



Utrecht University

# **GREEN HOTELS ON WHITE BEACHES**

A Study into the Environmental Management of Hotels in Puerto Viejo,  
Costa Rica

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## ABSTRACT

The growing number of tourists and tourism related businesses is pushing the environment to its limits. As a response, hotels try to counteract environmental degradation by engaging in environmental management. However, it is still unclear what exactly drives hotel owners to engage in environmental management. The aim of this study is to determine how environmental management among hotels looks like, and by which factors this environmental management is influenced. For this purpose, the research question is as follows: *What explains hotels' engagement in environmental management in Puerto Viejo?* In this context, environmental engagement could be explained by both hotels' characteristics and owners' motivations. The research question is answered by conducting surveys and interviews among Puerto Viejo's hotel owners. Statistical data analysis indicated that hotels' size, type, luxury and ownership did not affect hotels' engagement in environmental management. Rather, engagement in environmental management is influenced by owners' motivations. Therefore, environmental management can be mainly explained by personal beliefs and environmental attitude. This finding may relate to the eco-friendly mindset that prevails in Puerto Viejo.

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## **LIST OF ABBREVIATIONS**

ATEC	Asociación Talamancaña Ecoturismo Conservación
AYA	Instituto Costarricense de Acueductos y Alcantarillados
CATCCAS	Cámara de Turismo y Comercio del Caribe Sur
CRC	Costa Rican Colón
CST	Certificación para la Sostenibilidad Turística
GDP	Gross Domestic Product
GNI	Gross National Income
ICT	Instituto Costarricense de Turismo
NGO	Non-governmental Organisation
SALUD	Ministerio de Salud de Costa Rica
UNOPS	United Nations Office for Project Services
USD	United States Dollar

# 1. INTRODUCTION

## *1.1 Two sides of tourism*

Our world and its inhabitants are constantly on the move. People's interest in travelling around is now greater than ever. Driven by globalisation, our planet is shrinking and distances become shorter, facilitating international and global travel. The amount of people crossing international borders for the purpose of tourism has more than doubled over the last two decades, with 1.2 billion international arrivals worldwide (The World Bank, 2018a). In addition, tourism plays an undisputed role in the global economy. Figures show how tourism accounts for one in every 10 jobs and contributes roughly 10 percent to worldwide GDP (UNWTO, 2017). It is no surprise that tourism, frequently praised for its broad range of socio-economic benefits, is described as a 'sector of hope' (UNWTO, 2017). In theory, tourism is often regarded as a catalyst for economic growth, therefore being conducive to poverty reduction in developing countries (Erskine & Meyer, 2012; Medina-Muñoz & Gutiérrez-Pérez, 2016). Tourism provides opportunities for people with a certain distance to the labour market, especially in poor areas with no other growth options (Medina-Muñoz & Gutiérrez-Pérez, 2016).

However, the growing number of tourists and tourism related businesses is not merely beneficial. The continuous threat of climate change emphasises the need to reduce tourism's contribution to global emissions and pollution (UNWTO, 2017). Together with the threat of mass tourism induced environmental degradation, these challenges are bringing forward new debates concerning the role of tourism within sustainable development. Tourism's role within development is often believed to be two-sided. On the one hand, tourists and tourism related investments have the potential stimulate the local economy (Erskine & Meyer, 2012; Medina-Muñoz & Gutiérrez-Pérez, 2016) On the other hand, the growing flow of people and businesses oppress the environment (Medina-Muñoz & Gutiérrez-Pérez, 2016). Of course, the construction of tourist accommodations and real estate development as a result of the increasing tourism is interesting for the country's economy, since a lot of money is involved. However, behind the economic benefits are lurking challenging environmental impacts (Kasim, 2006)

However, the tourism sector can play an active role within this debate, by adapting policies that are aimed to counteract environmental degradation, that is partly induced by itself. These policies are called environmental management. Environmental management, in its various shapes, has been widely researched. However, debate still persists about what its exact workings are within the hotel sector. Some studies claim that environmental management is influenced by hotels characteristics like size (Carmona-Moreno et al., 2014; Kasim, 2006; Mensah, 2004; Xu & Gursoy, 2014) and luxury (Christian et al., 2011; Hampton, 1998). However, there is no proof of other characteristics that may influence engagement in environmental management. Other studies suggest that environmental management can be a response to customers' demands (Knowles et al., 1999; Zhao et al., 2014) and legislative pressures (Carmona-Moreno et al., 2004; Kirk, 1998; Xu & Gursoy) and owners' motivations (Anderson, 1997; Ayuso, 2006; Carmona-Moreno et al., 2014; Park & Kim, 2014; Rivera, 2002). However, researchers have contrasting ideas about owners' motivations for engaging in environmental management. In addition, it remains unclear what the drivers and behind these motivations are, as well as barriers that inhibit environmental engagement. This research is aimed to close these knowledge gaps, by addressing environmental management in Costa Rica, a country where environmental management among hotels has been relatively underexposed in academic research.

