsible food and beverage</td>
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<td></td>
<td>-Communication to guests about the environment</td>
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<td></td>
<td>-Collection of gas, water, electricity and waste data per guest per night</td>
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<td>-Energy efficient equipments</td>
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<td>-Isolation</td>
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<td>-Water saving implementations</td>
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<td>-Environmentally friendly detergents</td>
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<td>-Waste separation</td>
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<td>-Wastewater treatment</td>
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<td>-Towel reuse</td>
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<td>-Traffic</td>
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<td>-(Renewable energy sources)</td>
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<td>-(Recycled paper)</td>
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<td>-(Environmentally responsible food and beverage)</td>
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<td>-(Decrease in single-unit packaging)</td>
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<tr>
<td>Green Seal</td>
<td>-Waste Minimization, Reuse and Recycling</td>
<td>-Socially sensitive purchasing policy</td>
<td>….“where cost-effective locally”</td>
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<td></td>
<td>-Energy Efficiency, Conservation and Management</td>
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<td>-Management of Fresh Water Resources</td>
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<td>-Waste Water Management</td>
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<td>-Management of hazardous Substances</td>
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<td>-Environmentally Sensitive Purchasing Policy</td>
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<tr>
<td>ISO 14001</td>
<td>-Energy use in line with current technology and environmental targets and objects</td>
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<td></td>
<td>-Water use in line with current technology and environmental targets and objects</td>
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<td></td>
<td>-Material use in line with current technology and environmental targets and objects</td>
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Ad Table 5: The standards printed in *italic* are optional and not necessary to receive the eco-certificate.
Another important quality of eco-certificates recognized in literature (Mohonk Agreement, 2000) is the ‘basis’ of the scheme, including its integrity. We may not have been able to access all the available information on this point because procedures of eco-certificate schemes are not always fully publicized, but as far as we were able to judge, the basis of the (internationally recognized) schemes we looked at was quite similar for a large part, and included the elements mentioned in the report of the Mohonk Agreement (2000), which were discussed in the literature analysis. However, ISO 14001 and Green Globe 21 lack in transparency, which is an element of a certificate’s integrity, because the standards of these programs are not completely and publicly accessible to non-members.

Different levels of ambition were also mentioned in the literature analysis as an asset of eco-certificates, because they could make eco-certificates more accessible to tourism businesses. Green Globe 21 and Green key have such levels of ambition, respectively benchmarking and certification; and a bronze, silver, and gold level. The accessibility of the eco-certificate scheme is important because the number of members an eco-certificate has, is also an important factor. It influences the effects a particular eco-certificate can have on the sustainability of tourism. The more members an eco-certificate has, the larger its impacts can be. We discussed in the literature analysis that in addition to having different levels of ambition, an eco-certificate also needs to be cost-effective to achieve this. In addition to this, marketing is needed, and consumer demand is also very important. Many eco-certificates may be cost effective after a certain period once the implementations that are needed to achieve certification have paid off, but the initial investments hotels have to do, and the yearly membership fees of eco-certificates can still cause problems, especially in developing countries. According to the respondents at the hotels in Curaçao, consumer demand is currently almost absent. In addition to this, the marketing of eco-certificates can also be improved. An example is that the tourism operators TUI and OAD currently do not mention in their brochures whether a hotel has an eco-certificate and which eco-certificate that is. The lack of good marketing is part of the dilemma concerning the applicability of eco-certificates to help achieve sustainable tourism. Without marketing it is unlikely that consumer recognition of eco-certificates will increase much. Without consumer recognition eco-certificates may not be appealing to hotels. If they are not appealing to hotels, and hotels do not apply for membership, the influence of eco-certificates is limited. It became clear form the interviews on Curaçao that only one hotel on the island had an eco-certificate at that time. Some other hotels were considering it, but most hotels did not plan to apply for any eco-certificate in the foreseeable future. The reasons these hotels gave for not applying were mostly the amount of (paper) work it would require. Some respondents replied that they simply did not have the time and people to spare for this. Especially small hotels had barely enough manpower to run the hotel day-by-day, and the extra effort of achieving an eco-certificate was too much to ask, according to them. The (initial) expenses that eco-certificates bring were also a reason not to apply for eco-certification for many hotels. Respondents argued that the (time, manpower, and money) expenses an eco-certificate would bring could not be offset by enough benefits because consumer demand and recognition is too low to lead to any real competitive benefits, and economic gains.
6. Conclusions

In sum, it appears that to answer the main research question, “To what extent and how can eco-certificates contribute to sustainable tourism in developing countries?” several subjects have to be attended to. These subjects could be divided into several interrelated quasi ‘sub-questions’ that can help us answer the main question. These questions are:

How do we define sustainable tourism?
Which eco-certificates could be (best) suitable to contribute to sustainable tourism, when we take into account their characteristics and standards?
Which problems (especially those that are typical for developing countries) should be solved to achieve sustainable tourism?
Are eco-certificates also applicable to the specific situations in developing countries?
What could the contributions of eco-certificates to sustainable tourism be, i.e. how can eco-certificates contribute to sustainable tourism?
What is needed so that the potential contribution of eco-certificates to sustainable tourism in developing countries can be reached?

6.1 Sustainable tourism

Regarding the first question: “How do we define sustainable tourism?” we would argue that the most important point that defines sustainability is that it is based on the three P’s: People, Planet and Profit. This is also represented by our preferred definition of sustainable tourism: “A form of tourism (development) that balances the economic, ecological and social-cultural needs of the people in the destination countries, without jeopardizing the needs of future generations” (The Dutch Guide to Sustainable Tourism, 2003). We argue that therefore social/cultural concerns cannot be left out of a discussion about sustainable tourism, and without the People aspect tourism cannot truly become sustainable. Economical concerns can function as preconditions for implementations and policies concerning sustainable tourism. Our presupposition about tourism in (developing) countries is that these countries have to be able to use tourism to develop themselves economically, and that hotels are commercial establishments that have to make money in order to keep in business. Our notion of sustainable development in general, and sustainable tourism in particular is therefore founded on these premises.

Although sustainable tourism could be regarded from a holistic point of view (i.e. the notion of global sustainability), we argue that the assessment of the sustainability of tourism at a destination level cannot include all the aspects that global sustainability would include. Travel towards the destination for example, is an important topic for the holistic version of sustainability, but it is difficult to apply to (the more practical and pro-destination version of) local sustainability in developing countries that we adhere to. If the issue of air traffic is included in the assessment of the sustainability of tourism, then arguably a tourism destination that is far away from the countries of origin of tourists could not attract these tourists without being unsustainable on a global level. Gössling et al. (2002) for example conclude in their study that any tourism based on air traffic is unsustainable per se. This would conflict with our premise that developing countries have to be able to use tourism to develop economically.

Furthermore, we argue that for a developing country like Curaçao that already has a tourism industry with unsustainable elements, completely sustainable tourism is often a very distant goal. Progress towards that goal is an important achievement for such a country. We would therefore also call something ‘sustainable’ if it is helping to achieve sustainability. For example a program that is teaching children to value and protect the environment, and that is therefore leading towards that ultimate goal of sustainable tourism.
6.2 Eco-certificates

When we take into account the characteristics and standards that eco-certificates should have to be suitable to help achieve sustainable tourism according to different studies, we can make some distinctions between the five eco-certificates we studied (European Ecolabel, Green Globe 21, Green Key, Green Seal, and ISO 14001). The characteristics we looked at were the type of labels (quality or performance; all the eco-certificates we regarded were performance labels), the performance criteria (relative or objective), the type of standards (output-based or process based), and the contents of the standards (environmental, social/cultural, and economical). Generally, eco-certificates with objective performance criteria are preferred to those with relative performance criteria in literature we discussed in the literature analysis. This would mean that concerning this characteristic Green Globe 21 and ISO 14001 would be less suitable than the other eco-certificates. In addition to a preference for objective performance labels, a combined approach of output-based standards and process-based, is also often regarded in literature as the best approach to help achieve sustainable tourism. The second-best option is output-based standards. Based hereupon, Green Globe would be the most suitable eco-certificate, followed by European Ecolabel, Green Key and Green Seal. ISO 14001 would be the least suitable. Process-based standards alone are the least desirable option, according to literature. Based on this classification, we would argue that the European Ecolabel, Green Globe 21, Green Key, and Green Seal would be better suitable than ISO 14001 to help achieve sustainable tourism.

When we look at the content of the standards, it becomes clear that all eco-certificates with output-based standards except the Green Seal have a standard that obliges members to have an environmental policy or appoint an environmental coordinator or both. In this way all these eco-certificates incorporate some issues regarding processes and management. In addition to this, all the eco-certificates we examined except ISO 14001 have some social/cultural standards, but those of Green Globe 21 are by far the most elaborate and far reaching, although arguably they are still quite basic. None of the eco-certificates had any significant economical standards.

Different levels of ambition can make eco-certificates more accessible because applicants can start with the lowest level of ambition and from there improve their performance so they can achieve higher levels of ambition. Different levels of ambition are therefore preferred above one single level of ambition by Buckley (2002). Only Green Globe 21 and Green key use multiple levels of ambition. The type of evaluation that eco-certificates use determine in part their reliability, and therefore also influence whether eco-certificates are suitable to help achieve sustainable tourism (e.g. Maccarrone-Eaglen and Font, 2002). As becomes clear from Table 6, only the Green Seal program does not require a form of independent evaluation before the eco-certificate is granted. Green Globe 21 does not require 3rd party evaluation for their benchmarking level of ambition, only for full certification.

Table 6: the types of evaluation used by the eco-certificates European Ecolabel, Green Globe 21, Green Key, Green Seal, and ISO 14001.

<table>
<thead>
<tr>
<th>Eco-certificate</th>
<th>3rd person evaluation</th>
<th>2nd person evaluation</th>
<th>1st person evaluation</th>
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<tbody>
<tr>
<td>European ecolabel</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Green Globe</td>
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<td>Green Key</td>
<td>X</td>
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<tr>
<td>Green Seal</td>
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<td>X</td>
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<tr>
<td>ISO 14001</td>
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Other important characteristics of eco-certificates, like the basis of the scheme, were comparable between the different eco-certificates, with the exception that ISO 14001 and Green Globe do not provide as much clarity as the other schemes, because they do not give public insight into all their standards and procedures.
All in all, we can conclude that based on the assumptions about the ‘good’ characteristics of an eco-certificate we found in literature, at least three of the five eco-certificates we analysed could help achieve sustainable tourism, to some degree (i.e. European Ecolabel, Green Globe 21, Green Key). We think that ISO 14001 and the Green Seal may be less suitable to help achieve sustainable tourism than these three. ISO 14001 only uses relative performance criteria and process-based standards. It also does not have any social/cultural standards, or levels of ambition. It also lacks in clarity because its standards and procedures are not public. ISO 14001 does require independent evaluation, but the weak points still seem to outweigh the strong points of this eco-certificate. Green Seal does not have any standards that demand environmental processes or management. Also, it does not require any independent evaluation. In addition to this it has no levels of ambition. Green Seal does have objective performance criteria and output-based standards, but no ‘extra’ positive points to outweigh the negative points. Other eco-certificates are therefore probably more suitable to help achieve sustainable tourism than the Green Seal.

A weaker point of Green Globe 21 is that it uses only relative performance standards (as far as we could tell). The fact that not all of their standards and processes are public is also a disadvantage. Also, their benchmarking program does not require independent evaluation. On the other hand, their full certification program does require 3rd person evaluation. Also, Green Globe 21 uses a combination of process and output-based standards, and it has more elaborate social standards than the other eco-certificates. In addition to this it has multiple levels of ambition. We argue that Green Globes strong points outweigh its weak points, and therefore the Green Globe 21 eco-certificate would be suitable to contribute to sustainable tourism. The European Ecolabel and the Green Key eco-certificates have the disadvantage that they do not use different levels of ambition, but for the rest they do not have any important weak points, and therefore we argue that they could also be suitable to contribute to sustainable tourism.

6.3 Problems concerning tourism

Regarding the question “Which problems (especially those that are typical for developing countries) should be solved to achieve sustainable tourism?” we can conclude that based on our literature study, several issues can be regarded as important. Environmental and social/cultural impacts of tourism have been discussed. An important remark on this account is that it became clear from our case study that sometimes very specific environmental regulations are necessary, e.g. for septic tanks and wastewater quality. As became clear from the example we mentioned in the discussion about the effects of nutrients from septic tanks on the coastal coral reef eco-system, these specifications can be very important, especially on an island (like Curaçao).

Other problems described in literature that were mentioned in the literature analysis are the investment incentive problem, which causes free-riding behavior, and the overuse problem, which causes congestion. These are problems associated with common pool resources, and they can be increased by a lack of communication between the different actors. This is currently the case for the different stakeholders in tourism on Curaçao. A lack of (environmental) awareness of the local population as well as the visiting tourists in developing countries, like Curaçao, can increase these problems even more. On Curaçao this is currently an important obstacle in the way of achieving sustainable tourism. Furthermore, for developing countries in particular the problems of leakages of tourism earnings and the lack of linkages of the tourism industry with the local economy, which leads to low multiplier effects, were mentioned.

As we discussed in the literature analysis, imports and foreign employment can increase leakages. Curaçao imports most of its consumer goods and appliances. Foreign employment, especially in the higher functions (management functions for example) at hotels is also frequent, as is foreign ownership of e.g. large international hotel chains. The lack of linkages on Curaçao is best illustrated by the example of cruise ships. The passengers on these cruise ships visit Curaçao during one or two days, but they sleep, eat and find most of their entertainment on the ships.
themselves and not on the island. Cruise tourism therefore has therefore relatively few linkages to
the local economy of the islands the cruises visit. All-inclusive resorts can pose similar problems.
An additional problem that is very distinctive for Curaçao is that social and cultural issues are
important obstacles for sustainable tourism. Environmental as well as social/cultural awareness is
very low on Curaçao. Without local awareness, implementing new policies and rules to achieve
sustainable tourism is only possible from ‘top down’, through legislation for example. Without
‘bottom up’ support, which could lead to voluntary measure for example, achieving sustainability
may be impossible without government intervention. This brings us to the last point, the lack of
strong and reliable government bodies on Curaçao, and presumably in other developing countries
as well. We did not specifically look into this issue in our research, but corruption, a lack of
(enforcement of) legislation, and a lack of thoroughness and momentum from the government
(which we found out during the case study are associated with the government of Curaçao by
stakeholders we interviewed) are serious problems by themselves, but in addition to that they also
can have serious negative influences on the process of achieving sustainable tourism.

6.4 Applicability of eco-certificates

The subsequent question is whether the eco-certificates we discussed above are also applicable to
the specific situations in developing countries? There are some problems associated specifically
with developing countries that according to some studies could mean that these countries have an
arrears compared to other countries when it comes to eco-certificates. According to Font (2003)
certification is most suited to those countries with well-established infrastructures and the
finances to support the tourism industry to reduce its negative impacts. A developing country
such as Curaçao has neither. Government support, e.g. by providing low interest loans for
efficiency improvements (Sustainable Tourism Stewardship Council, 2003), is also important for
eco-certificates and often lacking in development countries like Curaçao. Furthermore, part of the
basis of many eco-certificates is that they demand from their members that they abide to all
relevant national and local legal standards as a first step in the certification process. When there is
almost no legislation, as is the case on Curaçao for example, these standards are useless.

Another problem that was mentioned in the interviews on Curaçao was that many small-scale
tourism enterprises, and even some larger enterprises, would have a very difficult task to reach
the process and output standards of many eco-certificates that have originated in developed
countries. They do not have the manpower to appoint an environmental coordinator or someone
who e.g. fills in the abundant paperwork that eco-certificates require. They also do not have the
financial reserves to spare for the costs of certification, and the initial investment costs of many
required implementations.

In addition to these problems, the lack of technology and know-how in developing countries such
as Curaçao is also an obstacle. Some hotels on Curaçao for example used solar cells, but these
cells had to be imported from abroad. When something broke, spare parts also had to be
imported, and finally the knowledge of how to repair them, i.e. expert knowledge was also
lacking on the island. This does not only take a lot of time, it is also more expensive than when
the technology and know-how would be locally available. This was an obstacle for some hotels
on Curaçao when they wanted to do environmentally friendly. These hotels therefore sometimes
refrained from buying solar cells or other special energy or water saving appliances.

Also, some elements of the management structure in some hotels on Curaçao may also cause
problems for the use of eco-certificates to help achieve sustainable tourism. We found out that
managers often stay with the same hotel for about three years before they move on to another
hotel. When an e.g. manager that was responsible for the environmental policy and
implementations of the hotel leaves, his or her knowledge is lost too. For example, one hotel on
Curaçao used to have a green globe certificate. When the manager that was in favor of eco-
certificates and in charge of the implementation of the eco-certificate left, his successor did not renew certification. Finally, the lack of environmental awareness that developing countries that strive for economic development, like Curacao, sometimes have is also an important obstacle for the applicability of eco-certificates to such countries. If e.g. people in hotels do not perceive environmental deterioration as a real and important problem, they will have little incentive to apply for an eco-certificate. Especially not since tourist demand for eco-certification is lacking (Font & Tribe, 2001) and therefore does not provide hotels with an additional incentive to apply for an eco-certificate.

A result of these obstacles can be that some demands for certain standards and implementations from eco-certificates may continually pose problems for the hotels on Curacao, and probably for hotels in other developing countries (especially small islands) as well. The most important effect is probably the low rate of participation in eco-certification schemes by the tourism businesses in those countries. A solution for this problem could be to lower the standards that hotels have to achieve, to increase the number of participants. However, according to Sasidharam et al. (2002) this creates a new problem because the resulting standards may not be high enough, which makes the certificate useless to achieve sustainable tourism. Because of these problems we more or less repeat one of our conclusions from the case study here, namely that the goal of sustainable tourism in developing countries can not be achieved by using only voluntary measures (e.g. eco-certificates). The effect of eco-certificates is not large enough without additional mandatory (legal) measures.

6.5 Contributions of eco-certificates

This does not mean that eco-certificates can contribute nothing to sustainable tourism in developing countries, however. This brings us to our next question: What could the contributions of eco-certificates to sustainable tourism be, i.e. how can eco-certificates contribute to sustainable tourism? We argue that eco-certificates could make positive contributions to solving some of the problems that (developing) countries face if they want to achieve sustainable tourism. Especially the construction stage of new hotels is very interesting from a sustainable tourism point of view, because at this stage environmentally friendly implementations can be done much easier than once the hotel is already there. Standards from eco-certificates and expert knowledge available through eco-certificates could ensure that hotels ‘get it right’ from the start. Environmental issues for example are fairly well represented in the standards of eco-certificates. Especially saving water and energy, and separating or recycling waste are actively encouraged by eco-certificates. Specific standards on waste water quality and biodiversity on the other hand are often lacking, and so all but some very basic social standards. Eco-certificate cannot contribute to sustainability on those accounts.

The abundance of foreign ownership and employment are also described in literature (e.g. Brohman, 1996) as typical problems for developing countries that, together with frequent imports, lead to leakage of tourism earnings. Foreign employment may decrease because of eco-certificates because they often have standards to encourage hotels to hire local employees. However, standards of eco-certificates on local employment do not include the higher functions like management functions, and so they cannot decrease foreign ownership. Moreover, on Curacao it sometimes seemed that foreign employment actually increased eco-certification. It became clear from our case study that foreign owners and managers were often actually the most willing to apply for an eco-certificate or adopt an environmental policy. The hotels with foreign owners and managers on average also had more environmentally friendly implementations and more concern for the environment of Curacao than hotels with local owners and managers.

A large quantity of imports can also increase leakage of tourism earnings. Some eco-certificates encourage the use and purchase of local products which is a positive effect, but because eco-certificates also prescribe the purchase and use of many energy and water saving appliances, that
are often not manufactured and available in developing countries themselves, eco-certificates may actually increase certain imports by developing countries from the industrialized world, e.g. of technology. Economically, eco-certificates are also not very interesting (yet) for hotels. The main reason for this is that because of the lack of consumer recognition eco-certificates do not lead to additional visitors. According to some hotels they would only lead to more (paper) work and give nothing in return. Some of the implementations that eco-certificates demand can save money because they save water or electricity, but hotels on Curaçao more often choose to make these cost-effective implementations by themselves without applying for an eco-certificate.

Eco-certificates could play a role in educating people about sustainability. In the hotel on Curaçao that had acquired an eco-certificate, the personnel as well as the managers and owners knew about the environmental policies of the hotel. The managers could get expert knowledge from the eco-certificate organization and passed their ‘sustainable mission’ and what that entailed on to their personnel and to their guests. Many eco-certificates include staff training and informing guests about the environment in their standards. In a country like Curaçao where environmental awareness and awareness about other sustainability issues is so rare, we argue that this is an important effect.

Eco-certificate can also encourage other improvements. Many hotels had some environmentally friendly implementations, but after doing the initial most cost effective implementations they were ‘done’. Eco-certificates, especially those with several levels of ambition or with an element of continual improvement, can give hotels an incentive to keep improving their performance. A final important point where eco-certificates could contribute is that they can encourage and increase communication and coordination. Both are lacking between the different hotels and stakeholders on Curaçao. International eco-certificates form international networks in which information can be shared. If more hotels on Curaçao would join the same eco-certificate program, this could encourage communication and coordination between these hotels. The eco-certificate could for example provide a platform for mutual consultation between hotels that are certified. In this way, these hotels could set a good example for the other businesses on the island. Good examples are currently rare on Curaçao and eco-certificates could help showing and advertising (to the other hotels but also directly to the tourist) the best practices that are currently there. Another benefit of more cooperation between certified hotels is that this could potentially decrease the investment incentive problem that was discussed before. For example because hotels could do initial investments in collaboration with each other, giving the other parties no possibility to free ride. All in all, eco-certificate may not be the answer to many problems concerning tourism, but they can play a role in helping to relieve some of the issues that stand in the way of sustainable tourism.
7. Recommendations

On account of the question “What is needed so that the potential contribution of eco-certificates to sustainable tourism in developing countries can be reached?” some remarks can be made. One of the most important prerequisites that have to be met so that eco-certificates can make a contribution to sustainable tourism is an increase in the number of members. Only if a considerable number of hotels are certified the contribution of eco-certificates to sustainable tourism may reach its potential. However, issues like the lack of consumer awareness and consumer demand, combined with people’s lack of awareness in the destination countries are currently standing in the way of an increase in members.

Some stakeholders in tourism could have an influence on the demand of eco-certificates. Examples of these stakeholders are the tour operators, on the Netherlands Antilles itself as well as in the countries of origin of the tourists (for example, the Netherlands; Dutch tourists constitute approximately one third of the market on the Netherlands Antilles (Dinica, 2006-b)). These tour operators supply tourists going to the Netherlands Antilles and tourists that undertake activities and trips on the Netherlands Antilles, with all kinds of information about hotels and other tourism businesses, for example information on eco-certificates. According to Yaw (2005) tour operators also influence the use of cleaner technologies in hotels, because representatives visit hotels to check whether hotels still meet their (environmental) standards. Tour operators can therefore be seen as an important group of actors in the tourism industry, for example by including information on eco-certificates in their brochures. Another way to influence the demand of eco-certificates is giving more education on sustainability issues for local people in developing countries, for example in local tourism educations or colleges, but also in a broader context. Marketing and education of tourists themselves is also important. If there is demand by tourists for facilities with eco-certificates, this also influences the demand for eco-certificates of tourism businesses like hotels.

Another way to increase membership of eco-certificates and thereby their impacts, is government intervention. Governments can use rewards (e.g. subsidies) as well as punishments (e.g. fines when environmental legislation is not abided) to encourage sustainable tourism, either directly or indirectly by encouraging hotels to become a member of an eco-certificate. Additional environmental legislation and enforcement of this legislation can also be a first step to increase environmental awareness, because legislation means hotels have to take the environment and other sustainability issues into account whether they want to or not. Especially in the siting and construction phase of a new hotel, (standards from) legislation could make sure that hotel will become as sustainable as possible.

Furthermore, governments could help enable certification by putting sustainability high on their agendas. Currently the main goal of the governmental tourism organization CTDB (Curaçao Tourism Development Board) is to attract more tourists. They try to achieve this by attracting large international hotel chains, for example. Whether these hotels are environmentally conscious and willing to contribute to sustainable tourism, is not a criteria. Tourism growth mostly in sheer numbers without much regard for sustainability currently seems to be the current main goal of the CTDB, although fewer people, staying longer and spending more per capita could achieve the same ends. We argue that without a good example from their government, people and hotels are much less likely to voluntarily try to change and become more sustainable, e.g. by applying for an eco-certificate. In addition to this, the underdeveloped infrastructure in Curaçao is an additional problem there, and presumably in other developing countries as well. Naturally, possibilities for e.g. waste separation and recycling and wastewater collection and treatment have to be available.
first, before hotels can use them, whether that is done voluntarily through eco-certificates or because of legislation.

In addition to national government support, we would like to add that international support for tourism destinations in developing countries (like Curaçao) is also an option. These countries attract many tourists from industrialized countries, but they do not have the means to counteract the negative impacts of tourism. Tourism is an international business, and the responsibility of sustainable tourism at a destination like Curaçao should therefore not stop at the destination countries borders. Tourists’ origin countries should also share some of the responsibility to make tourism in developing countries more sustainable, for example by providing financial or technical support. Otherwise tourism could be in danger of being just an (other) account of the industrialized world ‘taking advantage’ of the developing world and leaving them (literally, in the case of tourists) to clean up the mess.

In sum, we can conclude that the practical implementation of eco-certificates to achieve sustainable tourism can encounter several obstacles. In theory, the elements to help achieve sustainable tourism voluntarily through eco-certificates are there, but in practice elements are lacking, and government intervention may be an additional necessity. Much more research, for example on social/cultural issues, will be necessary in multiple different developing countries, to find out which things and issues stand in the way of the implementation and adoption of eco-certificates, and which solutions are possible. Without the actual implementation and adoption of eco-certificates by tourism businesses, their potential currently mainly exists on paper and not in reality. On the other hand, if partly because of eco-certificates tourism becomes more sustainable than it was in developing destinations like Curaçao, where environmental awareness and thinking about sustainable development is only in its infancy, this is arguably an important achievement in itself.
8. References


Sien, C. L. (2001) Overview of impact of sewage on the marine environment of East Asia: social and economic opportunities. *United nations Environmental Programme East Asian Regional*


Eco-certificates


9. Appendices

Appendix A:
Report of the internship for the ministry of Public Health and Social Development of the Netherlands Antilles, Department of Environment and Nature

Appendix B:
Interviews with ten hotels on Curaçao (in Dutch)

Appendix C:
Accounts of meetings with tourism stakeholders on Curaçao and in the Netherlands (in Dutch)

Appendix D:
Presentation for the workshop of the ‘Bedrijven Pltvorm Milieu’
Environmental standards for hotels and resorts in the Netherlands Antilles

A survey of ten hotels and resorts on Curaçao

F. Smit, 2007

Ministry of Public Health and Social Development
Netherlands Antilles

Foreword

This report is the result of my internship for the ministry of Public Health and Social Development of the Netherlands Antilles, at the Department of Environment and Nature. As part of the research during my three-month internship I did interviews with key people at some of the hotels on Curaçao and other stakeholders in tourism. In this report I have formulated an advice on the implementation of environmental standards for hotels and resorts on Curaçao. I could not have written this report without the help of several people. I would therefore like to take this opportunity to thank Bart van Geleuken, Tim van den Brink, all members of the “Bedrijven Platvorm Milieu”, Mark Wiegers, and all people in Curaçao as well as the Netherlands that took the time to let me visit and interview them.
**Summary**

To diminish the environmental impacts of tourism on the environment of the Netherlands Antilles, environmental standards for tourism are needed. These standards can be legal or voluntary, like those in eco-certificates. Eco-certificates set voluntary standards that hotels and resorts have to reach, in order to be certified. These voluntary standards can also be used as a basis for legal standards. In this study the possibilities for using standards from eco-certificates for legislation for hotels and resorts on Curaçao as well as ways how these standards could be implemented are explored. The main subjects that were studied are energy, water, wastewater and waste. Three levels of ambition in environmental standards were distinguished for these four subjects: a high, normal and low level. To find out what the current performance of the hotels and resorts on Curaçao on these subjects is at the moment, interviews were done at ten of the major hotels and resorts on Curaçao. The people that were interviewed were asked what implementations and practices the hotels had for the four main subjects and what they thought was needed to increase and expand these environmentally friendly implementations and practices. From the interviews became clear that many different environmentally friendly implementations and practices exist on the island, but that not all hotels have an equal share in them, and that they are poorly communicated. Some hotels have environmentally friendly implementations on all subjects and have standards (almost) at the level that eco-certificates demand. Some hotels only have taken measures on one or two of the four main subjects, and some hotels are clearly falling behind on environmental management. Because of the lack of communication between hotels, knowledge on environmentally friendly implementations and success stories are often not shared. The lack of knowledge of the hotels on their energy and water consumption also contributes to poor environmental management: leakages but also (possibilities for) savings are missed, because monitoring is often poor. Furthermore it became clear from the interviews that the goal of environmental friendly tourism on the island cannot be met by voluntary measures alone, although many implementations are cost effective and have payback times of less than 2 years, or even less than 6 months. Legal measures are also required. For legal standards many chances lie in the instances that new hotel or a new part of an existing hotel are built. Water saving and energy saving measures that are implemented at this stage will save the hotel money later on, and are good for the environment. In the report examples of some of the most cost-effective and environmental beneficial implementations are given. For existing hotels legal standards should come into force after a longer time span of about ten years for example. In the meantime the government has the task to inform the hotels on the standards and rules that are coming, to enforce the legislation that is already in place, and to provide infrastructure and subsidies to make sure the standards that are set are not impossible to reach. Organizations like CHATA can provide platforms for the hotels to exchange knowledge. The ‘normal’ level of ambition should be possible to reach for tourism on Curaçao: hotels that want to go further can do so by taking the voluntary path and apply for an eco-certificate to distinguish themselves.
Samenvatting

Om de negatieve effecten van toerisme op het milieu op de eilanden van de Nederlandse Antillen te verminderen zijn milieu standaarden voor toerisme nodig. Deze standaarden kunnen verplicht worden gesteld of op vrijwillige basis worden ingevoerd, zoals dat bijvoorbeeld bij eco-keurmerken het geval is. Eco-keurmerken stellen vrijwillige standaarden op die hotels en ressorts moeten behalen. Deze vrijwillige standaarden kunnen gebruikt worden als basis voor wettelijke standaarden. In dit onderzoek worden de mogelijkheden om standaarden uit eco-keurmerken te gebruiken voor milieuruggeving voor hotels op Curaçao onderzocht en de manieren waarop die standaarden in praktijk gebracht zouden kunnen worden. De hoofdonderwerpen waarnaar gekeken is, zijn energie, water, afvalwater en afval. Voor deze vier onderwerpen zijn drie ambitieniveaus onderscheid: een hoog, normaal en een laag niveau. Om er achter te komen hoe goed de prestaties van hotels op dit moment op Curaçao zijn met betrekking tot deze onderwerpen, zijn er interviews gehouden bij tien van de grootste hotels op Curaçao. De mensen die werden geïnterviewd werd gevraagd naar de implementaties en maatregelen van de hotels op het gebied van de vier hoofdonderwerpen en wat zij vonden dat nodig is om deze implementaties en maatregelen op milieugebied verder uit te breiden. Uit de interviews werd duidelijk dat er vele verschillende implementaties en maatregelen op milieugebied bestaan op het eiland, maar dat niet alle hotels er even ver mee zijn gevorderd en dat de communicatie onderling erover slecht is. Sommige hotels hebben implementaties voor alle vier onderwerpen en standaarden die (bijna) zo hoog zijn als die eco-keurmerken vereisen. Sommige hotels hebben juist alleen maatregelen op het gebied van één of twee onderwerpen, andere lopen duidelijk achter op het gebied van milieumanagement. Omdat er zo weinig communicatie is tussen de hotels, worden kennis en de succes verhalen van milieu maatregelen weinig gedeeld onder de hotels. Het gebrek aan kennis op het gebied van water en energiegebruik draagt ook bij aan de matige milieumanagement van hotels: lekkages en mogelijkheden voor besparingen worden niet opgemerkt door gebrek aan monitoring. Verder werd uit de interviews ook duidelijk dat het doel van milieuvriendelijk toerisme op het eiland niet kan worden gehaald door alleen maar vrijwillige maatregelen, ook al zijn veel maatregelen kosteffectief voor de hotels en hebben ze terugverdientijden van minder dan 2 jaar, sommige zelfs minder dan een half jaar. Wettelijke maatregelen zijn ook nodig. Voor wettelijke standaarden zijn de meeste kansen te behalen wanneer er een nieuw hotel of een nieuw deel van een hotel wordt gebouwd. Maatregelen die water en energie besparen en die geïmplementeerd worden in deze fase, besparen het hotel later geld, en zijn ook nog eens goed voor het milieu. In dit rapport worden aan aantal voorbeelden van de meest kosten effectieve en milieuvriendelijke maatregelen gegeven. Voor bestaande hotels moeten de wettelijke standaarden pas op langere termijn verplicht worden gesteld, bijvoorbeeld na tien jaar. In de tussentijd heft de overheid de verantwoordelijkheid om deze standaarden en regels die eraan komen goed te communiceren naar de hotels toe, de bestaande standaarden en wetgeving te handhaven, te zorgen voor infrastructuur en subsidies te verlenen zodat de standaarden die vastgesteld zijn ook echt haalbaar zijn voor de hotels. Organisaties zoals CHATA kunnen een platform bieden voor hotels om kennis uit te wisselen. Het ‘normale’ ambitie niveau is haalbaar voor het toerisme op Curaçao: hotels die verder willen gaan kunnen dat doen op vrijwillige basis door een eco-keurmerk aan te vragen om zo zichzelf te onderscheiden.
Index

1 Introduction
   1.1 Environmental standards in the Netherlands Antilles: Issues and backgrounds
   1.2 Environmental standards and sustainable tourism in the Netherlands Antilles
   1.3 Environmental standards and hotels on Curaçao
   1.4 Stakeholders in tourism on Curaçao
   1.5 Principal environmental themes in hotels: energy, water, waste, and wastewater

2 Existing standards
   2.1 Voluntary environmental standards: the example of eco-certificates
      2.1.1 Different eco-labels, different standards
      2.1.2 Levels of ambition in environmental standards
   2.3 Standards from Eco-certificates water, energy, waste and wastewater

3 Interviews hotels
   3.1 Methods
   3.2 Present environmental consciousness of hotels
   3.3 Present environmentally friendly implementations of hotels
   3.4 Summary of main conclusions from the interviews

4 Discussions
   4.1 Comparison between existing standards, and present situation in hotels
   4.2 Preconditions for implementations according to stakeholders
   4.3 Available policy instruments: legal versus voluntary measures

5 Recommendations
Environmental standards for resorts and hotels in the Netherlands Antilles

1. Introduction

To protect our environment, and therefore our quality of life, regulation of human activities is essential. Without it, it is often impossible to prevent that long-term benefits are forsaken for short-term profits and the personal gain of a few leads to losses of many. Setting environmental standards is one way to regulate human activities. Environmental standards can be very versatile; from minimum demands for water and air quality in general, to legal claims on the discharge of a specific substance for one specific company. Industries (for example the oil industry) often have their own set of environmental standards. The tourism industry, like any other industry, also needs environmental standards to regulate human activities. In this introduction the backgrounds and aims of this study will be explained: first on the project environmental standards in the Netherlands Antilles, and after that we will zoom in on the specific subject that was researched for this report; environmental standards for hotels and resorts on Curaçao.

1.1 Environmental standards in the Netherlands Antilles: Issues and backgrounds

The project ‘Environmental standards and criteria for the Netherlands Antilles’ was started in 2005. The project’s goal is to set legal environmental standards for the Netherlands Antilles, which are basically the (minimal) requirements for the quality of the environment. These standards are used as guidelines to create an effective environmental policy for the Netherlands Antilles. The protection of human beings is a first priority in this; the protection of the environment itself is a second priority. For both of these goals, but especially for the former, there is a need for clear guidelines on environmental hygiene issues like water quality, air quality, and waste (water). According to the study of Dinica (2006) on the challenges surrounding the implementation of the 1997 policy for promoting sustainable tourism on the Netherlands Antilles, a problem with the implementation of sustainable tourism measures was that politicians favored a legislative vacuum, because their perception was that legislation would have a negative impact on the regional competitiveness for tourism of the islands. However, research done by Anne Pronk, who interviewed 25 businesses on Curaçao and Bonaire and asked them about their standpoint on environmental standards and legislation, provided a different picture. Her research showed that people’s knowledge on existing environmental policies is minimal. The importance of more and especially of clear environmental standards however was acknowledged in general by the businesses that were interviewed. People preferred to know what they can and cannot do. This stood true for different types of companies on the islands (mostly hotels and garages).

1.2 Environmental standards and sustainable tourism in the Netherlands Antilles

One of the most important businesses on the Netherlands Antilles is tourism. The number of hotels on the Netherlands Antilles, and the number of tourists that will visit the islands, is only expected to increase in the future. Tourism is gradually becoming one of the most important business sectors on the Netherlands Antilles. According to the Curaçao Tourism Bureau, the share of tourism in the GDP of the Netherlands Antilles has increased spectacularly over the last years and will only increase more in the future. The tourism industry is very interesting if we consider environmental standards, because for its continued existence tourism depends directly on the (environmental) quality of its surroundings. If tourism is not sustainable, it can have major negative impacts on the environment at the destination. Tourists often visit places partly because of their natural beauty; if that is gone, so are
the tourists. Consequently, environmental quality and therefore environmental standards and tourism, are closely connected.

1.3 Environmental standards and hotels on Curaçao
The tourism industry as a whole comprises many different businesses, e.g. hotels, restaurants, souvenir shops, and dive schools. However, this is such a broad and diverse group of businesses that for this project it was decided to focus only on hotels and resorts. At the present, environmental standards for the Netherlands Antilles would be standards for Curaçao, Bonaire, and the three small Leeward Islands St. Maarten, St. Eustatius, and Saba. However, in the near future the country of the Netherlands Antilles as such will probably seize to exist. In that case, the environmental standards that were originally meant for the country as a whole can also be used for the individual islands. This would probably not lead to many legal changes or difficulties, since environmental policy and tourism are already constitutionally mainly an area of island competence. Because of the above, and because of the limited time available for this research, interviews were limited to hotels and resorts, which will both be referred to under the denominator ‘hotels’, on the island of Curaçao.

1.4 Stakeholders in tourism on Curaçao
Before putting together a set of environmental standards for the hotels on Curaçao, it is important to discover what the most important environmental issues are, and where the opportunities for improvement lie. To do this, the stakeholders (other than the hotels themselves) in tourism on Curaçao had to be identified. There are different types of stakeholders: for example governmental bodies, but also NGO’s and certain businesses. Some of the most important of these stakeholders were interviewed at the beginning of this project. This was done to pinpoint the most important environmental issues in tourism, to get an overview of the situation (for example past, present, and future projects), and to be able to make a list of questions for the hotels. Stakeholders that were identified and interviewed were for example: the energy and water company Aqualectra, the garbage service Selikor, The NGO Uniek Curaca, The environmental consultancy company Ecovision, the Curacao Tourism Development Board CTDB, the Curacao Hotel And Tourism Association CHATA, and the Environmental service (the ‘Milieudienst’) of Curaca. International travel agencies, e.g. OAD and TUI, are also stakeholders in tourism that were interviewed.

1.5 Principal environmental themes in hotels: water, energy, waste and wastewater
The environmental standards of the project environmental standards for the Netherlands Antilles are on air quality and noise, water quality, waste, and wastewater. For the tourism sector, most of these environmental issues are also important. However, from interviews of the different stakeholders it became clear that four environmental issues are of special importance for the tourism industry on the Netherlands Antilles. These are: energy use, water use, waste and wastewater. In the following paragraph this choice is explained.

Environmental measurements can be costly. However, measurements that increase efficiency can save money in the longer run. Energy and (fresh) water on the Netherlands Antilles are expensive; the cost of energy for private clients is approximately 0.5 NAF/kWh (approximately 0.28 USD/kWh), the costs of water for private clients are approximately 15 NAF/m3 (approximately 8.38 USD/kWh). Because of this, implementations to save energy and water have a relatively short payback time.

Since according to multiple stakeholders the largest environmental problems originating from tourism on the Netherlands Antilles are waste and wastewater, but hotels are expected to be more positive towards energy and water (efficiency) measures, it was decided to focus on these four issues waste, wastewater, energy, and water.
2. **Existing standards**

Some legislation and environmental (hygiene) standards already exist on the Netherlands Antilles. On Curaçao and the other islands, these are formulated in the so called ‘nuisance licences’ (hindervergunningen). Businesses need to have a nuisance license for their activities, which is based on the nuisance ordinances (hinderverordeningen) of the island. In a standard nuisance license for hotels and pensions, regulations can be found on wastewater (it is forbidden to discharge dirty wastewater in sea), on pipelines, swimming pools (which have to be filled with tap water), and tanks for gas oil storage, for example. Most of these regulations are about safety, only very few regulations, like the one for wastewater, deal with environmental issues. There are some regulations that forbid pollution of the soil, and some that deal with waste disposal, but that is all. On many environmental issues there are no regulations in these nuisance licenses.

From the research of Anne Pronk it became clear that hotels actually regret this lack of clear regulations on environmental issues: their opinion was that the existing regulations are not always clear and not well known and that there are also too few regulations. Without this, without clear environmental regulations and standards to comply with, hotels often do not know what they can and cannot do to consider the environment.

In this second chapter we will start by introducing possible additional environmental standards which could possible be used in regulations for hotels on Curaçao as well, namely the existing environmental standards that are used by eco-certification programs. We will start by explaining a little more about these programs and about so called ‘levels of ambition’, and we will end by giving an overview of standards (for energy, water, waste and wastewater) divided into different levels of ambition, from several different certification programs.

### 2.1 Voluntary environmental standards: the example of eco-certificates

Environmental standards for tourism are not necessarily and exclusively legislation obliged by governments. National and international eco-certification programs that promote sustainable tourism, like Green Globe and Green Key, give a voluntary alternative to legal standards. These programs do this by imposing their own environmental standards on tourism businesses that apply for membership. These can be standards on the management of the hotel, the appliances a hotels uses, the way waste and wastewater is handled, and the energy and water use of the hotel, for example. They then grant eco-certificates to businesses that (voluntarily) comply with these standards. The benefits from these eco-certificates for the hotels, apart from the financial gains from a more efficient use of recourses, lie in that they can be used as a promotional tool; to show potential guests that the hotel is working on sustainability cares for the environment. The eco-certificate programs help the hotels achieve their goals by showing best practice examples and helping them to make the right choices. They are also an encouragement to keep up the good work because they use audits, in which the hotels is visited and thoroughly investigated, to see if it still lives up to the eco-certificate’s standards.

Eco-certificates are described by the United Nations Environment Programme (UNEP, 2006) as: “voluntary instruments to improve the environmental, social and economic performance of tourism companies”. Of course, it would be useless to ‘discover the wheel’ all over again for legal environmental standards. On the contrary: voluntary standards from eco-certificates could also be used as examples to create legal standards; this option is explored in this research.

#### 2.1.1 Different eco-labels, different standards

A problem with eco-certificates is that there are so many of them. Not every certificate is suitable for the Netherlands Antilles. Also, every certificating program has different criteria to achieve certification e.g. limitations on energy and water use, location choice, type of building materials, construction and upkeep of gardens, mobility, and waste (prevention) policies. To determine which eco-certificates can contribute to a (more) sustainable tourist industry on the islands of the
Netherlands Antilles, it is necessary to start with inventorying which certificates are suitable for the Netherlands Antilles, which environmental standards these certificates aim for, and what the conditions to obtain these certificates are. Certificates that were analyzed in this project were: Green Seal, Environmental Barometer, Green Key, Green Globe, and the European Ecolabel/Environmental Seal European Union (Milieukeur Europese Unie). In Textbox 1 (next page) a little more is explained about eco-certificates.

2.1.2 Levels of ambition
Change does not happen overnight, and businesses will need time to start their implementations. Therefore, it is useful to distinguish different ‘levels of ambition’. A standard with a low level of ambition is relatively easy to achieve, a standard with a high level of ambition really ensures that the environment is not harmed, but it is a lot stricter and harder to achieve. Eco-certificates sometimes also utilize different levels of ambition: the green key (the successor of the Dutch ‘environmental barometer’ or ‘milieu barometer’) for example has a bronze, silver and a gold level. A high ambition level may or may not be feasible for the Netherlands Antilles in the long term, but in the short term a lower level of ambition is probably more reasonable. There could also be a distinction between the level of ambition of the required environmental standards for existing buildings and hotels, and new ones, or expansion of existing hotels.

2.2 Standards from Eco-certificates for water, energy, waste and wastewater
On the whole, there are two different kinds of environmental standards in eco-certificates. On the one hand: the guidelines on behavioral aspects or implementations, these standards we will call the management-focused standards. On the other hand eco-certificates can also have standards on the type of equipments a hotel should have, and how much water or energy a hotels should use per ‘guest night’ (which is per guest in a room per night; two people staying in one room for one night consequently amounts to 2 guest nights). These standards we will call the quantity-focused standards. In the following section both management-focused standards and the quantity-focused standards from eco-certificates on the four main subjects energy, water, waste and wastewater will be dealt with.
2.2.1 Standards on energy (use)

The following standards and requirements for energy use are taken from eco-certificates (Green seal, Green key/environmental barometer, European Eco label/Environmental Seal European Union, Green Globe) and articles (by Trung and Warnken et al.; see literature list Appendix) on energy use in hotels in other/similar parts of the world. First, the standards that are aimed at quantitative performances, like water use per guest-night are presented, and second the requirements for other aspects of environmental management are presented in order of importance and relevance. For the first type of standards three levels of ambition are
distinguished: high, normal and low. High ambition levels are the strictest standards found in the eco-certificates and in literature, low ambition levels are the least strict, and normal ambition levels are the levels that were most common in eco-certificates, and somewhere between the high and low level of ambition. In some cases there was not enough information to formulate all three levels of ambition, so for example only the normal level of ambition in shown.