Costa Rica is a country that saw its tourism sector significantly expand over the last decades. Because of its unique geological and biological attractions, Costa Rica is especially popular among tourists. Ecotourism can cause a wide range of benefits to different layers of a country's society and therefore contribute to the achievement of the Sustainable Development Goals (SDGs). Included as a target in three out of 17 goals, tourism is a well-represented sector to do its part in this common endeavour (UNWTO, 2017). In addition, the World Tourism Organization (UNWTO), highlights ecotourism's role in the areas of resource efficiency, environmental protection and climate change.



Thus, governments and tourism experts promote ecotourism as a way to offer quality tourism while simultaneously preserve nature.

Nowadays, ecotourists, supplemented by surfers and other sun seekers, are increasingly finding their ways into the coastal areas of Costa Rica. Additionally, with this flow of tourists, Costa Rica also gained interest among investors. Tourism related businesses like hotels, resorts, restaurants and other hospitality enterprises are being developed at a high velocity. This blooming tourism sector is not confined to local entrepreneurs, but also attracts many foreign investors, especially from the United States, Canada and Europe, that all want a piece of Costa Rica's tourism pie.

Therefore, Costa Rica's main challenge is to find a balance between (eco)tourism development and respecting environmental boundaries and recreational capacity (Brohman, 1996). Environmental challenges are mainly emerging around popular parks, coastal areas and beaches. Hotel constructions and operations, in particular, are associated with the pollution of rivers and beaches, deforestation, and destruction of wetlands (Gormsen, 1997; Brohman, 1996). In contemporary research, it remains unclear which role tourism related businesses exactly play within this debate. Some studies suggest that a certain concentration of hotels may increase environmental consciousness (Gormsen, 1997; Kirk, 1995). Other studies perceive tourism as a notorious perpetrator of natural degradation (Brohman, 1996; Kasim, 2006; Medina-Muñoz & Gutiérrez-Pérez, 2016). Apparently, there is a fine line between these two.

### *1.2 Research objectives*

This research aims to examine how the tourism industry can contribute to environmental maintenance and protection. The objective is to determine how environmental management among hotels looks like, and by which factors this environmental management is influenced. To narrow the focus, this study will focus on hotels<sup>1</sup> in Puerto Viejo, a coastal tourism destination in Costa Rica. Hotels are interesting, because their presence is both linked to economic development (Erskine & Meyer, 2012; Medina-Muñoz & Gutiérrez-Pérez, 2016) and environmental degradation (Kasim, 2006; Medina-Muñoz & Gutiérrez-Pérez, 2016). Moreover, hotels are widely present in Costa Rica and there is already a national certification programme for sustainable hotels in practice (Rivera, 2002; Rivera, 2004). Puerto Viejo is interesting because it is a popular destination among surfers, backpackers and domestic families.

This research can provide new insights, by demonstrating how the hotels in Puerto Viejo are engaged in environmental management. Additionally, by determining which factors influence engagement in environmental practices, this research can be an addition to contemporary research. Tourism and the environment are interrelated and will remain important topics within the debate of sustainable development. Tackling this challenge is not merely relevant to Costa Rica or developing countries in general, but of global importance. The following research question is central to this study:

What explains hotels' engagement in environmental management in Puerto Viejo?

This thesis is structured as follows: Chapter 2 places this research in a theoretical context. It explains the theoretical framework, the conceptual model and the related core concepts. Chapter 3 states the research questions that are central to this thesis, as well as four hypotheses that are derived from the literature review. Chapter 4 addresses the methodology, by elaborating on the research instruments, operationalisation, data analysis, sampling strategy, positionality and limitations. In Chapter 5, the regional thematic framework is discussed. It provides an overview of relevant information regarding Costa Rica and Puerto Viejo de Talamanca. In chapters 6, 7, 8 and 9 the results of the data analyses will be described. In chapter 10, the most important results of this research are interpreted and discussed. This is followed by a general conclusion, which answers the sub questions and the research question.

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<sup>1</sup> In this research I will use the general term 'hotel', but this also encompasses hostels, resorts and guesthouses.