**Quantitative performance standards**

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Lighting (within 1-5 years)</th>
<th>Air-conditioning</th>
<th>Boiler</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>80% class A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>60% class A</td>
<td>Class B efficiency 90%</td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>20% class A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table: 1 levels of ambition for lighting, air-co and boiler.
For the explanation of ‘class A, B etc’: See [http://www.energielabel.nl/](http://www.energielabel.nl/)

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Washing machine</th>
<th>Dish washer</th>
<th>Tumble dryer</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>Energy label A</td>
<td>Energy label A</td>
<td>Energy label A</td>
</tr>
<tr>
<td>normal</td>
<td>Energy label B</td>
<td>Energy label B</td>
<td>Energy label B</td>
</tr>
<tr>
<td>low</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: levels of ambition for washing machine, dishwasher and tumble dryer.
For the explanation of ‘Energy labels A, B etc’: See [http://www.energielabel.nl/](http://www.energielabel.nl/)

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Refrigerator</th>
<th>Freezer</th>
<th>Mini bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>Energy label A</td>
<td>Energy label A</td>
<td>Energy label A &lt;1 kWh/day</td>
</tr>
<tr>
<td>normal</td>
<td>Energy label B</td>
<td>Energy label B</td>
<td>Energy label B</td>
</tr>
<tr>
<td>low</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: levels of ambition for refrigerator, freezer and mini bar.
For the explanation of ‘Energy labels A, B etc’: See [http://www.energielabel.nl/](http://www.energielabel.nl/)

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Isolation</th>
<th>Warm water</th>
<th>Room temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>Heat exchange coefficient max. 4.2 W/m²</td>
<td>Max. 50 degrees C</td>
<td>If not rented: above 25 degrees C</td>
</tr>
<tr>
<td>normal</td>
<td>Energy efficient windows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>low</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: levels of ambition for isolation, warm water and room temp.

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Total energy use (kWh/guest/night)</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>&lt; 37.3</td>
</tr>
<tr>
<td>normal</td>
<td>37.3 - 53.3</td>
</tr>
<tr>
<td>low</td>
<td>50.3 - 100</td>
</tr>
</tbody>
</table>

Table 5: levels of ambition for total energy use
Other standards
- Programmable on/off timers and/or sensors for lighting in low traffic and low occupancy areas
- 22% of energy from renewable sources
- Inspection efficiency level boiler at least once a year

2.2.2 Standards on water (use)
The way the standards and requirements for water are presented is similar to the energy standards. Again a high, normal and low level of ambition is distinguished. First the quantitative performance standards are dealt with, and second the requirements for other aspects of environmental management are presented in order of importance and relevance.

Quantitative performance standards

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Faucets (litre/min)</th>
<th>Toilets (litre/flush)</th>
<th>Showers (litre/min)</th>
<th>Washing machines</th>
<th>Dish washer (litre/basket)</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>12 litre/wash</td>
<td>3.5</td>
</tr>
<tr>
<td>normal</td>
<td>8</td>
<td>6</td>
<td>9</td>
<td>12 litre/kg</td>
<td>9.8</td>
</tr>
<tr>
<td>low</td>
<td>12</td>
<td>80% 6</td>
<td>12</td>
<td>12 litre/kg</td>
<td></td>
</tr>
</tbody>
</table>

Table 6: levels of ambition for faucet, toilet, shower, washing machine and dishwasher

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Total water use (litre/guest/night)</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>&lt;650</td>
</tr>
<tr>
<td>normal</td>
<td>650-1000</td>
</tr>
<tr>
<td>low</td>
<td>1000 -6000</td>
</tr>
</tbody>
</table>

Table 7: levels of ambition for total water use

Other standards
- For exterior plantings, property shall use plants and trees tolerant of climate, soils and natural water availability
- Landscape shall be watered where necessary in the early morning or at night to minimize evaporation
- Towel and/or linen reuse option to multiple night guests
- Instructions displaying recommendations for saving water

2.2.3 Standards on waste
The way the standards and requirements for waste are presented is similar to the energy standards. Again a high, normal and low level of ambition is distinguished. First the quantitative performance standards are dealt with, and second the requirements for other aspects of environmental management are presented in order of importance and relevance.

Quantitative performance standards

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Paper</th>
<th>Toilet paper</th>
<th>Facial tissues</th>
<th>Paper towels</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal</td>
<td>30% recycled</td>
<td>20% recycled</td>
<td>10 % recycled</td>
<td>40% recycled</td>
</tr>
<tr>
<td>low</td>
<td>10% recycled (coated paper)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8: levels of ambition for paper, toilet paper, facial tissues, paper towels
<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Total waste production</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>2.8 l/guest/night</td>
</tr>
<tr>
<td></td>
<td>0.5-1.5 kg/guest/night</td>
</tr>
<tr>
<td>normal</td>
<td>4 l/guest/night</td>
</tr>
<tr>
<td></td>
<td>5.7-18.7 kg/guest/night</td>
</tr>
</tbody>
</table>

Table 9: levels of ambition for total waste production

**Other standards**

<table>
<thead>
<tr>
<th>Categories recycling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal level of ambition</td>
</tr>
<tr>
<td>High level of ambition</td>
</tr>
</tbody>
</table>

Table 10: categories for recycling of waste

- Use highly concentrated cleaning products dispensed through portion control equipment
- Do not use single portion packages for food.
- Donate leftover food to a local shelter or food bank.
- It is the responsibility of the hotel that garbage ends up in the appropriate place, when the authorities fail in collecting it.
- Used amenities are collected for donation to charity or recycling.

### 2.2.4 Standards on wastewater

The way the standards and requirements for wastewater are presented is similar to the energy standards. Again a high, normal and low level of ambition is distinguished. First the quantitative performance standards are dealt with, and second the requirements for other aspects of environmental management are presented in order of importance and relevance.

#### Quantitative performance standards

<table>
<thead>
<tr>
<th>Level of ambition</th>
<th>Total waste water (m3/guest/night)</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>&lt;0.26</td>
</tr>
<tr>
<td>normal</td>
<td>0.26-2.3</td>
</tr>
<tr>
<td>low</td>
<td>2.3-12</td>
</tr>
</tbody>
</table>

Table 11: levels of ambition for total wastewater production

**Other standards**

- Property shall demonstrate that chlorinated chemicals are used only where there is no less toxic alternative, and only in minimal amounts
- Property shall use automatic dishwashing detergent that is biodegradable, does not contain NTA (nitrilotriacetic acid), and does not contain chlorine bleach.
- Property shall use non-phosphate, nontoxic, biodegradable, concentrated liquid or powder laundry detergents and cleaning products
- Property shall seek out and explore the use of organic insecticides, fertilizers and biocides and/or integrated pest management (IPM) techniques.
3. Interviews with hotels on Curaçao

Before this survey, it was not clear what the current environmental practices of hotels were. Some hotels could already be very environmentally aware, and have a lot of environmentally friendly implementations, while others could be falling far behind on things like environmental management. Before any legislation can be made, it is necessary to know what level of ambition is feasible for hotels on Curaçao. It is possible for example that an ambition level that would be feasible in the Netherlands is not (yet) possible for the Netherlands Antilles. From interviews with other stakeholders it became clear that, apart from being clear, standards and legislation also have to be feasible to work.

"If standards set by the government are not realistic, people will ignore them and just go on doing what they were doing before"

The only way to find out which practices are used and useful ‘in the field’, is to ask the hotels themselves what has been done so far, and what they think could be done. Therefore, hotels on Curaçao were visited and interviewed to see which environmentally friendly and policies the hotels of Curaçao have at this moment.

3.1 Methods
For the interviews appointments were made with employees of the hotels. The only restriction for the person that was to be interviewed was that he or she should know something about the environmental policies and practices of the hotel. A total of ten hotels were visited (for a list of the hotels, the questions and the accounts of the interviews: see Appendix B). In the following table (Table 12) the division of the posts at the hotels of the participants of the interviews is shown.

<table>
<thead>
<tr>
<th>Position participants interviews</th>
<th>Number of hotels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner/ shareholder</td>
<td>3</td>
</tr>
<tr>
<td>General manager</td>
<td>1</td>
</tr>
<tr>
<td>Assistant general manager</td>
<td>1</td>
</tr>
<tr>
<td>Maintenance manager</td>
<td>1</td>
</tr>
<tr>
<td>Facility manager</td>
<td>2</td>
</tr>
<tr>
<td>Financial manager</td>
<td>1</td>
</tr>
<tr>
<td>Resort manager</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 12 Division of the positions in the hotels of people that were interviewed

The composition of the questions of the interviews was such that first some general questions were asked about the environmental policy of the hotel and the personal opinion on environmental standards, possibilities interventions by the government, and legislation of the participants. Thereafter followed some questions on the four main subjects of this research; energy, water, waste, and wastewater. At the end some questions on eco-certificates were asked. The concept of the elaboration of the interview was sent back to the person that was interviewed, so that person could make corrections, and the elaboration of the interview could be adjusted.

3.2 Present environmental consciousness of hotels
As was mentioned above, at the beginning and the end of the interviews the participants were asked some questions to find out what the general opinion of ‘hotels’ is on eco-certificates and environmental policies. Participants were asked whether the hotel had an environmental policy or
not and whether there were any plans to apply for an eco-certificate (or whether they already did). The following table summarizes the responses of the ten hotels.

<table>
<thead>
<tr>
<th></th>
<th>yes</th>
<th>no</th>
<th>Partial/plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental policy</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Eco-certificate</td>
<td>1 (green key)</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Table 13 Division of the positions in the hotels of people that were interviewed

As becomes clear from this simple summary only one hotel out of the ten interviewed on Curaçao has an eco-certificate and most hotels do not have an environmental policy. However, this doesn’t mean that nothing is done on environmental managing: some hotels do have plans to strive for an eco-certificate in the future, or adopt an environmental policy. Some of the others found that eco-certificates and policies were too much paperwork, and strove for environmental improvements and awareness on an ‘unofficial’ basis. The hotels had different motivations for having or not having or planning on achieving an eco-certificate. These motivations are summarized in table 14.

<table>
<thead>
<tr>
<th>Why</th>
<th>Too much (paper)work</th>
<th>Too expensive</th>
<th>No perceived benefits</th>
<th>Competitive value</th>
<th>Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why (plans)</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why not</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 14 Motivations of hotels in favor of and against eco-certificates

From the questions about the four main environmental issues that were distinguished in this study, it became clear that at least the hotels on Curaçao already have adopted some environmental practices. The next paragraph will deal with these environmental practices by the hotels.

### 3.3 Present environmentally friendly of hotels

In this paragraph the overview of the outcome of the questions for each of the four main subjects is presented as follows: some quantitative performance data on the subjects are presented, then some implementations and practices and the number of hotels that have them are presented in a table, and after that some additional information on these current implementations and practices is provided.

#### 3.3.1 Implementations and practices on energy use

Quantitative performance data:
In most hotels the energy use is not closely monitored. Hotels basically look at the monthly bill from Aquallectra to see whether there are no striking peculiarities. Hard data are sometimes collected, monthly, weekly, or even daily, but often not much is done with it, and data were almost never available. Although most respondents thought that the energy use of the hotel was
“high”, almost none knew whether the use was going up or down. For the resort that did have some hard data available, the energy use was 200.000 kWh/month (approximately 36 kWh/room/day). The amounts hotels pay for their energy varies a lot: some small ones pay 45.000 NAF/month for both water and electricity combined; other large ones pay 300.000 NAF/month for electricity alone.

Implementations and practices:
The following table (Table 15) summarizes some of the most common implementations and practices to save energy, and number of hotels that have them.

<table>
<thead>
<tr>
<th></th>
<th>yes</th>
<th>no</th>
<th>Partially/plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy saving light bulbs</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Air-conditioning sensors</td>
<td>7</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Central thermostat</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Solar water heaters</td>
<td>3</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Timers on lights</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Energy meters</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Pool filter on timer</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Signs: Air-conditioning off</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Energy labels/efficiency</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 15 energy saving implementations and practices of hotels

In general, most hotels on Curaçao have some energy saving implementations and practices. As become clear from Table 15, energy saving light bulbs are used everywhere in about half of the hotels. Other hotels have only replaced some of their light bulbs with energy saving light bulbs. Energy saving bulbs especially replace the traditional light bulbs in common areas, like gardens and lobby’s. One problem that was mentioned by some of the respondents, however, is that the electrical current on Curaçao often fluctuates. This is not good for energy-saving light bulbs: they break a lot sooner than their supposed life-expectancy suggests.

One hotel had a ‘master switch’ in every room, to simultaneously turn off all lights, and the television. The air-conditioning wasn’t connected to this switch.

Almost all hotels indicated that the air-conditioning uses the most energy. However, only about half of the hotels have a system in place that causes the air-conditioning to turn off if guests are leaving. Half of the hotels had timers on lights in the gardens or public spaces, like hallways. Only a couple of the hotels have solar boilers. They are often used in combination with electrical boilers. It is remarkable that the hotels that have them claim they were a good investment, but the hotels that do not have them are often not convinced that they are worth the investment and the trouble of installing them.

According to some resorts, guests (especially from Europe) don’t mind as much as most hotels think if the air-conditioning turns off when they leave. In some resorts (Chogogo, Papagayo) only the bedrooms have air-conditioning. Another hotel had a centralized air-conditioning system. This system was coupled to reservation system, which enabled the hotel to switch the air-conditioning system to de-humifying only when the rooms are unoccupied (if the rooms are not de-humified, mildew develops very rapidly).

Another hotel had central thermostat, set on about 20 degrees; this prevents temperature differences between rooms, which otherwise leads to water-condensation, and associated problems

Isolation (to keep the heat out and the cold in) is not a common used (or mentioned) option to save energy; only one hotel mentioned drought strips under their doors to the bathroom as well as the outside doors, and one had double windows.
Most hotels did not look for energy efficiency labels when purchasing new appliances. Sometimes the respondents indicated that they did want to buy energy efficient appliances, but were overruled by others, or that they did not have right of say on the subject.

“Energy labels? I don’t even know what they are”

The continuity of supply of appliances and know-how on appliances (like e.g. appliances for sustainable energy) was mentioned as being important and a determining factor in purchasing appliances. Some hotels had timers on their pool filter pumps, so they would shut down during the night. This was not feasible for all hotels, since the quality of the water had to be guaranteed.

3.3.2 Implementations and practices for water (use)

Quantitative performance data:
Water use is often monitored only to see whether no large leakages occur, and whether the monthly bill from Aqualectra is approximately right. The only hard data that were available on water use from three hotels diverge from 180 l/room/day to 260 l/room/day up to 880 l/room/day.

Implementations and practices:
The following table (Table 16) summarizes some of the most common implementations and practices to save water, and number of hotels that have them.

<table>
<thead>
<tr>
<th></th>
<th>yes</th>
<th>no</th>
<th>Partially/plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grey water recycling</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Water saving faucets</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Water saving showerheads</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Water saving toilets</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Water meters</td>
<td>8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Watering time gardens</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Drought resistant plants</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Drip system gardens</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Washing system towels</td>
<td>8</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Washing system sheets</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Environmental cleaning products</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Table 16 water saving implementations and practices of hotels

Almost all hotels have water saving measures in place. The most popular practice to save water (and energy and extra work) is the towel-washing system. This mainly includes the system in which towels on the floor are cleaned and towels on a peg are not. Not all hotels have the same system; one resort lets their guest take their own new towels and bring their old ones. This also encourages guests to bear longer with their towels. Some of the hotels also have policies for the cleaning of the sheets. Some different systems are in place: a note on the bed, top-down cleaning, and a cleaning schedule linked to check-in system.

Water saving showerheads, faucets, and water saving toilets are used by less then half of the hotels. Since in most hotels the showers and baths in the rooms use the most water, this is not a very high percentage. Especially the resorts and hotels with large gardens have grey-water systems. For them this is profitable, because the water price is high. Hotels that have their own
water-plant and make their own water have less to gain from re-using and saving water, and are therefore less inclined to use grey water systems. Personnel are often, but not always, trained to look for leakages. Some hotels/resorts (resorts especially) use local plant life in their landscaping, that doesn’t require a lot of water. Some use drip systems for watering their gardens, but not all. Not all hotels water their plants at night, which causes less evaporation. One hotel especially makes ice cubes, so as to give them to the plants; because ice cubes evaporate less than liquid water. Hotels with a septic-tank and a grey water system water their gardens at night, (also) because of the smell. Something remarkable is that some air-conditioning systems also use a lot of water, which is evaporated to cool the air. A hotel indicated that their old chiller system evaporated 36 cubic meters of (tap) water a day.

3.3.3 Implementations and practices for waste
Quantitative performance data:
There are two different systems for garbage collection and payment: part of the hotels pays a certain sum per month, which depends on the number of times a week and how many trucks come to pick up the container(s) with the garbage. Other hotels have a pressing-container and pay per ton garbage (see Table 17). Most hotels did not have any hard data at hand on how much waste was produced. One hotel had a container of about 200 cubic meters, which was picked up twice a week; another hotel had an estimate of 3 ton of garbage per week.

<table>
<thead>
<tr>
<th>Number of hotels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay per ton</td>
</tr>
<tr>
<td>Pay per month</td>
</tr>
</tbody>
</table>

Table 17 type of payment for waste

Implementations and practices:
The following table (Table 18) summarizes which different categories of waste are distinguished by hotels, and by how many hotels these categories are distinguished.

<table>
<thead>
<tr>
<th>Number of hotels</th>
</tr>
</thead>
<tbody>
<tr>
<td>No categories</td>
</tr>
<tr>
<td>Leftover food separate</td>
</tr>
<tr>
<td>Paper separate</td>
</tr>
<tr>
<td>Large garden waste</td>
</tr>
<tr>
<td>Glass separate</td>
</tr>
<tr>
<td>Batteries separate</td>
</tr>
<tr>
<td>Grease and oil separate</td>
</tr>
</tbody>
</table>

Table 18 waste categories of hotels

Some hotels with septic tanks use special dissolvable toilet paper. Most hotels use single-package soap, (and food, but many restaurants have their own management, separate of that of the hotel). Only 3 hotels had soap dispensers, which save in single portion packaging, and only one hotel used recycled paper. One hotel lets the employees at the dumping ground sign for their garbage: to make sure it end up there and doesn’t end up in nature.

3.3.4 Implementations and practices for wastewater
Quantitative data:
Almost no data were available on the amounts of wastewater the hotels produce. The septic tank of one resort could hold 300 cubic meters.
Implementations and practices:
There are three different means of waste water disposal; the sewer, septic tanks or by discharging it into the groundwater or the sea. The following table (Table 19) summarizes the type of wastewater processing and/or discharging the interviewed hotels used.

<table>
<thead>
<tr>
<th></th>
<th>Number of hotels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Septic tank</td>
<td>5</td>
</tr>
<tr>
<td>Septic tank and sewer</td>
<td>1</td>
</tr>
<tr>
<td>Sewer</td>
<td>3</td>
</tr>
<tr>
<td>Discharge into sea</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 19 Means of waste water processing of hotels

Septic tanks are the most popular way of processing wastewater. Especially resorts often, but not always, use their septic tanks for grey water supply for their grounds and gardens. Collected rainwater is scarcely used for watering (only one hotel had gutters on the roofs that were connected to the septic tank system). One hotel had just implemented a system of so called ‘bio balls’: these nurture a lot of bacteria in the tank, which supposedly makes the water cleaner and decreases the odor.

Wastewater from hotels can be cleaned by ‘Kleinhofje’, and hotels can bay back this water. However, the price is often higher than the water they buy from Aquatectra, and a lot higher than the price of the water if they have their own reverse osmosis water plant. Hotels with such a plant are less inclined to save water, by implementing a grey water-septic tank system for the gardens, for example, then other hotels. This is mainly because in their opinion water does not cost them so much. Instead of recycled water, tap water is used to water the gardens.

Even though only one hotel did not have either a connection to the sewage system or a septic tank, more hotels discharge waste water into the environment one way or another; very salt water, remains of the sea water used to make drinking water in a water plant, is for example discharged back into the sea. Other hotels discharge the trans-shipment (‘overslag’) water of their (chlorinated) pools into the sea. From the interviews it became clear that some hotels use a lot of chlorine: An alternative to this, found in two resorts is an ‘ozonator’ for the swimming pool. Pools with ozonators need almost no extra chlorine to stay clean, and use ozone as a disinfectant. Some hotels, but few, use environmentally friendly cleaning products.

“We use as little as possible chlorine in our water and no environmentally unfriendly cleaning agents, because these would end up in own septic tank and grey water irrigation system, and therefore in our own backyard.”

3.4 Summary of main conclusions from the interviews
All in all, there are many differences between the hotels. Some already have a lot of environmentally friendly and practices in place, others are just starting to value the environment and still have a long way to go. Implementations and practices to save energy and water are the most popular. Wastewater recycling systems like septic tanks are often used, especially at resorts, because they save a lot of water. Only a few hotels take measures that do not directly bring in money, like environmentally responsible cleaning products and waste-separation schemes. Most hotels do have plans for the future: to use environmentally friendly and practices in newly build hotel sections, or after renovations of older sections, because it could save them energy and water (and therefore money) in the future. Only very few of the hotels really have a clear overview of their water and electricity use, and most hotels know even less about their waste production, and
4. Discussion

In the previous paragraphs we described what kinds of standards eco-certificates have set for hotels on the subjects of energy, water, waste, and wastewater. In addition to that we described what implementations and practices the hotels on Curaçao have on these four subjects. The goal of this discussion paragraph is to see where the matches and mismatches between existing standards in eco-certificates and existing implementations and practices of the hotels are. It is important to keep in mind however, that not all hotels on the island were interviewed because of time limitations and practical obstacles: ten of the largest hotels on Curaçao were interviewed for this project.

Also, because the staff members of the hotels that were interviewed had different functions in the hotels (see paragraph 3.1, Table 12) it is possible that some implementations and practices were left out or forgotten, because each function in a hotel comes with its own responsibilities and emphases. General Managers may know different things about the hotel and have different priorities than maintenance managers for example. Since respondents give their information from their own point of view and reference, this may have an influence on the image that is constructed of the hotel. The conclusions from this study are consequently always with reservation.

The structure of this chapter is as such, that first a comparison between the standards from eco-certificates, and the actual implementations and practices of hotels on Curaçao is made. After that follows an overview of the opinions of the different stakeholders in tourism on what should be done and what should not. After that policy instruments are explored (legal measures versus voluntary measures).

4.1 Comparison between existing standards, and present situation in hotels on Curaçao

In general, the largest mismatch between standards from eco-certificates and the present situation in hotels on Curaçao is that the hotels have very few hard data available. Eco-certificates often set standards at certain 'levels', sometimes called 'benchmarks'. These are levels in for example energy or water use that a hotel must reach to be given an eco-certificate. Most hotels on Curaçao however, do not keep clear records on how much water or energy they use. They often do have water and energy saving implementations and practices, but since usage is not closely monitored, the costs and benefits of these implementations and practices are often unknown. In the following sections the comparison between eco-certificates standards and the hotels on Curaçao is summarized for each of the main subjects of this study.

Energy

Only a very small minority of the hotels has any notion of their energy consumption. The one hotel (with mainly European guests and relatively 'green') that did have hard data available on their consumption of kWh per guest per night (approximately 36 kWh) is already on the 'high' ambition level of eco-certificate standards. The 'normal' ambition level (around 53 kWh/guest/night) could therefore probably also be feasible for similar hotels on the islands. Timers for lighting outside of the rooms are used by only half of the hotels. The percentage of energy-saving light bulbs in hotels is hard to estimate: only half of the hotels have energy-saving light bulbs ‘almost everywhere’, and a couple of the remaining hotels have some energy-saving light bulbs. Consequently, at least half of the hotels that were interviewed therefore did not reach the 'normal' ambition level for hotels from eco-certificates, which is that 60% of all bulbs have to
be energy saving bulbs. Energy from renewable sources is only very sparsely used, in the form of solar water heaters. Energy labels are not used or taken into account by most hotels and some were even unfamiliar with the whole concept. Only the most environmentally aware hotels, including the one certified resort, look at efficiency labels when new appliances are bought.

All in all, there is quite a large difference between the hotels concerning how well they measure up against eco-certificate standards. But for almost every hotel some progress has to be made on all aspects of energy use, to live up to the ‘normal’ ambition level standards from eco-certificates. Only a couple of hotels already have the implementations and practices that the ‘normal’ ambition level requires. However, there are also energy saving implementations and practices that we came across at hotels that are not mentioned directly in eco-certificate standards, such as timers on the swimming pool filters, different types of air-conditioning sensors, and ‘master switches’ to turn off the lights. Some hotels are apparently even a little ahead of eco-certificates concerning some implementations to save energy. These hotels are a minority of the hotels that were interviewed, but they could provide a good example for the others.

**Water**

Most hotels do not have many quantitative data on their water use. They do use water saving showerheads for example, but do not keep track of whether these use 8 or 9 liters per minute, as is directed by standards from eco-certificates. The water use per guest per night was also not known by most of the hotels. The hotels that did have data on their water use performed fairly well. However, we have to rely on very few data (from three hotels). There are large differences between the highest (880 l/room/day) and the lowest (180 l/room/day) numbers of these three. The lowest water use level (if true) is extremely low, a lot lower even than the highest level of ambition. The hotel for which data were available with the highest water use (an all inclusive hotels with mainly guests from the US) was already on the ‘normal’ level of ambition. This level (around 900 liters per guest per night) is therefore probably feasible for most hotels.

The current volumes of the current in showers and faucets and the volume of the flush of the toilets were almost never known by participants. However, some hotels (less than half, though) indicated that they had water saving showerheads and faucets, and water saving toilets. Hotels had almost no data on the water use of their dishwashers or washing machines. The tactic to give guests the option to reuse their towels was used by almost every hotel. Only half of the hotels had a system for sheets (for example: top- down changing of sheets, a note on the bed to clean sheets or a cleaning system linked to the check-in system). For their grounds and gardens, only about half of the hotels have taken into account the type of plants and the watering time of the plants.

All in all it seems that water use is already quite low, and hotels can live up to the ‘normal’ ambition standard. However, to really be able to say this it is necessary to have more data on water use. On implementations to save water (like water saving showers) most of the hotels are still behind on eco-certificate standards. The same is true for the purchase of water saving appliances. Similar to the situation for energy, there is also a large difference between the hotels concerning how well they measure up against eco-certificate standards.

**Waste**

Quantitative data on how much waste is produced is unknown to almost all hotels. The only estimate one (relatively green) hotel gave was about 3.8 kg/room/day. This amounts to a little less waste than the eco-certificate standard at the normal level of ambition. Most hotels pay a fixed sum per week (depending on how many times a week a container is collected) for their garbage, and therefore the hotels do not have an overview of the amount (kg or tons) of waste they produce. Hotels have not yet reached the low ambition level for the separation of waste into categories (glass, paper and large garden waste). The waste categories that are distinguished most are grease/oil, leftover food, and large garden waste. Half of the hotels had their leftover food
collected (by a pig farmer). Recycled paper is almost never used, because it is too expensive, or the supply is not constant enough. Only a few hotels use soap dispensers, but none of the hotels had a policy to prevent single portion packages. All hotels are therefore falling behind on eco-certificate standards concerning the handling of waste. Most hotels distinguish one or two separate waste categories, but none of the hotels could live up to the eco-certificate standards of the ‘normal’ ambition level. The hotels do also not monitor the amount of waste that is produced, and a lot of improvements will be necessary.

Wastewater
None of the hotels had any quantitative information on how much wastewater they produced, or the levels of N, P, oils or any other substances in the wastewater. Only very few hotels used environmentally friendly insecticides, detergents and other cleaning products, although some hotels mentioned that the cleaning company they hired did have some sort of environmental policy. About half of the hotels recycled their water, via a septic tank system. Water from these septic tanks was always exclusively used for watering the gardens and grounds.

It can be concluded that there are large differences between the hotels on how well they handle their wastewater: some are not even connected to the sewer system; others have an elaborate septic tank and grey water system. Only very few of the hotels take into account the type of detergents and cleaning products they use. A lot has to be done on the subject of wastewater for most hotels before they can measure up against eco-certificate standards.

From the interviews an overview of the current sustainability of hotels and resorts on Curaçao can be constructed. Most hotels are already doing something about two environmental items: water and energy saving. Especially saving water is a high priority item, because the Netherlands Antilles has quite high water prices, and the water (and electricity) bill is often alarmingly high for many hotels. This does not mean, however, that every hotel that was interviewed deals with water and energy in an efficient way. Some implementations are used by about half of the hotels, but are for some reason not implemented by others. Environmentally friendly dealing with waste and wastewater on the other hand happens still very scarcely, and not structurally at all. In sum, at present most hotels still have a long way to go before they can measure up against eco-certificate standards.

4.2 Preconditions for implementations according to stakeholders
All the different stakeholders in tourism on Curaçao will have a role to play in changing the tourism industry of Curaçao into a sustainable one. In the interviews different stakeholders were asked where they thought bottlenecks currently occur, what is essential to achieve sustainable tourism (legislation as well as voluntary initiatives), and which one of the stakeholders in tourism (including public as well as private stakeholders) should be responsible for changing the present situation. In the next section statements and opinions of the stakeholders that were expressed in the interviews by both the hotels and the ‘other stakeholders’ are described. These ‘other stakeholders’ included businesses and NGO’s, like ‘Uniek Curaçao’ and Ecovision, utility companies like Selikor (garbage) and Aqualectra (water and electricity), and governmental bodies like the ‘Milieudienst’ and the CTDB (Curaçao Tourism Development Board), and the travel agencies in the Netherlands TUI and OAD.

The opinions and statements are arranged in such a way that they successively deal with issues and points of interest for hotels themselves; action points and points of interest for NGO’s; action points and points of interest for utility companies (like Aqualectra and Selikor); and finally action points and points of interest for the government.
4.2.1 Issues and points of interest for hotels
According to some stakeholders in tourism, for example the CTDB, the tourism sector on Curaçao has gone through some tough times, in which mere survival was the prime goal of many of the hotels. But now the tourism industry is blossoming; there are more flights to Curaçao, higher occupancy rates of the hotel rooms, etcetera. Now the hotels can start looking at other things beyond day-by-day survival; like environmental issues. Customers from western (especially European) countries are becoming more environmentally aware, and are beginning to see environmentally aware management by hotels as a standard issue in their vacation 'package of demands'. Because of the Internet, customers can more and more handpick their own travel packages. In light of this, an assembly of different tour operators has already started to develop an Internet travel database, with information on the environmental performances of all their hotels. From the interviews it became clear that there is also a lot to gain from better internal management in the hotels. The implementation of new environmentally friendly measures is sometimes discouraged or hindered by the lack of clarity on policies and rules and internal consultation within the hotels. The general manager for example knows things the maintenance manager doesn’t and visa versa. A consequence of this could for example be, that someone orders new toilets that are not water efficient, before internal consultation has taken place in which someone with more knowledge of environmental issues could have intervened in the decision.

Remarkably, some hotels seem quite comfortable in disregarding environmentally friendly measures that would be very easy, but that in their opinion do not directly save a lot of money (even though they may underestimate the savings). In one hotel a drip system to water the gardens was in place but “water is not that expensive if you have your own water-plant”, so even though the system was ready to use and it would decrease the hotels water use, it isn’t used.

Furthermore, it is not enough if only the managers of the hotels are environmentally aware: they do not have the power to make certain key decisions, and the do no have the ‘on site’ power of the staff. All levels in the ‘chain of command’: from the hotel owners/shareholders to the managers to the personnel should be fully aware of the importance of environmental management, this includes all kinds of personnel from housekeeping to the kitchen staff. If personnel from e.g. housekeeping with experience in one hotel later on starts to work for a new hotel, they take their knowledge with them: if managers listen to such people, their know-how is optimally used.
A problem with the current manager system in some hotels that was mentioned in interviews is that the managers stay only for an average of 3 years, after that they often move on to another hotel and/or another function. This can result in a policy in which managers don’t really look for long-term gains, because they want to optimize the hotels profits in the time they are in charge, and short-term gains are therefore preferred over long-term gains. These managers may therefore forsake projects that have a longer payback time and require high initial investments, because their successor will pick the fruits of that labor.

According to several hotels the degree of how much environmental management is possible also depends largely on the origin of the customers in the hotel. Guests from the US are much less environmentally aware and willing to make environmental considerations then guests from Europe. They demand luxury and comfort above all else, and are less willing to make compromises on, for example, the temperature of the air-conditioning, and timers for the air-conditioning. Hotels with mainly European guests can ‘get away’ with a lot more environmentally friendly implementations before guests will complain about a loss of comfort, then hotels with mainly guests from the US, according some of the hotels.
Something else that became clear about environmentally friendly for hotels is that these implementations do not have to be costly for the hotels at all; they can even save a lot of money in the longer run. There are implementations to save water and energy that pay back for their investment costs, because of the savings they produce, in less then 6 months. These are for example energy saving light bulbs, turning off the pool filter pumps at night and signs that tell guests to “turn air-co off”, but also water saving faucets, water saving showers, and water saving toilets or toilet dams (which is an object that is placed in the water reservoir of the toilet, so it needs less water to fill up and uses less water per flush). Implementations like solar water heaters, air-conditioning sensors, and grey water recycling have payback times of less then 2 years.

Monitoring energy and water use can also save a lot of money. According to one respondent, water leakages happen quite often, and can lead to a much higher water use then usual, which can easily be detected if water use is monitored often. If such a leak is not detected it will cost hotels a lot of money in a short time. Hotels should therefore monitor more closely how much water they use, and also for what they use it. If two similar buildings with similar rooms have a large difference in water use, something is obviously the matter. One respondent even described how the daily water use figures could tell him something about how careful housekeeping had been in turning off all dripping showers and faucets.

4.2.2 Issues and points of interest for NGO’s

Dutch and other European tourists know very little about green globe and other eco-certificates; if eco-certificates were better known, they would be more interesting for hotels to apply for certification. NGO’s in Curacao and the Netherlands (and the rest of Europe) could try to raise awareness in the public that these certificates exist, and that they support them, for example. Projects with youth on environmental awareness (to make them realize the value of coral reefs for example), could teach young Antilleans respect for the environment. When they become employees in for example hotels later on in life, they can take these lessons with them. CHATA could be a good platform for information exchange, as most hotels do not officially interact with each other and consult each other, although they could learn a lot from each other.

4.2.3 Issues and points of interest for Utility companies

The garbage fractions that are distinguished according to Selikor are: glass, building materials, paper (although they temporarily do not have a client to sell it to) and batteries (and they have plans for separate collection of garden waste and fat and oils). However, the possibilities to separate these fractions of waste are often not known by the hotels. Hotels do not know which fractions they can bring in separately, where they should take them and how. A garbage delivery point for the different waste fractions will be opened in the near future, but if information about this is also not clear to the hotels, it will not work in the way it is supposed to, and hotels will often not make use of it. Informing the hotels is the key issue here.

The ‘Grey water’ project is a project in which hotels can buy back wastewater to use (for irrigation for example), after it is cleaned. However, the price of the cleaned water is the same or even higher as the water price hotels negotiated with Aqualectra, so none of the interviewed hotels buy back their water. This example makes clear that projects like this one will only work if environmentally beneficial measures are also financially interesting.

4.2.4 Issues and points of interest for the government

For the government it is important to determine the priorities and priority themes, and inform the public. More public awareness is a must; the mentality of the people must change, they have to feel like they and their actions matter for the future. If the (Antillean) employees of hotels for example are not environmentally aware, and a (Dutch) owner comes with rules and regulations on environmental issues, this could create a field of tension. Environmental law keeping by
governments should therefore also not only be directed at large companies or hotels for example, but also at the ‘average citizen’. Legislation and rules on what hotels can and cannot do must be clear to everyone, and an alternative must be provided if something is not allowed. Legislation has to be realistic and applicable for the Netherlands Antilles, where there is a limited access to certain goods/products/appliances. If legislation seems too difficult to obey, it will just be ignored. The Environmental service (Milieudienst) has the task to keep environmental laws up to date, and let people know they are reinforcing the law, and that they might come and check up on the hotels. The maximum fine for offences on environmental issues at the moment is 5000 NAF (roughly 2500 Euro). In the future, higher fines and information campaigns announcing these fines may be necessary.

International large hotels chains get certain exemptions from the government, but according to some stakeholders, the small hotels are more inclined to do things for the environment. Large international hotel chains on the other hand have international environmental standards: according to hotels such as the Hilton these are higher than those on Curaçao. The intent is that bringing those hotel chains to Curaçao will also bring these standards to Curaçao. According to some stakeholders this is what happened in Aruba, and this is why Aruba is so much ahead on environmental management (especially certification by Green Globe) in comparison to Curaçao.

Infrastructural implementations are very important: the government should for example provide glass containers, and improve and extend the sewer system. The existing sewer system is already overloaded and especially when the newly built hotels are ready this will cause problems. Also, some hotels do not have access to the sewer system yet, and are therefore ‘forced’ to discharge their water into the sea if they do not have septic tanks (this was the case according to one of the interviewed hotels). The government could also intervene in waste policy by putting deposits on bottles (statiegeld).

Something that was mentioned a couple of times, is that the government should provide protection from the price-raises of Aqualectra. Some hotels are afraid that if water use and energy use go down, Aqualectra will raise their prices, to keep their profits.
5. Recommendations

The previous section dealt with the opinions of different stakeholders on what should be done in terms of implementations and practices. This section will also explore further how things could be done, which changes are necessary from the different stakeholders, which policy instruments are available, and how they could be used to enable changes. An example of the role governments can play is that they could use the standards set by voluntary eco-certification programs as standards in legislation, like nuisance ordinances. This raises the question where legal and voluntary targets and requirements should meet. Too many legal requirements are seen as harmful to the tourist industry because of regional competition considerations, but completely voluntary projects also often fail. Furthermore, legal measures need reinforcing, which costs money, but stimulating voluntary measures e.g. by rewarding good practice also costs money. The solution will probably be a compromise between legal and voluntary measures. These measures do not exclude each other and may follow up each other in time. In this chapter, recommendations for voluntary as well as legal measures for hotels on Curaçao are made, based on literature and on the interviews that were done with the stakeholders in tourism on Curaçao.

‘Education’ in a broad sense, is always a first step; if people don’t know what the rules are and why they have to change their behaviour, the chances are great that they will ignore the rules and they won’t change their behaviour, and that they won’t realize that they can also benefit from changing their behaviour. Many of the hotels have a staff of local employees, combined with employees and managers that are often not from Curaçao, although they do live there. The owners of the hotels, which are often different persons than the managers, do not necessarily live on the island. All these groups of people have to be environmentally aware for changes to happen; the (local) staff has the ‘on site’ power to change things, which managers and owners do not have, while managers and especially owners can make key decisions on long-term policies and have the final say-so in many matters. Education of the people connected to the hospitality business should of course start at the schools, where the value of the environment for the future of the island should be made clear to children, and that they are important stakeholders in that future of ‘their’ island. But later on the hotel school (the academy hotel) where people are educated who want to work in the hospitality business, could also be a very good medium for this. The government should oblige such schools to include a course on ‘environmental management’ or something similar in their curriculum. Since the tourism business is blooming right now on Curaçao according to many stakeholders, many new employees will have to be trained in the near future, so this is where chances lie for better environmental awareness. The managers and owners of the hotels are often not from the island and are possibly less interested in the environment on Curaçao as such, but in stead they could be ‘educated’ in the financial benefits of environmental management and persuaded by that.

Eco-certificates or eco-certificating organisations like green Globe and Green Key could play a role in this ‘education’ because they can inform hotels and guide them along the right path, voluntarily. This can be done supported by examples of best practice and benchmarks. Eco-certificating organisations also have their own sets of standards, which are often higher and more elaborate than the standards that are legally enforced. If hotels join and eco-certificate program, they have to meet these standards and are audited by the program to verify that they keep meeting the standards.

Another interesting point is that the potential benefits of consultation between hotels are very clear from this study, but it is only rarely put into practice by the hotels. Many hotels can meet a lot of environmental standards, and improve a lot in their dealing with environmental issues just by implementing measures other hotels already have. Organizations like CHATA could supply the hotels with information on how to proceed and become more sustainable, and a platform for
hotels to share experiences and information. Some of the respondents described in the interview that motivating a few ‘key people’ on Curacao would have the effect that most of the rest of the important people in tourism on the island will follow. Such a platform could also be a good way to bring motivated ‘key people’ together.

However, voluntary measures can only take you so far, and from the interviews with the hotels it became clear that as for now it has not been enough to convince the hotels to voluntarily implement certain measures. Not even very cost-effective ones like energy and water saving measures, as became clear from the interviews with the hotels. Legislation on water and energy saving implementations and practices is therefore very useful, while also indirectly providing profit for the hotels, because in the long term such implementations save hotels money. Legislation on these subjects could therefore be used in addition to voluntary measures. Implementations and practices on waste and wastewater on the other hand are less popular as far as voluntary measures go, because they do not directly result in financial gains. Making and enforcing legislation on these subjects may be the only way to really change things.

Legislation should especially be formulated for new hotels and new buildings. In the ‘building phase’ hotels can still implement systems that would be very expensive to implement afterwards. If hotels take certain implementations into account in their design phase and building phase, this could save them a lot of money too later on, and it would also be beneficial to the environmental impact of the hotel.

It would therefore be useful to make it obligatory that every new hotel makes an environmental assessment report before they start building, so they have to look for possibilities for environmentally friendly building. Measures that are both cost-effective and decrease the environmental impact of the hotel should be the first to be made obligatory for new hotel constructions. Measures that belong to this category include: isolation (double windows and droughts strips; they save a lot of energy and money later on) and ozonators (they decrease the need for chlorine in pools, which is very bad for the environment, and they save money because the pool filter can be shut off more often/during the night). Installing drip systems where possible is another way of saving money and an environmentally friendly implementation that new hotels should be obliged to install. According to the environmental consultancy agency Ecovision, air-conditioning systems which use water to cool a room are a lot more efficient than those based on cooling the air itself. For new hotels it should therefore be made obligatory to install the energy efficient water-based air-conditioning systems. Heat recovery from air-conditioning, for example for water heating, is another energy-saving implementation that should be planned when the hotel is build. It can save a lot of energy later on. Hotels should be obliged to at least consider the option and the possibilities for this, before they start building.

Other obligatory implementations could include the use of energy efficient lighting in new rooms and buildings, and water saving faucets, showers and toilets. Solar boilers are an example of energy saving measures of which have quite high initial costs, and of which the value only comes to light once they are implemented. They are good examples of environmentally friendly and sustainable investments that pay back for themselves later on. New hotels should therefore be obliged to install at least 22% (a number also used for standards for renewable energy in several eco-certificates) of their water heating capacity as solar water heating.

For wastewater, grey water-recycling systems like septic tanks, with (if possible) a connection to the rain gutters of the hotel, should be made obligatory. The benefits of septic tanks that are used for grey water systems are twofold: firstly they save water, because of the water recycling, and secondly the hotels know that whatever comes into the tanks will end up in their own back yards, which may create more awareness on what goes ‘down the drain’. The problems with nutrients and odour nuisance could be solved by excluding streams from toilets (and letting them discharge in the sewer system) or possibly by adding ‘bio balls’ with bacteria that break down the organic
waste in the water. The hotels with grey water from septic tanks that do include the wastewater streams from their toilets already water their gardens at night, to decrease odour nuisance for guests. The fact that this decreases evaporation in comparison to watering plants in the daytime is an added bonus.

Legislation must of course also come into force for existing hotels. Especially hotels that make their own water and/or electricity should be prevented from squandering their water and energy recourses, just because they are not that expensive. Other hotels should also decrease the burden they have on the environment to become sustainable. However, it should be taken into account that the implementation of these measures mentioned above couldn’t be accomplished overnight. From the interviews it became clear that legislation has to be feasible, otherwise hotels will just ignore it. Therefore, these implementations should rather be made obligatory within a time span of about ten years. In the mean time, NGO’s or environmental consultancy agencies could help hotels with accomplishing the legal standards and demands which have to be met by hotels, by loaning them money for their investments, which the hotels could then pay back from their environmental savings, from saving water and energy for example. The possibilities for a construction like this are already in place.

For the subjects of waste and wastewater there are less financial incentives possible to encourage the hotels to conduct their business in an environmentally friendly manner. For these cases the ‘polluter pays’ principle could be helpful, and provide an initiative for hotels to start minding their waste and wastewater. The costs to bring in waste (per ton) for example could be raised for the ‘rest fraction’, the fraction that is not separated into categories, to encourage the hotels to recycle. On the other hand this should not lead to illegal dumping, so hotels should for example ask for a signature from the landfill, as to make sure their waste ends up in the landfill and not in the nature. If they cannot prove by presenting such signatures that ‘their’ waste went to the landfill, they can be held accountable if their waste was illegally dumped somewhere else. Also, hotels should be obliged to separate certain categories of waste that are very detrimental for the environment, such as batteries for example.

Of course, the general standards on water quality, air quality, waste and wastewater for the whole of Curaçao should also be enforced for hotels. These are formulated by Bart Van Geleuken (2007) in the project ‘Environmental standards for the Netherlands Antilles’. These standards include for example standards for salinity and chlorine content of discharged wastewater. This is important for hotels because they sometimes discharge hyper saline (very salt) water (remains of the sea water used to make drinking water in their reverse osmosis water plant) and ‘overslag’ (trans-shipment) water of (chlorinated) swimming pools into the sea.

In addition to different implementations to save water and energy for example, the actual numbers of water or energy use per night are also very important. At the moment most hotels do not really keep track of their water and energy use and their waste production. It was therefore hard to see whether the hotels were already performing on a low or normal or even a high ambition level, as they were formulated on the base of eco-certificates. It is therefore necessary to formulate feasible and useful legal standards for water and energy use and waste production, that hotels start keeping trace of their water and energy use and waste production. Standards that oblige hotels to do so should be amongst the first legal measures that are put into practice. The implementation of other, more elaborate, standards and legislation for existing hotels should have come into practice within ten years from now. Hotels should have reached normal ambition levels by then. Whether it is useful to make high ambition levels also compensatory is a little doubtful. The high ambition level could also become a legal requirement later on, but it is also an idea that this high ambition level remains a voluntary (extra) effort, so hotels that ‘go the extra mile’ stand out amongst the other hotels. They can then promote themselves accordingly, for
example by applying for an eco-certificate. In this way the protection of the environment is still ensured because normal ambition levels are reached, and voluntary and legal measures could go hand in hand.