## 2. THEORETICAL FRAMEWORK

*This chapter addresses this research's most important theoretical concepts. It discusses how tourism development, ecotourism, ownership, and environmental efforts relate to each other. Subsequently, the conceptual framework, based on the Sustainable Hospitality Supply Chain Management framework is explained.*

### 2.1 Tourism as development strategy

In order to understand how the environment can be affected by tourism companies like hotels, it is important to have a closer look at tourism in general. Developing countries attract tourists and investments from developed Western countries, by utilising their competitive advantages like a pleasant climate and natural attractions (Brohman, 1996). Tourism as a development strategy emerged in the late 60's. From the perspective of developing countries, tourism can be approached as a form of outward-oriented development. Through focusing on the attraction of foreign flows of people and money, tourism has the potential to contribute to economic prosperity in low-income countries that are less probable to industrialise (Brohman, 1996).

Tourism is often praised for its undeniable role in the world's economy. In theory, it can function as a catalyst for economic growth, therefore being conducive to poverty reduction in developing countries (Medina-Muñoz & Gutiérrez-Pérez, 2016). Also, the construction of tourist accommodations and real estate development as a result of the increasing tourism can be interesting for the country's economy, since there is a serious amount of capital involved. However, behind the economic benefits of foreign-oriented development are lurking social and environmental issues. Tourism strategies are often too concerned with increasing the number of tourists, but less with how tourism affects communities and surroundings. To minimise negative effects and emphasise positive effects of tourism, low-impact tourism strategies are suggested. Instead of mass tourism, more sustainable alternatives, like ecotourism, are perceived to offer a solution (Medina-Muñoz & Gutiérrez-Pérez, 2016).

### 2.2 The crux of ecotourism

Ecotourism is generally regarded as a low-impact alternative to mass tourism. Although the definitions of ecotourism widely diverge, it is commonly believed to positively affect tourism destinations. According to The International Ecotourism Society, ecotourism can be defined as: "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education" (TIES, 2015). Ecotourism is aimed at offering a unique travelling experience while fostering environmental and cultural awareness. Moreover, ecotourism is intended to support conservation efforts. According to Balisacan (2012), ecotourism contributes to the protection of nature and wildlife — either directly, through targeting conservation areas as tourism hotspots, or indirectly, by generating revenue among the local community.

Compared to mass tourism, ecotourism contributes to a more sustainable development of tourism destinations (Belsky, 1999). Therefore, ecotourism has to meet certain requirements. For ecotourism to be executed responsibly, areas have to meet a number of preconditions, namely: ecosystems should not be jeopardised by the tourism; local communities should be aware of the potential opportunities and challenges of ecotourism; and the society should be willing to receive ecotourists (Pine et al., 2007). If these requirements are met, ecotourism has the potential to benefit both the environment and the community.

Ecotourism is frequently embraced as a development strategy, because of the sustainable utilisation of natural resources, development of local communities and indicated social and economic gains (Alampay & Libosada, 2003; Libosada, 2009). While ecotourism is concerned with protecting the environment, simultaneously, it generates revenue to conserve nature and benefit local communities. However, some studies claim that ecotourism is in a symbiotic relationship with mass tourism (Weaver, 1999). Ecotourism would mainly revolve around self-interest, because businesses,

tourists and communities above all remain concerned with seeking opportunities to profit on the short term (Weaver, 1999). Moreover, the image of ecotourism has been shifting.

“[...] when the character of this ecotourism is examined, the stereotype of the hardcore ecotourist, ‘treading softly’ through some untouched wilderness, is seemingly irrelevant, being too marginal in numbers, and too dispersed, to have much impact on the economy. Rather, it is passive and casual ecotourism, undertaken mainly by ‘mass tourists’ [...] which is significant to the parks in terms of direct and indirect revenue generation” (Weaver, 1999)