In this textbox a short overview of some of the main things that the different types of stakeholders could do is given.

What can hotels do?
- Save money, and save energy and water in the meantime, with environmentally friendly and practices
- Monitor water and energy use and waste production
- Consult each other, share experiences

What can the government do?
- Inform hotels and the public
- Make and enforce legislation
- Provide subsidies for the most energy/water consuming issues in the hotels: air-co and solar boilers
- Provide infrastructure for waste disposal and wastewater discharge (e.g. sewer systems)

What could other stakeholders do?
- Give information to hotels, but also (potential) guests
- Create a platform for hotels to share information
- Create possibilities for financing of implementations
Appendix B
Interviews with ten hotels on Curaçao (in Dutch).

These are the accounts of the interviews that were done with 10 hotels on Curaçao. The accounts of the interviews were sent back to the respondents for comments. The versions shown here are the accounts of the interviews including changes because of comments if necessary.

Interview Avila beach hotel

110 kamers, de nieuwbouw is bijna af; dan zijn er 152 kamers in totaal.
80% van de gasten komen uit Europa, ongeveer 10% uit de VS

Vragen Hotels:

P. Kok is de operationeel directeur van Avila. Dat houdt in dat hij zich bezig houdt met de dagelijkse gang van zaken in het hotel, zoals onderhoud, reserveringen, restaurants, bewaking, tuinen en administratie. Mr. Kok is tevens aandeelhouder (mede-eigenaar) van het hotel. Hij werkt in totaal 8 jaar bij Avila. Milieu zit in het takenpakket voor zover, dat het valt onder food & beverage (waterverbruik) en onderhoud. Verder is efficiëntie ook een belangrijk onderwerp. Milieu wordt steeds belangrijker; voor het energie beleid probeert Avila bijvoorbeeld met de tijd mee te gaan en de laatste technieken toe te passen (zoals zonnepanelen, isolatie) Een milieubeleidsverklaring is er nog niet, ook profileert het hotel zich niet op milieugebied naar buiten toe. Aan gasten wordt wel informatie gegeven, bijvoorbeeld over het handdoek systeem en het top down lakens verschonen. Mr Kok zou nog meer aan energiebesparing willen doen in het hotel: nu zijn er nog maar weinig spaarlampen, bijvoorbeeld. Verder zouden tijdschakelaar op de lichten nuttig zijn, zodat na 23 Hr. een groot deel van de lichten uit gaat. Vanuit de overheid zou er de mogelijkheid moeten zijn om subsidies te krijgen voor grote investeringen. Meer duurzame energie is een voorbeeld daarvan, zeker bij nieuwbouw zou dat erg nuttig zijn. Sommige veranderingen moeten wel via wetgeving, al het om de eindbestemming van duurzaam toerisme gaat, wat het vrijwillige spoor betreft: er zouden dan ook financiële stimulansen moeten komen voor hotels die wel echt iets aan milieu doen.

(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?

In de nieuwbouw zijn zonnepanelen aangebracht, die in combinatie kunnen werken met elektrische boilers. Ook is er op veel plaatsen dubbel glas aangebracht. De mantelbuizen die door het hotel lopen (van de airco) zijn extra geïsoleerd. Ook staat de airco op een centrale thermostaat: er is een max. en een min temperatuur setting, maar verder is het overal gelijk. Instelling, maar in principe staat de airco overal op 19 a 20 graden. Daardoor is er ook minder temperatuurverschil tussen de muren, wat condensatie van water voorkomt. In het nieuwe gedeelte zijn bewegingssensoren voor de airco. Vooral in het nieuwe gedeelte zijn energiebesparende maatregelen genomen, in het oude gebouw willen ze dat ook nog gaan doen in de loop der tijd, maar dat gaat moeilijker en is duurder. Het personeel weet wel dat de airco’s uitgezet moeten worden al ’s ochtends de kamers worden opgeruimd.

Houden jullie bij hoeveel energie er wordt verbruikt?

Op de gangen staan meters, daar wordt het verbruik gemeten, en afgezet tegen de bezetting, zodat het gebruik/gast berekend kan worden. Het zelf gemeten verbruik wordt vergeleken met de
rekening van Aqualectra. Het gebruik per gast gaat omlaag, maar precieze getallen wist mr. Kok niet.
Wat kost de meeste energie? Airco, ze staan ook vaak onnodig aan.
De meeste apparaten komen uit Europa, een paar uit de VS. Vroeger werd er niet op energiezuinigheid gelet, nu steeds meer.

(Water)
Doen jullie in het hotel aan waterbesparing?/ hergebruik? Wat dan?
Ze hebben een grijswatersysteem voor de tuinen. Vanuit een septic tank gaat afvalwater, systeem water, en regenwater(via bakken van afvoergoten verbonden met het systeem) naar de tuin. De tuin krijgt 's nachts water. Er is niet gelet op water gebruik bij de keuze voor welke plantensoorten er zijn aangeplant. Ook bij de wasserij (ze doen 50% zelf, 50% is uitbesteed) wordt of efficiëntie gelet: volle machine e.d. De nieuwste modellen die zijn aangeschaft zijn ook water- en energiezuinig, de oudere niet. Verder hebben ze perlators op de kranen, en waterbesparende douchekoppen. De Wc’s zijn niet waterbesparend.
Houden jullie bij hoeveel water er wordt verbruikt?
Ja, er zitten meters op de gangen, en waterverbruik per gast wordt berekend (hoeveel: wist mr. Kok niet) en vergeleken met de rekening van Aqualectra.
Waar is het meeste water voor nodig?
De kamers: vooral de douches. 50% heeft een ligbad, maar die worden niet erg veel gebruikt. Ook de wasserij en de keuken verbruiken veel water

(Afvalwater)
Doen jullie iets specifieks met jullie afvalwater (recyclen/lozen?) wat dan?
Het water gaat naar de septic tanks, en voor een deel ook naar het riool. Overslagwater van de zwembaden gaat terug naar de pomp. Bij reinigingsmiddelen wordt op milieuvriendelijkheid gelet: ze laten zich daarover speciaal adviseren door een extern bedrijf.

(Afval)
Hebben jullie maatregelen om afval te voorkomen?
In openbare ruimtes zijn er wel zeepdispensers gebruikt, maar op de kamers nog niet: is wel een plan voor de toekomst. gerecycleerd papier: interne presentatieblaadjes wel, ander papier niet. Hoeveel afval produceren jullie? Weet mr. Kok niet.

(Maatregelen)
Perlators kranen (minder water gebruik)
Spaardouches
Handdoekbordjes
Bordjes airco uit: nee; dat doen ze in principe zelf (housekeeping)
Waterrecycling voor tuin
Spaarlampen: ongeveer 25%
Solar water heater: ja, in combi met elektrisch
Lampen in tuin staan op tijdkloken ja, op alle buitenterreinen
Zwembad: filter staat op een timer
Top down lakens verschonen

(Afsluitend)
Werken jullie ook samen met andere hotels op het eiland, op milieugebied?
Ja, maar pas de laatste 1 ½ jaar. Dan gaat het om persoonlijke contacten, en uitwisselingen van technieken. Vooral bij de nieuwbouw. Er is contact geweest met Lions dive en Hilton. Van CHATA zijn er in het verleden ook wel seminars geweest over energiebesparing. Maar vooral over orkanen.
Heeft u/uw hotel ooit gedacht om te streven naar een eco-certificaat?
Wel aan gedacht om via CHA de green globe te gaan halen: zal in de toekomst een optie zijn, maar tot nu toe zijn ze er nog niet aan toe gekomen.
Welke voordelen heeft het, welke nadelen? Voordelen: ze hebben daar veel ervaring en kunnen je als hotel helpen de juiste beslissingen te nemen.
Interview Bonbini Seaside Resort

Vragen Hotels:

Mr Elias is eigenaar en tevens manager. Milieuzaken doet hij zelf. Vuil is het belangrijkste wat het hotel aan ‘milieu’ doet. De vuilnis wordt 2 x per week opgehaald. Verder steunt het hotel organisaties die iets met milieu te maken hebben, welke is niet duidelijk. Hoe je met milieu omgaat, heeft ook sterk te maken met het publiek dat je zoekt: eco of niet eco. Wat er vanuit de overheid vooral nodig is, zijn hogere boetes, en strenger optreden tegen overtreders, er moeten wettelijke maatregels komen, en er moet ook een informatie campagne komen die aan de mensen bekend maakt dat die boetes er komen. Hij wil echter niet meedoen aan publieke werken; niet verstrikt raken in politiek.

(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?
Spaarlampen, verder is het te duur. Verlichting gaat automatisch aan en uit, buiten en op de balkons van de bungalows.
Bij het nieuw te bouwen gedeelte: airco op pasjes systeem: aan als er mensen binnenkomen, anders uit.
Houden jullie bij hoeveel energie er wordt verbruikt?
Er zijn mensen die de meter opnemen die langskomen, ze vergelijken dan het verbruik met de bezetting. Wat de gemiddelde bezettingsgraad is, is onbekend
Gemiddelde cijfers (over langere tijd bijvoorbeeld) zijn er niet.
Wat inkopen betreft van apparatuur: ze letten niet op energielabels, maar kopen ook niet de goedkoopste: er wordt op merk gekocht.
Wat kost de meeste energie? Airco
Geen energie uit duurzame bronnen.

(Water)

Doen jullie in het hotel aan waterbesparing?/ hergebruik? Wat dan?
Er zijn 2 septic tanks; via een drip systeem gaat water van daaruit naar de tuin.
Het zwembad wordt gevuld met kraanwater. Ze hebben gewone douches en kranen.
Houden jullie bij hoeveel water er wordt verbruikt?
Wel een beetje hoeveel kuub per maand: wordt vergeleken met de bezetting, om te kijken of er geen verspilling is. Over een jaar zien ze veranderingen niet.
Waar is het meeste water voor nodig? De kamers zelf.

(Afvalwater)

Doen jullie iets specifieks met jullie afvalwater (recyclen/lozen?) wat dan?
Water uit de huisjes gaat naar de septic tanks, maar dat van de wasserij niet: zitten teveel wasmiddelen in. Dit water wordt geloosd in een put op het terrein, die in contact staat met zee (er zit zout water onderin de put)
Om afval water te laten zuiveren door Aqualectra kost veel te veel geld.
Wat zijn de meest voorkomende stoffen in het afvalwater? Wasmiddelen
(Afval)
Wat gebeurt er met het afval van het hotel? Wordt niet gescheiden, behalve GFT: haalt Selikor apart op.
Hebben jullie maatregelen om afval te voorkomen?
Dat is aan de bewoners zelf: er is geen restaurant
Hoeveel afval produceren jullie?
2 keer per week komt er een wagen de containers ophalen, ze betalen daarvoor een vast tarief; onafhankelijk van het gewicht.

(Maatregelen)
Spaarlampen
Schoonmaksters doen de airco’s uit als het goed is.
Lakens worden 2x per week verschoont
Elke dag schone handdoeken
Het zwembad wordt elke dag bijgevuld met leidingwater (dat moet verplicht leidingwater zijn)

(Afsluitend)
Werken jullie ook samen met andere hotels op het eiland, op milieugebied?
Nee, ze werken allemaal apart
Heeft u/uw hotel ooit gedacht om te streven naar een eco-certificaat?
Nog niet: misschien na de uitbreiding, nu is het nog te klein
Welke voordelen heeft het, welke nadelen?
Geen nadelen: goede promo
Toekomst:
Het toerisme bloeit op: er gaat wel aandacht komen voor het milieu. Op het ogenblik zijn ze druk bezig met moderniseren: over een jaar zouden de antwoorden op de vragen waarschijnlijk heel anders zijn.
Interview Breezes Hotel

341 kamers, all inclusive, eigen reverse osmose waterplant (wordt door een ander bedrijf beheerd), gasten uit Canada, VS, en Ecuador energienet van 220 en 380 V

Vragen hotels

Brian Schipper is maintenance manager van het hotel, en werkt nu 2 jaar bij Breezes. Zijn functie houdt in dat hij zich bezig houdt met alles wat kapot kan gaan, maar in het bijzonder ook met zaken als waterpijpleidingen, airco etc. Milieu (watergebruik, energiegebruik) hoort bij zijn takenpakket. Hij heeft zelf een rapport geschreven met mogelijke implementaties voor water en energie besparing en de terugverdientijden. Mr Schipper vindt het vooral belangrijk dat de regels duidelijker worden, en dat er ook duidelijke alternatieven zijn. Nu wordt soms gezegd: “Dit mag niet” maar dat is altijd achteraf, en er worden ook geen voorbeelden gegeven van hoe het wel moet. Dus gaan mensen door met wat ze doen ook al mag het niet, en het nemen van nieuwe maatregelen wordt hierdoor ontmoedigd. Ook moeten er strengere regels komen voor Aqualectra: die kunnen nu doen wat ze willen en allerlei eisen stellen. Ze zouden bijvoorbeeld niet zomaar de tarieven omhoog moeten kunnen gooien.

(Energie)

Doet het hotel aan energiebesparing, wat dan?
Er zijn 3 chillers voor de airco, die gebruiken erg veel energie. Binnenkort gaan er nieuwe thermostaten op de airco’s gezet worden, want de oude doen het niet meer waardoor ze continue aan staan. De airco’s gaan wel uit als de deur van de kamer open staat. Verder is er een master-switch naast de uitgang van elke kamer, waardoor alle lichten in 1 keer uitgaan. Daardoor blijven er veel minder vaak lichten branden als de gasten weg gaan. Ook zijn er tochtstrips bij de deuren naar buiten en naar de badkamer geplaatst, zodat er minder uitwisseling van warme en koude lucht is.
Ze zouden graag eigen generatoren hebben voor elektriciteit (net als voor water) maar Aqualectra wil daar geen vergunning voor geven. Het is mr. Schipper nu niet duidelijk of het nou eigenlijk wel of niet kan.

Houden jullie bij hoeveel energie wordt verbruikt? Hoeveel?
Ja, ze geven per maand ongeveer 300.000 gulden uit aan elektra, en verbruiken ook ongeveer 350 liter gas per dag. Ze verbruiken aan elektriciteit gemiddeld ongeveer 40 a 50 kilo volt ampère. 79% van de kosten van energie komen van elektriciteit, en daarvan is dan 80% door de airco. Mr. Schipper let wel op energiezuinigheid bij aanschaf van nieuwe apparatuur, maar de keuken bijvoorbeeld niet, en daar heeft hij geen zeggenschap over. Er staan op 2 van de 4 gebouwen zonnepanelen (voor 40 kamers), die werken samen met elektrische boilers.

(Water)
Het hotel maakt met een Reverse Osmosis Plant zijn eigen drinkwater. Ze mogen van Aqualectra niet produceren op het waterleidingnet, maar als er bijvoorbeeld onderhoud aan de plant is, kunnen ze wel water krijgen van Aqualectra. Alleen de prijs van dat water is dan veel hoger dan voor andere hotels. Er worden dagelijks keuringen gedaan van het water. Die keuringen zijn nu alleen bacteriologisch, want de voorzieningen voor chemische keuringen zijn er nog niet op Curaçao: dat wordt nu eens in de zoveel tijd in het buitenland gedaan. Ze hebben een systeem
waarbij handdoeken op de grond moeten worden gelegd als ze vervangen moeten worden. Er is een drip-systeem voor de tuin, maar op dit moment wordt er nog overdag water gegeven, en ook al is er een drip-systeem voor geregycled wastewater, dit wordt niet gebruikt, want het water is toch niet zo duur. Er zijn bij de laatste verbouwingen tot mr. Schipper zijn spijt ook geen waterbesparende toiletten geïnstalleerd. In de hoofdtoren (140 kamers) zijn er echter wel waterbesparende toiletten.

Houden jullie bij hoeveel water wordt verbruikt? Hoeveel?
Elke maand wordt er een waterrapport gemaakt, om achter eventuele lekkages te komen. Bij elk gebouw zijn er ook watermeters, waar elke dag metingen worden gedaan. Ze verbruiken ongeveer 250-300 kubieke meter water per dag. Het watergebruik is de laatste jaren gezakt, dit komt vooral omdat ze lekkages hebben verholpen en in 1 gebouw hebben ze alle badkuipen eruit gedaan, zodat er alleen nog douches zijn. Dat scheelde heel veel water.

Waarvoor wordt het meeste water gebruikt?
Tuin, zwembaden en kamers met badkuip

(Afvalwater)
Alles gaat naar het riool, behalve het zwembadwater (met vrij veel chloor) en het extra zoute rest water uit de osmose plant: dat wordt in zee geloosd

(Afval)
Afval wordt opgehaald door Selikor. Ze hebben ook een vetput, waarvan de overloop op het riool uitkomt, de rest wordt eens in de 2 weken afgehaald. Keukenafval gaat naar een varkensboer. Al het andere afval wordt gestort in een perscontainer. Ze betalen per ton. Groot groenafval wordt door een ander bedrijf dan Selikor opgehaald, ze betalen per rit daarvoor. Glas wordt wel apart ingezameld door het hotel (het is all inclusive, dus er wordt geteld hoeveel flesjes er bijvoorbeeld doorheen gaan per dag, en die flesjes worden gecrushed om navullen/misbruik te voorkomen. Alleen dat aparte glas gaat daarna wel weer dezelfde bak in als het andere afval: de regering zou voor een glasbak moeten zorgen.

(Maatregelen)
De filters van het zwembad staan altijd aan

(Toekomst)
Er komen veel hotels bij: er moet dan echt iets aan de riolering gedaan worden. Deze is altijd verstop, zeker als het regent is de capaciteit gewoon te klein. De riolering zou meer schoongemaakt moeten worden en uitgebreider moeten zijn.
Ook voor afval moeten er duidelijke standaarden komen: hoeveel containers moet je bijvoorbeeld hebben? Heel veel regels zijn verouderd, en ook worden er vaak geen alternatieven gegeven voor hoe het wel moet. De overheid zou moeten kijken of de regels van nu nog wel up-to-date zijn.
Interview Chogogo Resort

+/- 200 kamers (60 bungalow, 59 appartementen), gasten vanuit Europa

Vragen Hotels:


Een ander probleem bij veel andere hotels is het management structuur: general managers blijven vaak maar 3 jaar, en willen in die jaren commercieel gezien zo veel mogelijk scores (=winst maken) lange termijn investeringen die alleen voor een opvolger profijt op zouden leveren worden daardoor dan niet gedaan. De overheid zou mensen moeten helpen met financiering van investeringen, dmv bijvoorbeeld leningen die ze dan automatisch met het geld dat ze besparen terug kunnen betalen. Op Chogogo hebben ze de investeringen op energie en water gebied binnen 2 jaar terugverdient, en nu gebruiken (en betalen) ze 30% minder dan voorheen.

(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?
Elk huisje heeft een eigen kleine boiler, airco alleen in slaapkamers: de woonkamer heeft shutters. Airco’s werken op beweging, warmte en deuren (alleen aan als de deur dicht staat)
Houden jullie bij hoeveel energie er wordt verbruikt? Ja; 200.000 kWh/maand, en dat kost ze 45.000 gulden per maand (samen met water is dit bedrag)
Wat inkopen betreft van apparatuur: letten op labels, duurzame materialen (belangrijk vanwege het tropische klimaat), en continuïteit levering.
Wat kost de meeste energie? Airco, maar dat verschilt ook erg met de temperatuur: in een koelere maand gaat er veel minder energie naar de airco’s. Ook zijn er spaarlampen, al halen deze door wisselende stroom (vooral de stroomstoot die ontstaat bij het weer opstarten na een storing) vaak de brandtijd niet. Terrein verlichting staat op timers.
Geen energie uit duurzame bronnen. Het probleem met bijvoorbeeld zonneboilers is dat er geen blijvende kennis op het eiland is: de slijtage is erg hoog en constante knowhow ontbreekt. Zo had het ressort in het verleden Philips apparaten, maar nu is Philips al weer weg van Curaçao. Ze
waren bezig met een onderzoek naar windmolens, maar hebben nu een erg goede deal met Aqualectra, dus dat is wat uitgesteld.

(Water)


(Afvalwater)

Doen jullie iets specifieks met jullie afvalwater (recyclen/lozen?) wat dan? Al het water naar de septic tanks. Ze hebben er 2, elk van 150 Kubieke meter. Het water ging altijd ’s nachts naar de planten vanwege stankoverlast, maar ’s ochtend water geven is beter voor planten eigenlijk. Sinds 2 maanden hebben ze een systeem in de septic tank waarbij er biobollen met bacteriën worden toegevoegd. Die bacteriën zuiveren het water nog eens extra, waardoor er veel minder stankoverlast zou moeten komen. Dit systeem wordt al gebruikt door bestaande waterzuiveringsinstallaties. Er zit geen chloor in het afvalwater (is ook slecht voor de planten). Bij het zwembad hebben ze een ozonator, zodat er echt nog maar minimale hoeveelheden chloor bij hoeft. In schoonmaakmiddelen en dergelijke zit ook geen ammoniak of andere giftige stoffen (het zijn zo genaamde biologische schoonmaakmiddelen) ze komen namelijk anders ook weer terug in het eigen systeem. De rooi (voor regenwater) is aangesloten op de grote gemeenschappelijke rooi met afvoerput bij Jan Thiel. Regenwater opvangen zo dicht bij de kust is te duur, want het komt in zo’n korte tijd in zulke hoeveelheden en het is zo snel bij zee, dat de opslagcapaciteit die je nodig zou hebben onbetaalbaar is. Op hoger gelegen gebieden zou een systeem met een dam wel mogelijk zijn.

(Afval)

Hebben jullie maatregelen om afval te voorkomen? Nee.
Nee, het moet mooi zijn: dus losse verpakkingen voor zeepjes e.d. Geen gerecycled papier.
Hoeveel afval produceren jullie? Veel, maar hoeveel weten ze niet.

(Maatregelen)

Spaarlampen: overal
Perlators en spaardouches overal
Spraak Wc’s ja
Airco gaat automatisch aan en uit
Geen zonneboilers (elektrisch)

(Afsluitend)

Werken jullie ook samen met andere hotels op het eiland, op milieugebied?
Water wordt samen met Papagayo en livingstone ingekocht. Ook investeringen in airco’s werd samen gedaan omdat er dan grotere korting mogelijk was. Ook hebben ze hetzelfde afvalbedrijf.
Heeft u/uw hotel ooit gedacht om te streven naar een eco-certificaat?
Nee, ze hebben gekeken naar green globe: maar daar moet elk jaar de lat hoger: als je dus al erg goed bezig bent is dat heel moeilijk. Daarna is gekeken naar de milieubarometer maar dat was ook weinig pragmatisch vonden ze, en met heel erg veel papierwerk. Er is eigenlijk vooral niet achteraan gezeten, het is zo veel gedoe. Ze zijn denken ze zelf eigenlijk verder dan Papagayo, dus het zou wel moeten kunnen, maar je moet er specifiek iemand opzetten. Er zou eigenlijk meer bewustzijn over keurmerken moeten komen: door bijvoorbeeld een marketing bedrijf in te schakelen.