This is actually the crux of the matter. Although ecotourism may significantly contribute to the preservation of a destination’s natural resources, it is too marginal in numbers to be a decisive factor for a destination’s economy. Therefore, from an economic perspective, investment policies tend to favour ecotourism projects that generate more income. Prioritising economic growth may lead to the attraction of foreign investors for large-scale ecotourism enterprises, jeopardising the core principles of ecotourism and risking stratification (Horton, 2000). Furthermore, the injection of larger businesses may actually undo the gains of ecotourism (Libosada, 2009) Namely, although being lucrative, ‘big’ businesses often induce environmental degradation (Cañada, 2010). Plus, if ecotourists are being attracted in larger numbers, ecotourism no longer serves its purpose; when the influx of visitors exceeds a tipping point, the balance between economic development and environmental protection is undermined. More importantly, it stands in the way of sustainable development in tourism destinations (Libosada, 2009). Thus, ecotourism does not come without challenges. Developing countries that are involved with ecotourism aim to simultaneously conserve the environment and reap economic benefits. However, when not working appropriately, ecotourism can nevertheless lead to environmental challenges or economic leakages. One might even wonder if ecotourism can be still regarded as an ‘industry without smokestack’ when larger, foreign ecotourism enterprises enter the stage (Cañada, 2010). Ecotourism is a fast-growing sector and if its workings are not adequately channelled, it may be just as harmful for the environment as mass tourism (Cañada, 2010; Weaver, 1999;)

Therefore, a large portion of ecotourism activities actually have to be reallocated into the mass tourism category (Weaver, 1999). Figure 2.1 illustrates how these two forms of tourism relate to each other, by depicting four possible scenarios of sustainable tourism. The scheme shows how ecotourism can be both sustainable (type A) and unsustainable (type B). Ecotourism can be classified as type B when it unintendedly induces negative outcomes, like affecting the environment or harming communities. Likewise, mass tourism can be both sustainable (type C) and unsustainable (type D). Mass tourism becomes sustainable when tourism enterprises implement sustainable management techniques, as will also be discussed in Section 2.4. Obviously, type A and C are the most desirable for developing countries. Which of these tourism scenarios is pursued, depends on the circumstances of the particular destination. However, generally, as ecotourism destinations grow more popular, a shift is noticeable from Type A to Type C tourism, which is economically more promising (Weaver, 1999).

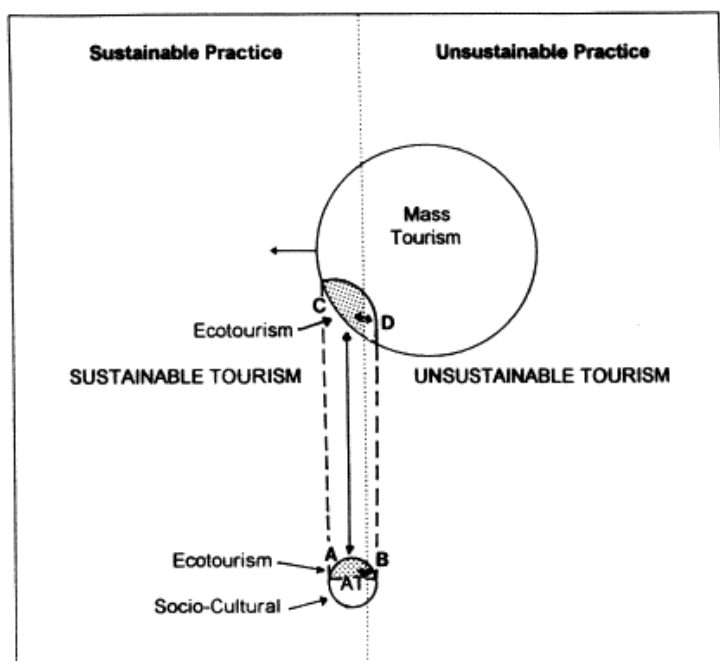


Figure 2.1 Relationship between sustainability, mass tourism and ecotourism. Source: Weaver, 1999, p. 810

### 2.3 Local & foreign ownership the tourism sector

Tourism related enterprises can be either have local or foreign owners. According to Gormsen (1997) tourism destinations move through three stages of tourism development: the pioneer stage; the domestic tourism stage and the large tourism projects stage. Potential tourism destinations start as small villages, that are discovered by 'tourism pioneers'.<sup>2</sup> Subsequently, the presence of these first tourists causes private domestic investment, leading to the development of small-scaled, locally owned hotels, which generally focus on domestic middle classes. In the last stage, the increasing influx of international tourists and foreign capital, causes development of larger tourism projects, generally operated by foreign enterprises (Gormsen, 1997).

According to Khan (1997) tourism development in developing countries always goes hand in hand with a certain dependency towards foreign investment. Especially large-scale tourism destinations are often dominated by foreign entrepreneurs (Khan, 1997). Due to the large amount of capital that is needed for tourism development, tourism related businesses often remain in the hands of foreigners. Therefore, dependency workings between tourist-sending developed countries and tourist-receiving developing countries effectuate a tourism sector that is largely owned by foreigners (Khan, 1997). Britton (1982) too, argues that tourism in developing countries is mostly dominated by foreign companies. International tourists are being channelled through structures that are controlled by large foreign companies that dominate the sector. Foreign companies hold the commercial power in hands, making them indispensable for a tourism area. However, this also makes the local tourism industry dependent on them (Britton, 1982).