Toekomst:
Ze zijn nu 14 jaar hier, en de mensen worden steeds milieubewuster. Er is veel positieve verandering geweest: meer bewustwording, minder verspilling. Je kunt niet in je eentje vechten tegen milieuvervuiling, maar steeds meer mensen denken hetzelfde, dus het komt er wel aan.
Interview Floris Suite Hotel

71 kamers, gasten vanuit VS en Europa, gemengd

Vragen Hotels:

Dhr. MJ. is facilitair manager en als zodanig verantwoordelijk voor onderhoud, security en landscaping. Afvalverwerking zit ook in zijn takenpakket maar dat is bijna niks. Milieu is niet echt een onderwerp in het hotel (het is een 4* designhotel, ontworpen door Jan des Bouvries, dus alles moet vooral mooi en sjiik zijn). Het is wel geprobeerd, zo is er wel waterhergebruik en zijn er spaarlampen, maar meer lukte niet. Er is geen interesse voor, zowel van bovenaf (eigenaars) niet als van onderaf (werknemers) niet. Er wordt wel gesproken over eventuele investeringen, maar het hotel moet vooral geld opbrengen. Wel zijn er offertes aangevraagd, over bijv. reverse osmose installatie om zelf water te maken, en een energy-plant. Het is echter maar een klein bedrijf dus grootschalige aanpak is al snel teveel. Er is vanuit de overheid veel te weinig regelgeving, bijvoorbeeld op gebied van veiligheid. Kijk ook naar Isla bijvoorbeeld: in Europa zou zoiets al lang gesloten zijn. Wat de overheid zou moeten doen volgens MJ is het volgende: eerst een risico-inventarisatie maken: prioriteiten stellen, dan mensen informeren, zodat er een bewustwordingsproces plaatsvindt: dit is het belangrijkste, de mentaliteit van de bevolking moet veranderen. Toen MJ een batterij inzamelsysteem probeerde op te zetten, bijvoorbeeld, mislukte dat tot 2x toe, omdat er bij het personeel geen animo voor was. (er zijn heel erg veel batterijen bij het hotel afval, denk aan kluisjes, afstandbedieningen, etc.). Enerzijds wordt milieubewustzijn vanuit de overheid niet gestimuleerd, maar de mensen zelf zijn er ook niet mee bezig: er wordt geen of te weinig aandacht aan besteed in het onderwijs. Je zou al bij kinderen moeten beginnen met onderwijzen wat de gevolgen zijn voor het eiland als het milieu kapot wordt gemaakt. Zodat ze zien hoe de toekomst er uit zal zien, en ze echt het gevoel hebben dat ze ook zelf bij de vorming van die toekomst worden betrokken. Na de bewustwording zou er vanuit de overheid een handhavingsbeleid moeten komen dat ook controleerbaar is, en er moeten dan ook straffen komen. Niet alleen voor grote bedrijven, maar ook voor de ‘gewone man’. Het probleem is dat wetgeving die wordt opgelegd van bovenaf, voordat er bewustwording heeft plaatsgevonden niet geaccepteerd wordt, door de gewone bevolking althans. Voor grote bedrijven zou er wel een lik op stuk beleid moeten komen: de vervuiler betaald. Maar het personeel moet daar ook van doordrongen worden: anders leg je de bedrijfsvoerder de zware taak op om het personeel te onderwijzen, dat kan een spanningsveld tussen de (Nederlandse) eigenaar en het (Antilliaanse) personeel opleveren. Belonen van ‘good practice’ zou wel tot meer bewustwording kunnen leiden/een eye-opener kunnen zijn. Je moet bij het beleid vooral ook kijken hoe andere landen dat hebben gedaan. Daarbij natuurlijk wel rekening houden met de cultuur van Curacao. Vooral het koloniale verleden heeft invloed: als een blanke iets komt vertellen is dat patronizing, en de les lezen. Er is een houding van: “bemoei je er niet mee”.

(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?

Spaarlampen, er wordt aan gasten gevraagd om de temperatuur van de airco’s hoger in te stellen of uit te doen. Er is ook een automatisch bewegingsmelders systeem: als de kamer leeg is (geen beweging langer dan 10 min) of als de terrasdeur open staat gaat de airco uit.

Houden jullie bij hoeveel energie er wordt verbruikt?

Meterstanden worden opgenomen, maar er wordt niks mee gedaan, behalve als de kosten opvallend hoog zijn.

Wat inkopen betreft van apparatuur: ze letten niet op energielabels
Wat kost de meeste energie? Airco (70-80 % van de totale energiekosten)
Geen energie uit duurzame bronnen.

(Water)
Doen jullie in het hotel aan waterbesparing? hergebruik? Wat dan?
Er is een septic tank, daar gaat al het afvalwater heen, zelfs condenswater van de airco’s. Er past 80 kubieke meter in de septic tank, de overloop komt uit op het riool. ’s nachts wordt daarvan de tuin water gegeven (ivm stankoverlast). Op kamers zijn geen ligbaden, maar kranen en douchekoppen zijn allemaal ‘design’ dus daar passen geen waterbesparende dingen op. Wel is er een handdoek hergebruik systeem (op de grond=nieuw, anders niet). In de tuin is een mix van inheemse en andere planten: er is bij de aanleg niet op watergebruik gelet.
Houden jullie bij hoeveel water er wordt verbruikt?
De meterstanden (meters per kamer) worden opgenomen, maar er wordt niets mee gedaan. Waar is het meeste water voor nodig? Zwembad (verdamping)

(Afvalwater)
Doen jullie iets specifiek met jullie afvalwater (recyclen/lozen?)wat dan?
Al het water naar de septic tank. Er is speciaal toiletpapier dat beter ‘oplost’.
Het is niet bekend of er bij schoonmaakmiddelen wordt gelet op milieuvriendelijkheid.
Na gesprek met collega manager Housekeeping blijkt, dat er wel zoveel mogelijk naar gestreefd wordt om milieuvriendelijke poetsmiddelen te kopen.
Wel bij pestcontrole: tegen muggen worden er rookgordijnen gelegd die verder onschadelijk zijn, tegen termieten wordt een middeltje gegeven dat ze onvruchtbaar maakt, waardoor kolonies uitsterven: dus geen zwaar vergif. Tegen kakkerlakken wordt wel gif gespoten.

(Afval)
Wat gebeurt er met het afval van het hotel? Wordt niet gescheiden omdat er geen systeem voor is (zou wel moeten: glas, karton en GFT zou al een groot verschil maken) Afval wordt per ton betaald (ze hebben een perscontainer). Vroeger was glas wel apart, nu niet meer.
Hebben jullie maatregelen om afval te voorkomen?
Nee, het moet mooi zijn: dus losse verpakkingen voor zeepjes e.d. Geen gerecycled papier.
Hoeveel afval produceren jullie? Veel, maar hoeveel weten ze niet.

(Maatregelen)
Spaarlampen: ja, waar kan
Perlators en spaardouches passen niet.
Airco gaat automatisch aan en uit
Geen zonneboilers (elektrisch)
’s Nachts wel lichten aan: uit veiligheidsoverwegingen
Poolfilter moet dag en nacht aan (is niet zo groot)

(Afsluitend)
Werken jullie ook samen met andere hotels op het eiland, op milieugebied?
Nee.
Heeft u/uw hotel ooit gedacht om te streven naar een eco-certificaat?
Nee, als design hotel is dat waarschijnlijk niet interessant
Toekomst:
Veel bedrijven komen hier vanwege de gaten in de wet: alles is hier mogelijk met de juiste, goede contacten. Als de overheid stelling neemt en er echt veel regelgeving komt, zal het voor bedrijven en investeerders wellicht niet meer interessant zijn om naar Curaçao te komen. Vooral als Isla blijft bestaan, heeft Curaçao dan niet bijster veel te bieden.
Interview Howard Johson Plaza Hotel

50 kamers (nog 20 in 2e fase: die zijn nog niet opgeleverd ze gaan dienen voor overcapaciteit).
Gasten vooral uit VS, Aruba en Venezuela, Nederlandse gasten zijn meestal van bedrijven, voor business bezoeken.
Pand is gehuurd en wordt door het hotel geëxploiteerd

Vragen Hotels:


(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?

Houden jullie bij hoeveel energie er wordt verbruikt?
De pandeigenaar houdt het dagelijks bij, het hotel betaalt een vast bedrag. Het is maar de vraag of dat bedrag helemaal klopt, en of ze besparingen dus zelf ook terug zouden zien in de rekening. Ze betalen nu 19.000 NAF aan water en elektra elke maand
Wat inkopen betreft van apparatuur: Mr Fereira weet niet of er bij inkoop van huidige apparatuur op zuinigheid wordt gelet: dat was voor zijn tijd. Op de pomp van het zwembad zit een timer: hij gaat ’s nachts uit.
Wat kost de meeste energie? Airco
Geen energie uit duurzame bronnen.

(Water)

Doen jullie in het hotel aan waterbesparing?/ hergebruik? Wat dan?
Nog niet, het plan is wel om douchekoppen en kranen waterbesparend te maken. De rendabeheid daarvan is al getest, en ze komen dit jaar nog als het goed is. De toiletten zijn al Europese modellen die maar 6 liter/flush gebruiken. Het is de bedoeling dat er ook in de toekomst een mogelijkheid zal komen voor het hergebruiken van bijvoorbeeld handdoeken: dat is er nu nog niet.
Houden jullie bij hoeveel water er wordt gebruikt: huisbaas: per dag.
Waar is het meeste water voor nodig? (bad) kamers
(Afvalwater)
Doen jullie iets specifiekjes met jullie afvalwater (recyclen/lozen?) wat dan?
Afvalwater gaat naar het riool (ze hebben geen tuin). Er is ook geen wasserij. Er wordt bij inkoop van schoonmaakmiddelen niet gelet op milieuvriendelijkheid voor zover hij weet.
In het zwembad wordt er veel chloor gebruikt, omdat ze veel last hadden van algen.

(Afval)
Wat gebeurt er met het afval van het hotel?
Afval zit bij de huurprijs inbegrepen, zoals iedereen in het stadsdistrict zijn ze verplicht om met Selikor te werken. Afval wordt helemaal niet gescheiden.
Hebben jullie maatregelen om afval te voorkomen?
Wel zeepdispensers. Wc papier in de lobby is gerecycled, rest niet.
Hoeveel afval produceren jullie? Weet hij niet.

(Maatregelen)
Spaarlampen: ja, waar kan
Perlators en spaardouches nog niet, komen wel
Airco gaat automatisch aan en uit met pasjes systeem
Poolfilter alleen ’s nachts aan
Personeel weet dat ze lichten en airco’s uit moeten zetten

(Afsluitend)
Werken jullie ook samen met andere hotels op het eiland, op milieugebied? Nee.
Heeft u/uw hotel ooit gedacht om te streven naar een eco-certificaat?
Nee: er zitten te hoge kosten aan vast, ook de uitvoering is erg moeilijk
Toekomst:
Wereldwijd is het milieu een belangrijke zaak aan het worden, dus als je jezelf in de toekomst kan verkopen als een ‘groen hotel’ zal dat zeker een bepaalde klasse mensen aantrekken, waardoor je een voordeel hebt ten opzichte van andere hotels.
Interview Lions Dive Hotel

111 kamers en er komen er nog 40 bij.

Vragen Hotels:

Mr Gerard J. Martens is facilitair manager, hij is ook verantwoordelijk voor het onderwerp milieu. Er is geen milieubeleidsverklaring. Vroeger had het hotel een green globe certificaat; de vorige directeur wilde dat graag. Nu hebben ze dat niet meer: het koste te veel tijd en moeite, en leverde niks op. De gasten van Lions dive komen namelijk bijna niet uit de VS: daar is green globe veel bekender dan in (bijv) Nederland. De milieubarometer lijkt ze wel interessant. De milieudienst komt wel eens langs om dingen te checken, maar de meeste milieumaatregels zijn ze zelf mee begonnen. De overheid doet te weinig en zegt eerst dit, dan weer dat. Er zou bijvoorbeeld een project opgezet worden waarbij het afvalwater van het hotel gezuiverd zou worden. Dat water zouden ze het voor een goedkoper tarief weer terugkrijgen als grijs water: voor de tuin. Maar dat is nooit gebeurd, bovendien was dat goedkope tarief 5 NAF/m3 en dat is nu ook het tarief dat Aqualectra voor ze hanteert voor Lions Dive gewoon leidingwater.

Nu werkt Lions dive dus wel aan verbeteringen op milieugebied, maar geheel individueel en uit eigen beweging. Lions wil wel met milieu bezig zijn, maar richt zich niet op 'eco-gasten'. Wel gaat Lions dive er van uit dat zij het meeste met het milieu bezig zijn van de hotels op het eiland.

Streven naar milieuvriendelijker toerisme zou niet via verplichte maatregelen moeten, maar vanuit de hotels zelf. Mr. Martens Gaat er van uit dat milieu in de toekomst op Curaçao steeds belangrijker zal worden, vooral bij nieuwbouw liggen er kansen.

(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?
Alle lampen zijn vervangen door sparaampen. Bij het nieuwe gedeelte zijn er echter 500watt halogeen lampen in het plafond ingebouwd: die verbruiken heel veel stroom, en geven veel warmte af.

Houden jullie bij hoeveel energie er wordt verbruikt? Nee
Wat inkopen betreft van apparatuur: ze letten niet op energielabels, maar kopen wel alle apparaten in Nederland. Dit is omdat het hotel 220 volt heeft als netspanning, in plaats van de gebruikelijke 110 van Curaçao. Koelkasten moeten no-frost zijn, anders vormt zich (door de vochtige lucht?) heel snel een ijslaag.
Wat kost de meeste energie? Airco
Bij de nieuwbouw zijn/worden overal zonneboilers geïnstalleerd, dit bespaart zeer veel energie.

(Water)

Doen jullie in het hotel aan waterbesparing?/ hergebruik? Wat dan?
Er is septic tanks; dat water ging vroeger naar de tuin, maar het stinkt teveel dus nu niet meer. De rest wordt geloosd op het riool De tuin wordt voor een deel via een drip-systeem bewaterd, dit gebeurt ‘s ochtend s vroeg en ’s avonds. Het systeem kan uitgezet worden als er veel regen valt, en de hoeveelheid water die gegeven wordt hangt verder af van het weer. Er zijn inheemse plantensoorten voor de tuin gebruikt (behalve het gras), dus die hebben relatief gezien niet heel veel water nodig.
Ook zitten er spaarknoppen op de toiletten. Bij oude toiletten zijn toilet-dams aangebracht.
Douches gebruiken 7l water/min.
Houden jullie bij hoeveel water er wordt verbruikt? Nee
Waar is het meeste water voor nodig? De kamers zelf (ligbaden), de tuin = nr. 2, het zwembad = nr. 3

(Afvalwater)
Doen jullie iets specifiek met jullie afvalwater (recyclen/lozen?) wat dan?
Ze lozen alles. Er zou een rioolbelasting komen per kamer, maar daar is nooit meer wat van gehoord. Wasmiddelen zijn fosfaatvrij, en schoonmaakmiddelen zijn ook milieuvriendelijk. (geregeld via Diversi lever; alles komt uit Nederland)
Ze chlорeren hun drinkwater, dat gaat automatisch met een pompje met een metertje erop

(Afval)
Wat gebeurt er met het afval van het hotel?
Afval bestaat uit de GFT fractie en de rest. Vroeger werden accu’s e.d. nog naar Parera gebracht: die namen ze dan mee naar Nederland, nu is dat niet meer.
Hebben jullie maatregelen om afval te voorkomen?
Zeepdispensers en dergelijke.
Vroeger gebruikten ze gerecycled papier e.d. maar daar is mee gestopt omdat het te duur was.
Vroeger werd overgebleven eten opgehaald in een container en aan schapen gevoerd, nu niet meer. Als het eten gedoneerd zou worden, wordt er van dat systeem misbruik gemaakt door het personeel: er wordt dan expres te veel besteld zodat er over blijft.
Hoeveel afval produceren jullie?
Ongeveer 3 ton per week: ze hebben een eigen perscontainer, en betalen per ton.

(Maatregelen)
Perlators ja
Afstellen kranen publieke wasbakken ja
Airco Compressoren ja
verplaatsen naar buiten ja
Spaarlampen kamers ja
Tl badkamers ja
Doorstoombegrenzers (spaa rouches) ja
Handdoek bordjes ja
Bordjes airco uit niet meer: ze hebben nu sensoren die de airco op 26 graden zetten als mensen weggaan, deze worden echter regelmatig door gasten gesaboteerd. De bedoeling is dat die gesaboteerde sensoren binnenkort weer in bedrijf komen.
Waterrecycling (voor bijv. tuin) nee, maar: bij de nieuwbouw komt dat wel: douche en wasbaker water apart: grijs water, bananen en papaja groeien goed op water met een beetje zeep.
Spaarlampen lobby ja
timer giftshop nee, er blijft een beetje licht branden, de airco gaat wel uit.
Lantarens en tuinspots spaarlampen/spots ja
Solar water heater ja: vroeger was dat de grootste kostenpost: nu zijn er zonneboilers.
**informatie schoon makers en keuken**  
1 x in de zoveel tijd zij er besprekingen. De airco’s zet het personeel niet meer uit: daar kwamen teveel klachten over.

**Auto magazijn switch off**  
nee

**auto toiletten switch off**  
nee

**Maintanance ruimte licht+ airco uit**  
zetten ze zelf uit, in mr. Martens’ kantoortje: wel timer voor de airco, in het weekend staat hij uit. nee, maar de lampen die aan staan zij nu wel

**0-6 uur: 50% lampen uit**  
ja

**spaarlampen**  
ja

**Waterbesparende toiletten (toiletdams)**  
ja

**Slang douche op strand**  
ja, maar die is nu kapot, in de vakantietijden als er veel kinderen zijn moet hij wel 24 uur draaien. In blok 4 zit wel een zwembad met een timer, maar die is gestolen.

**Pool filterpomp timer**  
nee

**Grijs water afvoer**  
ja

**Top down lakens verschonen**  
ja: dat is mr. Martens

**Energie coördinator benoemen**  
nee

**Meters installeren**  
half-half

**Incentive personeel**  
in het oude gedeelte van het hotel zitten wel green globe stickers.

**Stickers op apparaten**

(Afsluitend)

Werken jullie ook samen met andere hotels op het eiland, op milieugebied?  
Er zijn wel bijeenkomsten geweest voor meerdere hotels in het verleden, maar dat liep alleen maar uit op snacks en drinken. Tussen Avila en Lions dive is wel eens wat persoonlijk contact, dan wordt er door Avila om advies gevraagd bijvoorbeeld, maar dat is meer persoonlijk contact tussen de managers, dan dat het een structureel contact tussen de hotels betreft.
Interview Papagayo ressort

75 huisjes, zilveren milieubarometer

Vragen Hotels:

Rogier van der Meer is de ressortmanager, zijn taak is om samen met het general management alles aan te sturen, behalve het restaurant: dit is nog wel eigendom van Papagayo, maar wordt niet door hen gerund. Mr. Van de Meer is de milieusupervisor van het ressort. Ook heeft hij zich bezig gehouden met het behalen van het zilveren niveau van de milieubarometer. Papagayo heeft een milieubeleidsverklaring voor medewerkers, die moeten die tekenen. Ook gasten worden op de hoogte gehouden dmv een map met informatie die in de villa’s ligt. Volgens mr. Van der Meer ligt de sleutel in milieubewustwording van hotels in het besparen van geld. Er zijn problemen op Curaçao waardoor je sommige dingen niet verplicht kan stellen: zo is de aanvoer van sommige producten en apparaten er bijvoorbeeld niet altijd. Er moet vooral meer bewustzijn dat het ook gaat om kostenbesparing.

(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?
Spaarlampen, alleen door sterke stroomfluctuities gaan spaarlampen hier maar net zo lang mee als gewone lampen: dus dat is juist weer niet goed voor het milieu. Verder gaat de airco uit als mensen het huisje verlaten, en kan hij niet aan als de deuren open staan (behalve bij gezinnen met kinderen). De boiler van een huisje gaat uit als het langer dan 3 dagen leeg staat.
Houden jullie bij hoeveel energie er wordt verbruikt?
Energiegebruik wordt per week gemeten, cijfers zijn niet bij de hand.
Wat kost de meeste energie? Airco, en boilers
Geen energie uit duurzame bronnen.

(Water)

Doen jullie in het hotel aan waterbesparing?/ hergebruik? Wat dan?
Alle huizen zitten op een septic tank systeem, niet op het riool, dat water wordt gefilterd (tegen stank) en gaat dan naar de tuin. Het zwembad is gevuld met leidingwater. Handdoeken worden niet elke dag gewassen, en er zijn kaarten in de maak om gasten te informeren dat ze hun handdoek op de grond moeten leggen als ze een nieuwe willen.
In de tuin staan inheemse planten, maar er zijn wel grasvelden: die worden besproeid met water uit de septic tanks. ’s Nachts tussen 1 en 5 gaan de sproeiers (voor het gras) en de drip systemen (voor de andere planten) aan.
Houden jullie bij hoeveel water er wordt verbruikt? Ja, bij de hoofdkraan, en bij de tuin zijn meters, er wordt elke week gemeten.
Waar is het meeste water voor nodig? De kamers zelf: douches.

(Afvalwater)

Doen jullie iets specifieks met jullie afvalwater (recyclen/lozen?) wat dan?
Naar septic tanks met goede filters. Er is geen wasserij: die is uitbesteed. Verder gebruiken ze milieuvriendelijke schoonmaakartikelen.
(Afval)
Wat gebeurt er met het afval van het hotel? Gescheiden in: tuinafval, algemeen afval, voedsel en glas (restaurant)
Hebben jullie maatregelen om afval te voorkomen? Hervul systeem voor zeepjes
Hoeveel afval produceren jullie? Weten ze niet: ze betalen een vast bedrag voor het afval (niet per ton). Er moet getekend worden door de mensen die het afhalen, om er zeker van te zijn dat het niet ergens gedumpt wordt maar naar de juiste plek (stort) gaat. Het etensafval gaat naar en varkensboer. Het GFT wordt ook afgehaald, het kan niet op het ressort zelf compost worden door problemen met de stankoverlast. Ze gebruiken gerecycled papier voor alle kantoor artikelen.

(Maatregelen) (zie ook: milieubarometer)
Perlators
Spaardouches
Handdoekbordjes
Bordjes airco uit
Waterrecycling voor tuin
Spaarlampen overal
Solar water heater: nee, maar wel een optie voor een tweede Papagayo
Automatische switchoff van het magazijn
Lampen in tuin staan op tijdklokken
Waterbesparende toiletten
Meters installeren
Incentive personeel
Stickers op sommige apparaten, bijvoorbeeld op koelkasten.

Zwembad: heeft een ozonater, waardoor er veel minder chloor nodig is.

(Afsluitend)
Werken jullie ook samen met andere hotels op het eiland, op milieugebied?
Nee, er is wel wat overleg met CHATA af en toe
Milieubarometer eco-certificaat: (green globe is naar gekeken, maar was te zwaar) nu: zilveren niveau, goud gaat teveel ten koste van luxe: te weinig water door douches bijvoorbeeld.
Welke voordelen heeft het, welke nadelen? Voordelen zijn moeilijk te meten, mr. Van der meer gaat er wel vanuit dat er kosten bespaard worden door bijvoorbeeld energie te besparen. Nadeel is dat het veel tijd kost.
Toekomst:
De wil om te besparen is er wel, goede initiatieven waar hotels in aanbouw bijvoorbeeld op zouden kunnen letten is water verwarmen met de overtollige warmte van de airco. Het Renaissance gaat in de toekomst een strand verwarmen op de 1e verdieping met koud water uit zee dat eerst wordt gebruikt voor koeling, dan opwarmt en dan naar het strand gaat.
Interview Plaza Hotel

250 kamers, gasten vanuit Europa, maakt eigen water, maakte eigen elektriciteit (nu even niet, maar in de toekomst wel weer)

Vragen Hotels:

Mr. S. Winterberg is de general manager van het hotel, en als zodanig verantwoordelijk voor het algemene beleid. Met milieu zijn ze niet erg veel bezig: het hotel heeft pas net nieuwe eigenaars, en het loopt nog wat moeizaam: ze hebben nog teveel andere uitdagingen op dit moment.

Voor hotels meer aan milieu doen, moet er eerst meer bewustzijn worden gecreëerd vanuit de bevolking. Op dit moment ontbreekt dat geheel en is er geen referentiekader voor bijvoorbeeld wetgeving. Door campagnes zou eerst bewustzijn moeten worden gecreëerd, voordat er bij hotels aangeklopt wordt met wetgeving.

(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?
Eerst werd eigen energie opgewekt: grote dieselgeneratoren draaiden non stop. Die generatoren werken het best als zo op 80 a 90% vermogen draaien, dus werd er toen gekeken naar het hoogste en het laagste verbruik over een dag (overdag wordt er meer energie gebruikt dan ’s nachts). De 2 generatoren werden dan gesynchroniseerd, zo dat de 2e ging draaien bij een hoog energiegebruik. Ongeveer 60 a 70% van de opgewekte elektriciteit werd gebruikt, de rest werd niet verkocht (Aqualectra wilde daar niet aan meewerken). De prijs van elektriciteit was toen niet erg hoog, en verschil door zuinig te zijn met energie was niet merkbaar. Toen werd er dus weinig op elektriciteitsgebruik gelet. Maar nu moeten de oude generatoren vervangen worden en koopt Plaza tijdelijk elektriciteit van Aqualectra. Hierdoor is de elektriciteitsrekening flink gestegen, en men kwam er achter dat er toch wel erg veel stroom werd verbruikt. Daarom worden er nu af en toe 1 of 2 airco chillers (er zijn er 3) uitgezet: dat scheelt heel erg veel energie. In de nabije toekomst gaat nu het hele airco systeem vervangen worden. Het wordt een VRV-systeem met splitunits (een buiten en een binnengedeelte). Op de buiten units kunnen maximaal 16 binnen units worden aangesloten, ze kunnen dan trappsgewijs aangezet worden, in plaats van alleen aan en uit. Zo voorkom je het piekstromenverbruik bij het aanzetten, en kan je de airco’s mee laten gaan met de bezetting. Het systeem wordt gekoppeld aan het reserveringssysteem: als er niemand in de kamer zit, gaat het systeem van het koelen af en blijft het alleen ontvochtigen (dit is belangrijk, anders worden de kamers te vochtig).
Verder worden de verlichting en de fans ’s avonds uitgedaan. Er zijn wel een paar spaarlampen, maar niet heel veel, want ze zijn te duur.

Houden jullie bij hoeveel energie er wordt verbruikt?
Nu wel een beetje: er komt per maand een rekening, daarvoor helemaal niet.
Wat kost de meeste energie? Airco
Geen energie uit duurzame bronnen (er is wel een haalbaarheidsstudie gedaan naar koeling met zeewater, maar de stroming was te strek voor de kust bij Plaza, dus dat kon niet). Op energielabels wordt niet gelet: “Ik weet niet eens wat het zijn”. Apparaten komen uit Curacao, Nederland en de VS.
(Water)

Doen jullie in het hotel aan waterbesparing?/ hergebruik? Wat dan?
Er is het gebruikelijke handdoek ververs systeem, en voor het wassen van het linnen is ook een systeem: dit wordt niet op vaste dagen gedaan, maar gekoppeld aan de reservering: op de dag dat gasten komen is er schoon goed, dat wordt dan na een halve week ververst, daarna weer na een helave week of als ze wegaan. ( dus niet dinsdag= wasdag, ook al zijn de gasten pas maandag in hun kamer –met natuurlijk schoon linnengoed- gekomen) Verder niet, maar dat gaat wel komen, voor douches en Wc’s bijvoorbeeld. Ook zal het nieuwe airco systeem veel water besparen: de oude chillers verdampten water om te koelen, meer dan 36 kubieke meter per dag gaat dat schelen bij de nieuwe airco’s.
De tuin is niet groot, de planten (is niet gelet op inheemse soorten/watergebruik) krijgen geen gerecycleld water: ze krijgen overdag ijs (dat verdampt minder). Dat ijs is speciaal daarvoor gemaakt.

Houden jullie bij hoeveel water er wordt verbruikt? Nee
Waar is het meeste water voor nodig? Kamers (meeste kamers hebben alleen een douche)

(Afvalwater)

Doen jullie iets specifiek met jullie afvalwater (recyclen/lozen?)wat dan?
Afvalwater wordt in zee geloosd, het is een oud pand (1950) en de infrastructuur voor andere opties is er niet. Er is ook geen riol.
Ze hebben geen eigen wasserij, en er wordt niet om milieuvriendelijkheid gelet bij schoonmaakmiddelen. Het bedrijfje dat aan pest controle doet, houdt als het goed is wel rekening met het milieu (beetje).

(Afval)

Wat gebeurt er met het afval van het hotel? Afval wordt per ton betaald (ze hebben een perscontainer). Glas wordt apart opgehaald, groen/etens afvoer gaat naar een varkensboer, en ook vet wordt apart opgehaald.
Hebben jullie maatregelen om afval te voorkomen? Nee
Hoeveel afval produceren jullie? Onbekend.

(Maatregelen)

Spaarlampen: een paar
Poolfilters staan op tijdsklok
Er is een energie groepje geweest binnen het hotel: nu niet meer

(Afsluitend)

Werken jullie ook samen met andere hotels op het eiland, op milieugebied? Nee.
Heeft u/uw hotel ooit gedacht om te streven naar een eco-certificaat?
Nee, het hotel heeft nu nog genoeg andere uitdagingen
Interview Sunset waters Hotel

69 kamers, gasten vanuit VS, langzaam aan ook iets meer uit zuid Amerika en Europa. Vooral groepen (duik)toeristen

Vragen Hotels:


(Energie)

Doen jullie in het hotel aan energiebesparing? Wat dan?
De bedoeling is dat er dit jaar 50.000 NAF bespaard gaat worden op de energie. Spaarlampen zijn al overal, maar er komt nu ook een nieuwe airco aan. De vorige is erg verouderd en kon alleen aan of uit, de nieuwe staat op een thermostaat. Ook wordt het personeel op het hart gedrukt om te controleren of de lichten en de airco’s van kamers uitgezet worden. Houden jullie bij hoeveel energie er wordt verbruikt?
Ongeveer 60.000 NAF betalen ze per maand aan water en elektra. Vooral de duikschool gebruikt erg veel energie lijkt het.
Wat inkopen betreft van apparatuur: ze letten (nog) niet op energielabels
Wat kost de meeste energie? Airco
Geen energie uit duurzame bronnen. Maar mr. de Windt is wel erg geïnteresseerd in het gebruik van zonneboilers.

(Water)

Doen jullie in het hotel aan waterbesparing?/ hergebruik? Wat dan?
Op het strand zullen bij de douches timerkranen geïnstalleerd worden binnenkort. De tuin wordt nu met leidingwater 1x per week ‘s avonds besproeid, maar dat gaat dus als het goed is afvalwater worden.
Handdoeken worden alleen verschoond als ze op de grond liggen, en lakens alleen als er een papiertje op het bed wordt gelegd. (en anders/dat is ongeveer om de 3 dagen). De meeste planten in de tuin zijn inheems en hoeven eigenlijk geen extra water.
Zelf water en elektra maken mag niet volgens het contract dat ze met Aqualectra hebben (Max. 2 dagen per week zouden ze dan eigen elektra mogen hebben, bijvoorbeeld)
Ze krijgen nu van Aqualectra een speciaal ‘na 7en’ tarief, maar dan de hele dag.
Houden jullie bij hoeveel water er wordt verbruikt?
Ja, ongeveer 400 a 500 kuub/maand. 21 kamers hebben een ligbad, 1 een jacuzzi.
Waar is het meeste water voor nodig?
Voor de wasmachines. In principe besteden ze het wassen uit aan een wasserij bedrijf, maar die laat ze nógal eens zitten, dus dan moeten ze zelf wassen (eigenlijk dagelijks).

(Afvalwater)
Doen jullie iets specifieks met jullie afvalwater (recyclen/lozen?) wat dan?
Gaakt nu naar de septic tank, eens in de zoveel tijd wordt die geleegd: dan wordt de inhoud opgezogen. Het water uit de tank is nu nog te vies om te gebruiken voor de tuin, maar met het nieuwe project komt daar verandering in. Met was en schoonmaakmiddelen wordt geen rekening met het milieu gehouden. Het pestcontrole bedrijf komt 1x per maand in alle kamers spuiten, en in principe proberen ze zo licht mogelijke bestrijdingsmiddelen te gebruiken.

(Afval)
Wat gebeurt er met het afval van het hotel? Ze hebben een perscontainer: dat wordt 1 a 2x per maand afgevoerd. Ze betalen een vast bedrag. Er worden geen fracties onderscheiden.
Hebben jullie maatregelen om afval te voorkomen? Nee
Hoeveel afval produceren jullie? Weten ze niet precies.

(Maatregelen)
Spaarlampen: nu ongeveer de helft van de lampen, dat gaat in de toekomst meer worden.
Alle lampen buiten op een timer
De nieuwe koel/vrieskasten zijn de zuinigste op de markt
De poolfilter pomp staat continu aan: vroeger werd hij wel eens uitgezet, maar dan werd het water niet genoeg gezuiverd. Er vinden meeting met het personeel plaats waarin wordt gevraagd of ze er op letten dat lichten e.d. uit staan.

(Afsluitend)
Werken jullie ook samen met andere hotels op het eiland, op milieugebied?
Nee, meetings met bijv. CHATA zijn er eigenlijk alleen in het orkaanseizoen
Heeft u/uw hotel ooit gedacht om te streven naar een eco-certificaat?
Nee, ze zijn wel naar lezingen geweest, maar geen globe bijvoorbeeld is gewoon te duur.
Bovendien moesten ze dan alles veranderen, en dat was ook te duur.
Toekomst:
De toekomst wordt zeer interessant: er zullen veel mensen van het ene hotel naar het andere overstappen, vooral als de nieuwe hotels er zijn. Bijvoorbeeld mensen van de housekeeping, die hebben dan ervaring uit andere hotels, waardoor ze allerlei ideeën hebben voor verbeteringen. Mr. de Windt luistert altijd naar ideeën en suggesties.
In mei komt er een vakschool voor toerisme, helemaal geleid door studenten (er zullen namelijk 3000 mensen in 2 jaar nodig zijn, omdat het toerisme zo gaat groeien). Of het milieu in deze ontwikkelingen belangrijk wordt hangt o.a. af van de milieudienst. Er moeten weten komen, vooral ook voor de nieuw te bouwen hotels, en de milieudienst moet laten merken dat ze er zijn, en dat ze controleren. Ze moeten meer druk op de hotels zetten.
Appendix C

Accounts of meetings with tourism stakeholders on Curaçao (in Dutch)

These are the accounts of the meetings and conversations with stakeholders in tourism on Curaçao and the Netherlands. The accounts of the meetings were sent back to the respondents for comments. The versions shown here are the accounts of the meetings and conversations including changes because of comments if necessary.

1. Meeting with the Environmental Service Curaçao

Gesprek milieudienst , Tico Ras
7 december 2006

Prioriteit qua problemen is afvalwater, maar voor water en energie besparing is meer animo.
Waar zijn ze mee bezig:
- Afvalwater concept verordening: lozingseisen riolering
- Implementatie bestaande wetten (1994) hindervergunning
- Implementatie verordening vast chemisch afval (1995)
- ‘Nieuwe politieverordening’: geen afval op iemand anders terrein

Problemen: te weinig naleving door hotels door gebrek aan registratie en structurele controles.
Boetes moegen (grond?)wettelijk niet hoger zijn dan 5000 NAF (ERNE besluit).
Voorwaarden voor slagen project: luxe in hotels moet behouden blijven, regels moeten bij de tijd zijn, en ze moeten ook bij mensen bekend zijn, en er moet bekend zijn dat er gecontroleerd wordt.
Er zijn geen specifieke vergunningen voor waar je wel en niet mag bouwen, maar het mag niet in strijd zijn met het bestemmingsplan.
Ruimtelijke ordening: mv. Jonkers
De milieudienst heeft contact met: R.O., Selikor (afvalbedrijf) , politie ed., economische zaken, Juridische zaken
Geen contact met CHATA
In de toekomst zal toerisme op Curaçao nog belangrijker worden voor BNP.
“toerisme is in ieder geval schoner dan industrie”
Er is al veel verbeterd in vergelijking met vroeger, door meer milieuvriendelijke vraag vanuit westere landen/toeristen, zal er nog meer gaan veranderen.
2. Meeting with the environmental consultancy company Ecovision

Gesprek Tim van den Brink, Ecovision
7 december 2006

Er is nog niet zo lang geleden een bedrijven platform opgericht, met als doel de industrie op het eiland te motiveren om meer aan milieuzorg te doen. Hotels zijn een speerpunt. Half maart gaat er een workshop georganiseerd worden. Het milieu platvorm bestaat uit vrijwilligers.

Er is in 2002 al een project geweest van het innovatie centrum, waarbij werd getracht hotels certificeerbaar te maken: 2 hotels hebben dit ook gedaan (lions dive, en papagayo)

Het is handig om met de milieudienst te praten over de branche gerichte aanpak waar ze nu mee bezig zijn.

De meest milieubelastende activiteiten op Curaçao zijn het zand opspuiten om stranden te maken, en het afvalwater dat in zee terechtkomt (vooral stikstoffen en fosfor blijft in het water zitten na zuivering: als dit water dichtbij stranden wordt gebruikt voor irrigatie bijv. komt het in zee terecht.

Wat spreekt hotels aan: water en energie besparen. Let ook op groen afval dat tussen het restafval komt

Stakeholders zijn: milieudienst, Selikor, Aqualectra, CHATA (belangenstichting hoteliers zelf) CTB (beleidsmakers vanuit overheid) Casha: belangen organisatie voor appartementen.


Kleine, lokale hotels zijn meer met milieu bezig en eerder bereid mee te werken dan grote internationale concerns.

Op Bonaire leeft milieu meer, maar toch is er weinig certificering: ook door strubbelingen tussen ambtelijk apparaat in Nederland en hier. Dominica is een goed voorbeeld van een eco-destination. Ook op Aruba gebeurd meer, maar dat is meer de oorzaak van een paar enthousiaste hotels met een voortrekkers rol, dan door maatregelen van de overheid bijvoorbeeld.

Het platvorm zorgt vooral voor milieuzorg, niet perse voor kwantificeerbare resultaten. Bij de volgende vergadering ben ik ook welkom.
3. Second meeting with the environmental consultancy company Ecovision

_Gesprek Tim van den Brink, Ecovision_
_22 februari, 2007_

Tim’s bedrijf heeft meerdere taken: Ecovision is de commerciële consultancy tak, Sustainable Solutions is een andere tak die voorziet in hardware apparatuur. Voor individuele geïnteresseerden is de prijs echter vaak te hoog, zonne-energie is eigenlijk pas voordelig voor grotere systemen vanaf een gebruik van 80kWh. Veel projecten worden gefinancierd door Nederland. Vanuit Ecovision hebben ze een model dat de energie efficiency van een gebouw, dmv een input van een hele hoop variabelen, kan uitrekenen. Ook Aqualectra sponsort grote projecten, dmv hun ‘energie winkel’. Zo waren ze bereid 50.000 dollar te investeren in een ‘solar cooling’ project. Dit project is uiteindelijk echter niet uitgevoerd. Ze geven geen workshops voor huishoudens; eigenlijk alleen voor grotere bedrijven. De terugverdientijd van zonne-energie is hier ongeveer 10 jaar (of meer), van kleine wind energie 6-10 jaar. Water besparingen zijn echter soms al na 6 weken terugverdiend. Er is samen met Ecofys, een Nederlands bedrijf, een project gedaan waarbij hotels de investeringen voorgeschoten kregen, en dan uit de milieuwinst aan aantal jaren terug konden betalen. Dit is o.a. gedaan bij Chogogo en Papagayo ressort. Het project staat nu een beetje in de koelkast, maar is in principe nog steeds bezig. Een optie zou bijvoorbeeld zijn om het project voort te zetten samen met de energiewinkel van Aqualectra. Aqualectra is nog steeds geïnteresseerd. Er was een afspraak tussen Ecofys en banken op Curaçao om de financieringen rond te krijgen, en de banken waren daar erg in geïnteresseerd. De vraag van hotels was er op zich wel, maar misschien wel aan de lage kant van de verwachtingen.

Verder is er ook een project geweest samen met Amigu di Tera: ‘sustainable Antilles’. Hierin werd geformuleerd hoe een duurzaam Curaçao er uit zou zien, waarbij 5 speerpunten werden geformuleerd, onder andere het toerisme.

Vanuit het innovatiecentrum is er was er ook een project met geld vanuit Nederland. Dit was een soort training om gecertificeerd te worden: hotels werden begeleid op een milieuzorgsysteem op te zetten. Papagayo en Lions dive hebben dit toen uiteindelijk ook gedaan. Dit was een succesvol en leuk project; er is toen ook een follow-up voor grote hotels geformuleerd, maar dat voorstel is door Nederland afgewezen. Een zelfde soort project is nu ook in behandeling voor Aruba.
4. Meeting with the elektricity and water company Aqualectra

*Gesprek: Austin Matina, manager general affairs Aqualectra (Ook aanwezig: Manuel do Rego, quality coordinator)*


Aqualectra heeft ongeveer 60.000 aansluitingen voor elektriciteit en water.

Het bedrijf Aqualectra bestaat uit twee takken: de productie tak en de distributie tak. Voor de productie tak, die het meest milieubelastend is, wordt IFO; Industrial Fuel Oil, verstookt: dit is vaak zeer verontreinigd met bijvoorbeeld zwavel. In 1989 zijn er daarom roetvangers bij de ketels geplaatst. Zowel bij de oude als bij de nieuwe ketels; daardoor wordt 60% van het roet afgevangen.

Vanaf 1983 had Aqualectra meerdere ontmoetingen met de milieudienst, over formalisering van bijvoorbeeld de hindervergunningen. Maar van de kant van de milieudienst kwam weinig respons; het duurde tot 2000 voor met echt met milieu aan de slag ging vanuit de overheid. Daarom heeft Aqualectra in 1989 (toen was het nog KAE, de productietak, en Codilla, de distributietak) DHV in de arm genomen om metingen te doen. Isla bleek toen de grootste veroorzaker van vervuiling. Dat werd toen in kaart gebracht, en ook welk aandeel Aqualectra in die milieubelasting had. Vanuit de vestiging bij Mundu Nobo is er wel geluidsoverlast veroorzaakt, maar aangezien het hele stuk kust waar mundu nobo aan zit bestemd gaat worden voor toerisme, zullen de activiteiten van mundu nobo langzaam uitgevaagd worden, en dan lossen die klachten zich dus vanzelf op.

Vanuit de distributietak van Aqualectra is er geïnvesteerd in windmolens (sinds 1986). Om een soort handreiking naar het milieu te doen. Er wordt straks 9 MW geproduceerd door de windmolens. In veel Europese landen is een streven dat 3% van de piekbelasting door duurzame energie wordt geleverd, op Curacao is dat aandeel al 10%. In 2002 zijn milieu-initiatieven tijdelijk geparkeerd (gestopt), in 2005 is er weer mee begonnen. Bewustwording is daarbij erg belangrijk. Je moet reële eisen stellen voor Curacao, en niet zoals in Nederland meteen in 1x een heel eisen pakket op tafel leggen. De mensen moeten namelijk wel het gevoel hebben dat standaards haalbaar zijn, anders beginnen ze er niet eens aan.

Aqualectra heeft zelf een milieuregister gemaakt, rekening houdend met bestaande wetten, en met geanticipeerde wetten, maar soms ook gebaseerd op normen vanuit de VS of Nederland. Ze zijn op dit moment (nog) bezig hindervergunningen te regelen. De eisen uit de vergunningen worden dan onderdeel van het bedrijf. Door Lloyd zijn er ook externe audits gedaan. Wat betreft de connectie met hotels zijn ze bij Aqualectra bezig met het koudwaterpipp project, dat voor airco moet zorgen bij hotels, door koud water uit de oceaan op te pompen. Dat is meteen een paradepaardje van Aqualectra, en voor de hotels.

De contacten met de hotels gaan vooral via de technisch commerciële afdeling (Alexis Dauw). Om de economie te stimuleren krijgen hotels gunstiger tarieven. Dat er veel van betalende hotels zijn, is alleen een perceptie van de bevolking; dat was vroeger misschien zo, maar nu niet meer. Hotels kunnen wel bepaalde regelingen treffen voor het terugbetalen, als ze te laat zijn of zo worden ze niet afgesloten: het is een commercieel belangrijke tak voor het eiland, dus er wordt anders mee omgegaan.
Over de multi-utility tak: Dat is een apart onderdeel van het bedrijf, dat verder vooral bestaat uit productie en distributie en nog een deel CUC (Isla) daarvan is 29% van Aqualectra. De multi-utility tak is opgericht omdat veel klanten, omdat de energie en waterprijs zo hoog zijn op het eiland, zelf hun energie en water gingen produceren. Door met die mensen persoonlijk om de tafel te gaan zitten, en te kijken hoe ze geld konden besparen door beter met energie en watergebruik om te gaan, konden ze voorkomen dat ze klanten kwijtraakten. Dus de multi-utility tak is vooral om tegemoet te komen aan de klant die milieuvriendelijk/zuinig denkt: om die niet kwijt te raken. De multi-utility tak werkt ‘achter de meter’ en buiten de statuten van Aqualectra om, zodat ze meer vrijheden hebben.

Hoe ziet de toekomst eruit: de normen van de nu behaalde certificaten dwingen al verbeteringen af, door een proces van bewustwording nog het meest. Er is nu een milieumanagement systeem en een MAR, Milieu Aspecten Register. Je moet namelijk als bedrijf ook kunnen aantonen dat het bedrijf zich aan de regels houdt, en waar niet dat dit komt door de beperkingen van het eiland zelf, met eigen problemen.

Je moet bij wetgeving vooral letten op het samenspel van structuur en cultuur: als je meer structuur aanbrengt (regels vastgesteld) moet dat wel haalbaar zijn binnen de cultuur, anders houdt niemand zich er aan. Die tweeën moeten dus allebei groeien. Het moet haalbaar zijn. Er moet ook tijd ingebouwd worden om te groeien en te komen tot die cultuuromslag.

Wat er bij hotels vooral aan structuur mist is dat medewerkers zich niet bewust zijn van hoe je met het milieu zou moeten omgaan. Je hebt mensen nodig die een roolmodel zijn, en die dat weten. Binnen Aqualectra zijn er wel sessie gehouden met de medewerkers om meer bewustzijn te creëren. Ze zien wel duidelijke verbeteringen. Het verbruik van hotels van ‘automatic meter readings’ zou Alexis Dauw moeten hebben. Probleem is dat water en energiegebruik ook stijgen als de bezettingsgraad hoger is. Dus waar het door komt is onduidelijk, langere termijn gegevens heeft Alexis Dauw wellicht.

Water en energie zijn pijlers voor de economie: stijgt het BNP met 3%, stijgt de energie ook (direct), watergebruik stijgt vaak pas na 2 jaar. Als er in de toekomst meer geld in op Curaçao, wordt er waarschijnlijk ook nog meer water en energie verspilt.

Milieu moet uit meer bestaan dan een financieel plaatje: er zit vooral ook een groot moreel aspect aan. Die aspecten en risico’s moeten goed worden vastgelegd. Aqualectra is bereid een voorlopers rol te vervullen op milieugebied. De multi-utility afdeling wordt niet gebruikt als voorlichtingsmedium, wel zijn er brochures uitgebracht door de energiewinkel, waarin staat hoe je energie kunt besparen.
5. Meeting with the garbage company Selikor

Gesprek: G. Julkema Selikor.

Bedrijven hebben contracten met Selikor, met betrekking tot hoe vaak het afval bij hen wordt opgehaald. Aparte afvalfracties zijn: huisafval, bedrijfsafval, glas (daar zijn glasbakken voor te huur en aparte containers, een hotel zou met de commerciële afdeling van Selikor moeten gaan praten om speciale glasbakken te krijgen), en karton. De afname van karton is nu echter gestopt want het karton (ingevoerd uit China voornamelijk) is van te lage kwaliteit om verder verwerkt te worden volgens de vorige afgemaker. Er wordt nu naar een nieuwe afnemer gezocht.

Selikor is een afvalbedrijf, geen recycling bedrijf: hun taak is inzamelen, transport en beheer. De landfill raakt echter vol, en een nieuwe locatie is er niet. Dus nu wordt er naar andere opties, zoals hergebruik en recycling gekeken, om de levensduur van de landfill te verlengen. De 1e landfill (bij koraalspecht) is al vol, dat is nu een overslagstation, waar perscontainers staan. Met de huidige kunnen ze volgens de laatste berekeningen nog 60-80 jaar vooruit. Wat nu bijvoorbeeld gerecycled wordt (behalve glas) zijn metalen, en batterijen/accus's worden apart ingezameld: die kunnen zelf naar de landfill gebracht worden. Die batterijen gaan naar Venezuela. Ook puin (CSC) van bouw en sloopafval wordt gerecycled, zodat het weer als bouwmateriaal kan dienen (Selikor gebouw is daarvan gemaakt). Verder wordt er ook een deel van het afval verbrand: de vertrouwelijke documenten, kadavers, pathologisch afval en drugs. Hierbij wordt geen energie terugwinning gedaan. Er is wel een onderzoek geweest naar mogelijkheden voor energieretouwinning door afval en asfalt uit het asfalt meer samen te verbranden, maar dit bleek erg duur te zijn, en dus blijven liggen. Een nieuw project dat opgestart gaat worden is het maken van biodiesel uit vetten en oliën. Fruitafval en groenteafval krijgen ze bijna niet: dat gaat naar dieren. Compost is wel ooit geprobeerd, er is ook een studie naar uitgevoerd, maar het is erg droog: dus er moet veel water bij.

Grofvuil wordt 1x per maand opgehaald en gestort. Tuinafval wordt nu niets mee gedaan, maar er komt een apparaat dat zowel tuinaal als houten paletten als autobanden kan versnipperen. Die autobanden snippers kunnen goed gebruikt worden voor het afdekkend en afdichten van de landfill. In het nieuwe afvalstoffenplan ligt veel nadruk op recycling. Het 1e plan ging vooral over het lekmaken van de afvalstoffenketen: zodat al het afval dat bij de bewoners wordt opgehaald naar de landfill gaat en niet in de natuur komt. In het 2e plan gaan ze verder met recycling van afval. Regelingen als statiegeld vallen niet onder afval, en dat doet Selikor dus niet. Vanuit de overheid zou er gelet moeten worden op vergunningen, maar vooral de chemische afvalstoffenwet is belangrijk: veel mensen weten niet wat eronder valt. Er komt binnenkort een chemisch afvalstoffen depot. Ook komt er eind van dit jaar een stortstation, met allerlei verschillende bakken voor verschillende soorten afval.

6. Meeting with the Curaçao Tourism Board

Gesprek: Evita Nita (director of marketing, Curaçao Tourism Board)

Er zijn weinig wetten voor toerisme op Curaçao; op de lange termijn kan dat problemen geven. Samen met CASHA en de GGD en de brandweer is het CTB bezig met een pakket van minimumeisen samen te stellen voor appartementen. CTB heeft geen autoriteit voor sancties; het enige wat ze kunnen doen is ‘goede’ businesses in hun promotie materiaal opnemen en de andere niet. De voornaamste taak van het CTB is de overheid adviseren, gevraagd en ongevraagd, het hoofddoel hierbij is het toerisme op Curaçao te promoten. Er is een tijd geweest dat het alleen maar ging om marketing, maar nu is het weer een tukje breder: het gaat om toeristische ontwikkeling. Naast marketing doen ze af en toe aan productontwikkeling, vooral bij de stranden, maar eigenlijk is dat niet de rol van CTB: zij moeten er voor zorgen dat degenen die dat moeten doen het ook doen.

De bedoeling van het project met CASHA is, dat alle appartementen die op de website willen komen, nu een toetsing krijgen, om te kijken wat er anders en beter moet. Over 6 maanden volgt een 2e toetsing, waarbij aan alle normen moet zijn voldaan. Dino Dahl evalueert dit project. Om kleine hotels en appartementen aantrekkelijker te maken zouden ze moeten samenwerken: alleen dan kan je deals maken met vliegmaatschappijen om een goede (goedkope) stoelprijs te krijgen. Volgend jaar starten ze een project om een sterrenkwalificatie voor hotels te maken (i.s.m. CHATA) op Curaçao; dat ontbreekt nu. Met andere soorten certificatie zijn ze (nog) niet bezig.

Hotels hebben het een tijdje vrij moeilijk gehad op Curaçao: milieu komt dan niet op de 1e plaats. Er was geen structurele groei, en er werden te weinig investeringen gedaan. Nu gaat het weer beter, en de verwachtingen zijn zeer positief: andere aspecten, zoals het milieu, kunnen dan ook weer meer een rol spelen. Er komen een aantal nieuwe grote ketens aan: Mariott, Renaissance, Hyatt. Dat zijn de hotels die ze graag willen hebben, omdat grote touroperators, zoals TUI, vaak niet omkijken naar een hotel met weinig kamers: de grote hotels zitten gem. zo’n 80-100% vol, de kleine veel minder. Vanuit de overheid krijgen die internationale ketens bepaalde vrijstellingen van de belastingen. Internationale ketens hebben vaak al vrij hoge standaarden, en een milieu policy: daar kan de rest dan door omhoog getrokken worden (zoals bij Aruba). Het idee is dat er door internationale hotelketens ook internationale standaarden het land binnenkomen.

Voor 2009 staat een verdubbeling van het aantal kamers in grote hotels in de planning. CTB wil echter niet richting alleen maar massatoerisme. In plaats daarvan willen ze ook mikken op duurzaamheid. De vraag is vooral hoe ver je wilt groeien: in het masterplan staat waar en hoeveel groei er nog mogelijk is (maar dit gaat over ruimtelijke planning: niet over energie en watergebruik e.d.). Groei gaat ten koste van het milieu, dus bij blijvende groei moet Curaçao zich afvragen hoeveel het daar voor wil opofferen. Vooral afval(water) gaat een probleem worden, dus daar moeten regels en voorzieningen voor komen. De DROV (dienst R.O. en volkshuisvesting); geeft vergunningen uit, en de EOP doet het ruimtelijke gedeelte. DEZ (Dienst Economische Zaken) hebben een overzicht van alle vergunningen. Wetgeving hoeft geen probleem op te leveren voor bijvoorbeeld de concurrentie positie van Curaçao als mensen en ondernemingen maar vooraf weten wat er van ze verwacht wordt: hotel(keten)s houden zich toch ook aan de internationale normen.
7. Meeting with the travel agency OAD

*Gesprek: 9 november 2006*

**Inleidend:**
OAD: 3 poten: reizen (780,000 passagiers/jaar), Reisbureaus (+/-250), Touringcarbedrijf (voeren ook reparaties uit)
Kleinere takken bijv SRC reizen
60 brochures
Reis kost gem. 500/600 euro
Winstmarges tussen 1.5 en 2%
Kostenbeheersing door: -voorraad beheer, -volume

**Wat doet uw organisatie op dit moment aan duurzaam toerisme?**

*In hoeverre probeert uw organisatie zich neer te zetten als ‘milieu vriendelijk’?*


Een ander project in samenwerking met een aantal partijen (ook TUI) in samenwerking met ANVR is opzetten van een complete internet database, met milieu/duurzaamheid info over alle ingekochte hotels. Vragen over betaling personeel, materiaal en energie en waterbesparing enz. Maar bedrijf blijft commerciële invulling houden: bij goed verkoop en slechte milieuzorg...klanten worden wel voorgelicht, maar de vraag bepaald uiteindelijk het aanbod. Dealbreaker is wel kinderprostitutie (ECPAD)

**Wat zijn de reacties van de klanten op uw milieubeleid? Is er vraag naar duurzaam toerisme?**

Er is vraag naar informatie, en zo ontstaat ook meer bewustwording. Bewustzijn wordt alsmaar groter. Dit faciliteren is belangrijke doelstelling van OAD.

**Wat vind u van het concept van eco-keurmerken/eco-certificatie?**

Staat niet erg positief tegenover keurmerken/ Erkennen ze allemaal maar gebruiken er geen (behalve blauwe vlag). Er zijn er veel te veel: ’t is moeilijk te controleren. Klanten kennen ze niet: een keurmerk zou herkenbare waarde moeten hebben: nationaal en internationaal: 1 groot keurmerk. Er zijn nu nog geen keurmerken die daaraan voldoen (bijv BOVAG voldoet wel)

**Welke eco-keurmerken/eco-certificaten zijn het bekendst bij uw klanten?**

Blauwe vlag
Geven jullie in jullie brochures en/of reisbeschrijvingen aan of een hotel een eco-keurmerk/eco-certificaat heeft? Waarom wel/niet?
Nee: info is willekeurig (green globe wel, maar niet bij naam, milieubarometer niet)

Wat zijn belangrijke zaken die in uw ogen moeten veranderen om toerisme duurzamer te maken?
Duurzaamheid moet door de hele keten gedaan worden: individuele acties hebben geen kans van slagen. Initiatief: de travel foundation (kan je lid van worden, in toekomst): door TUI, OAD, GOGO en nog een paar.doel is: tools, praktische info, verduurzamen, concrete info, projecten op locatie.
In bijv EU verband: keurmerken reguleren, standaardiseren. Zodat je echt kan zien wat er geleverd wordt aan de hand van keurmerk.

Hoe staat de Nederlandse Antillen in vergelijking met andere bestemmingen tegenover duurzaam toerisme?
Redelijk groot bewustzijn, vooral Bonaire. Project met WWF: geldstromen creëren dmv nationaal park,

Hoe staan uw klanten die reizen boeken naar de Nederlandse Antillen tegenover duurzaam toerisme, in vergelijking met andere klanten?

Wat zouden jullie als reisorganisatie bereid zijn (nog meer) te doen, om duurzaam toerisme te bevorderen?
Nu bezig: project met TUI en WWF: Egypte_Samenwerking met NGO’s is incidenteel: wordt nog uitgebreid misschien.

Hoe denkt u dat de toekomst van de toeristische sector er uit zal zien, in Nederland en in de rest van de wereld? Zullen er grote veranderingen zijn? Of juist niet?
Er is een kentering zichtbaar in de vraag: door de techniek zijn klanten in staat reispakketten zelf samen te stellen. Assortiment van OAD blijft toch standaard pakketten: gevolgen van massa toerisme zijn belangrijker dan toerisme zelf: vooral wildgroei zonder planning/visie is niet goed. Diversiteit in aanbod van OAD zal blijven: maar wel verschuiving naar individuele pakketten. Touroperator als consument: praten met mensen over projectontwikkeling. Vooral all inclusive is niet duurzaam: weinig gaat naar locale economie. Pas als er geen vraag naar is, zal er geen aanbod van niet duurzame bestemmingen zijn: maar klant wordt steeds kritischer, duur vraag zal misschien ook verdwijnen.
8. Conversation with the travel agency TUI

*Telefoon gesprek: 2 november 2006*

**Wat doet uw organisatie op dit moment aan duurzaam toerisme?**
Afdeling kijkt naar een soort basis kwaliteitseisen, met betrekking tot accommodatie: scheiden afval, energie, water, sociaal: kinderarbeid, dierenleed. Er zijn geen specifieke duurzame kwaliteitseisen, er wordt meer naar duurzaamheid toegewerkt. Vooral inzet is belangrijk.

**In hoeverre probeert uw organisatie zich neer te zetten als ‘milieu vriendelijk’?**
Alle touroperators hebben deze basis kwaliteitseisen, alle dochterondernemingen ook.

**Wat zijn de reacties van de klanten op uw milieubeleid? Is er vraag naar duurzaam toerisme?**
Er wordt niet naar gevraagd: de verkoop daalt zelfs, doordat klanten denken dat duurzaam duurder is.

**Welke eco-keurmerken/eco-certificatief voor de toeristische sector (er)kennen jullie?**
Wel erkend: Green globe, Milieubarometer/ Green Key, alles onder VISIT, Rainforest Alliance (bij gebrek aan beter).


**Wat vind u van het concept van eco-keurmerken/eco-certificatief?**
Er moeten meer sociaal/economische aspecten in worden opgenomen. Er zijn er ook veel te veel: meer dan 50

**Denkt u dat eco-keurmerken /eco-certificatien werken? Is er vraag naar?**
Nee, maar 1% is gecertificeerd: vooral kleine B&B’s en dergelijke: het is niet mogelijk om alleen bij dat soort (gecertificeerde) accommodaties in te kopen.

**Welke eco-keurmerken/eco-certificatien zijn het bekendst bij uw klanten?**
Blauwe vlag

Nee: klanten kennen ze toch niet: zou te veel uitleg vergen in een brochure. Er wordt een signaal afgegeven, meer kan niet.

Het is niet de taak van reisorganisaties of certificatie bekender te maken.

**Wat zijn belangrijke zaken die in uw ogen moeten veranderen om toerisme duurzamer te maken?**
Infrastructuur en (bestuurlijke) systemen in de landen moeten anders, anders is er geen beginnen aan. Locale NGO’s kunnen dingen onder de aandacht brengen.

**Bieden jullie ook reizen aan naar de Nederlandse Antillen?** Ja

**Hoe staat de Nederlandse Antillen in vergelijking met andere bestemmingen tegenover duurzaam toerisme?**
Bonaire is veel bezig met duurzaam toerisme

**Wat zouden jullie als reisorganisatie bereid zijn (nog meer) te doen, om duurzaam toerisme te bevorderen?**
We gaan door zoals we nu bezig zijn; elk jaar wordt dit breder. Campagnes die in de aandacht staan nemen we mee met eisen: er wordt gekeken wat er speelt in de maatschappij en bij NGO’s

**Hoe denkt u dat de toekomst van de toeristische sector er uit zal zien, in Nederland en in de rest van de wereld? Zullen er grote veranderingen zijn? Of juist niet?**
Het wordt elk jaar meer; de klant wordt kritischer: ze verwachten meer, ook het milieu/duurzaamheid hoort bij dat pakket. Je kan niet meer aankomen met een reis waarin bijv. kinderarbeid naar voren komt.
Samenvatting doel van het milieuplatvorm door Karel Tujeehut, van Aqualectra, manager bij de multi-utility afdeling: achter de meter. De persoon die het meest van milieu(veiligheid) weet, ook van multi-utility, is Ottie Matine (nu op vakantie).

Een aantal grote bedrijven op Curaçao wilden meer doen op het eiland met duurzame (milieuvriendelijke) bedrijfsvoering. Op dat moment ging milieuzorg nog erg individueel. Het idee was de knowhow op het eiland te bundelen en meer het beleid meer gestructureerd te maken. De bedoeling daarbij was dat er ook spin-off naar andere bedrijven die niet in het platvorm zitten plaats zou gaan vinden.

Bedrijven in het platvorm zijn:
- Eco-vision (milieuadvies)
- Arbo (milieu conservatie Curaçao)
- ADC (analytisch Diagnostisch Centrum)
- Selikor (afvalverwerking bedrijf)
- MCB (bank, heeft eigen ‘environmental committee’)
- Aqualectra (elektriciteit en water)

Ongeveer 3 jaar geleden zijn ze begonnen met brainstormen, en in kaart brengen wat hun visies waren. De basis van het platvorm zijn de bedrijven als participanten, dus NGO’s minder (voor advies bijv.). Het is nu nog geen formele organisatie: daar wordt aan gewerkt. Elke 2 weken komen ze bij elkaar. Er is een businessplan gemaakt met hun visie en de speerpunten. Een formele structuur is nodig. Uiteindelijk is het de bedoeling dat ze meer leden krijgen, kennen gaan bundelen en uitwisselen, met elkaar maar ook met buitenstaanders om zo spin-off effecten te creëren en het imago van het milieu op het eiland te verbeteren. Om bewustzijn te creëren, dat milieuzorg ook positief en maatregelen kostendekkend kunnen zijn. Voor zaken die wel (veel) geld kosten, kunnen dmv synergie effecten de kosten gedrukt worden. Het platvorm is niet commercieel ingesteld, iedereen zit er in als persoon, maar ook als afvaardiging van hun bedrijf. Er moet nog een brief gestuurd worden zodat zwart op wit staat dat de bedrijven erachter staan. Er gaat binnenkort een projectvoorstel ingediend worden bij MINA, om subsidie (voor o.a. workshop) aan te vragen. Ook is het de bedoeling dat het platvorm een formele status krijgt; dan kan je namens/als ‘rijkspersoon’ het veld in: die krijgen meer gedaan.

Er zijn twee commissies in het platvorm: 1 die de formele status moet bewerkstelligen en 1 die zich bezighoudt met het organiseren van de workshop, op 20 maart als het goed is.
Appendix D

Presentation for the workshop of the ‘Bedrijven Platvorm Milieu’

The following presentation (next page) was given at the workshop: “Environmental management systems, what’s in it for hotels?” organized by the ‘Bedrijven Platvorm Milieu’ on 28 March 2007 in Willemstad, Curaçao, for the hotels and other stakeholders in tourism on Curaçao. The presentation was based on the conclusions of the internship study and report for the ministry of Public Health and Social Development of the Netherlands Antilles, Department of Environment and Nature, and on the interviews that were done with the hotels and other stakeholders in tourism on Curaçao.
How green are we?
Environmental implementations and practices at hotels on Curacao

WORKSHOP
“Environmental Management Systems, What's in it for the Hotels”

Nouweke Smit, Intern MNA
Wednesday, 28 March 2007

CONTENTS

- About this project
- Implementations and practices
  - Opportunities and problems
- Conclusions
**Environmental standards for the Netherlands Antilles**

Interviews at ten hotels on Curaçao

Main subjects:
- Energy
- Water
- Waste
- Wastewater

**Which implementations and practices do hotels have?**

---

**“Hotels are throwing money away”**

---

Wednesday, 21 March
PAYBACK TIME: ≤ 6 MONTHS

Energy:
- Energy saving light bulbs
- Turn off pool filter at night
- Signs: “Turn air-co off”

Water:
- Water saving faucets
- Water saving showers
- Water saving toilets/toilet cisterns

Table 1: Implementations and practices of hotels

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Partially/plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy saving light bulbs</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Pool filter on timer</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Signs Air-conditioning</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Water saving faucets</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Water saving showers</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Water saving toilets</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

Wednesday, 28 March Bedrijevda Platform Wilieu
PAYBACK TIME: 2 YEARS

Energy:
- Solar water heaters
- Air-conditioning sensors

Water:
- Grey water recycling

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Partially/plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 2: Implementations and practices of hotels

ENERGY:

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Partially/plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 3: Implementations energy use

Data on the average use of kWh/guest/night
- Master switch / key card for electricity
- Double glass

Drought strips under doors
Table 1: Waste Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass and All Ingredients</td>
<td>3</td>
</tr>
<tr>
<td>Paper and All Ingredients</td>
<td>1</td>
</tr>
<tr>
<td>Batteries</td>
<td>0</td>
</tr>
<tr>
<td>Bottles</td>
<td>4</td>
</tr>
<tr>
<td>Nature and All Ingredients</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2: Industrial and Public Waste

- Recycled paper
- Soap dispensers

Table 3: Implementation of Water Use

<table>
<thead>
<tr>
<th>Type of Plant Garden</th>
<th>Washing System</th>
<th>Washing System Location</th>
<th>Implementation of Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Based on check-in system</td>
<td>yes</td>
</tr>
</tbody>
</table>

Table 4: Implementation of Water Use

- No implementation of water use
- Yes implementation of water use

- Partially implemented
- Implemented

Table 5: Water Use

- Washing of clothes
- Watering of plants

Table 6: Possible Waste Categories

- Paper and All Ingredients
- Batteries
- Nature and All Ingredients

Table 7: Watering Systems

- Watering by plant garden
- Watering by public system

Table 8: Implementation of Water Use

- Yes
- No
### WASTE WATER

**Other measures:**

- Eco cleaning products
- Ozonator pool
- Septic tanks
  - 'Bio-balls'
- Rainwater from gutters

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Septic tank</td>
<td>5</td>
</tr>
<tr>
<td>Septic tank and sewer</td>
<td>1</td>
</tr>
<tr>
<td>Sewer</td>
<td>3</td>
</tr>
<tr>
<td>Discharge in sea</td>
<td>1</td>
</tr>
</tbody>
</table>

*Table 8: waste water processing of hotels*

Wednesday, 20 March. [Platform Mielou](#)
CONCLUSIONS

The hotel sector as a whole already has quite a few examples of good practice, especially on the subjects energy and water.

Environmentally friendly handling of waste and waste water is still a problem.

Hotels differ among each other in which and how many implementations and practices they have.

CONCLUSIONS

Hotels are often unaware of their water and energy use per month; no knowledge of data = no knowledge of problems and improvements.

The hotel sector on Curaçao still has a long way to go before it can call itself ‘sustainable’.

Hotels have a lot to gain in learning from each other.