Thus, international, large-scale companies are dominant in presence and power in relation to local, small companies. In general, foreign entrepreneurs have access to greater capital resources than local entrepreneurs. Therefore, foreign companies particularly consist of larger, high-end enterprises that focus on the midrange and luxury market (Christian et al., 2011). Local companies however, are typically smaller and target the lower end of the market (Christian et al., 2011; Hampton, 1998). As discussed in Section 2.2, large investments in the hotel sector can be beneficial for a destination's economy, but damaging for its environment (Cañada, 2010; Libosada, 2009). However, a dimension that has not been elaborated on yet, is how these tourism related enterprises deal with possible environmental drawbacks of their businesses. The next section examines how the tourism sector can play a role in protecting and maintaining the environment

<sup>2</sup> Gormsen (1997) actually refers to potential tourism destinations as 'coastal town' and 'fishing villages'.

#### 2.4 Environmental efforts of the tourism sector

The workings of the tourism industry are often associated with environmental impact. Tourism activities, being frequently aimed at recreation in natural areas, has the potential to bring about significant changes to destinations' environments (Hassan, 2000; Kasim, 2006). Tourism related businesses often operate in areas with an abundance of pristine nature. The increasing flow of tourists, facilitated by the growing tourism sector, is a potential threat to the often vulnerable ecosystems within these areas (Kirk, 1995). Kasim (2006) argues that tourism development has a direct relationship with a destination's physical environment. He distinguishes nine negative impacts of tourism on the environment, as depicted by Table 2.1. The development of businesses like hotels, restaurants and other tourism facilities often goes hand in hand with the deforestation and clearance of greenery (Cañada, 2010; Kasim, 2006). The increasing demand of water is pushing water sources to their limits, causing challenges regarding water access (Kasim, 2006; Kirk, 1995) The growing production of wastewater in combination with inadequate water treatment systems leads to contamination of rivers and oceans (Cañada, 2010; Kasim, 2006). Tourism induced changes to consumer patterns result in an accumulation of plastics and other waste (Cañada, 2010; Kasim, 2006; Kirk, 1995). Furthermore, tourism is intrinsically linked with mobility. The increasing amount of transport induces higher concentrations of greenhouse gases, contributing to air pollution (Holden, 2000; Kasim, 2006)

Table 2.1 Environmental impacts of tourism

Impact
Habitats loss to tourism related developments, particularly resort development in pristine areas
Land erosion and water runoff during construction
Increased demand on water supply
Increased demand on energy supply
Increased burden on solid waste management
Pollution of water bodies
Air pollution from various modes of transport
Alteration of natural environment, like ocean floor, mangrove area and beaches

Source: Kasim, 2009

Therefore, companies can choose to counteract environmental degradation that — in some cases — is induced by themselves. They can include strategies or policies in their business management that are 'green' and environmentally sound. The inclusion of such environmentally related questions in companies' management strategy, can be defined as environmental management (Carmona-Moreno et al., 2004; Mihalic, 2000). Carmona-Moreno et al. (2004) describe environmental management as follows:

“Environmental performance may be defined as the minimisation of the negative repercussions on the natural environment that stem from the productive activities of a company. [...] Environmental management embraces the study of all the technical and organisational activities aimed at reducing the environmental impact caused by a company's operations. In this definition the emphasis is therefore on the mission – the reduction of environmental impact” (Carmona-Moreno et al., 2004)

Moreover, environmental management comprises all actions that firms take to reduce negative environmental impact — from controlling energy consumption by adjusting lights and heating, to reducing waste by discouraging plastics and engaging in recycling programs (Carmona-Moreno et al., 2004).

Mihalič (2000) distinguishes three types of environmental management within companies. Firstly, environmental codes of conduct may arise within the tourism sector. These are general guidelines on how firms can be environmentally responsible. These codes are rather abstract and are

not necessarily translated into explicit environmental policies. Secondly, companies can engage in environmental management through self-initiated environmental policies. Ramus (2002) describes how such policies may look like. They created a list with 13 environmental policies that may exist in environmentally proactive firms. Firms may have written environmental policies, set specific environmental targets to be achieved, or have a plan for environmental education and training. For the complete list, see Appendix 1. Lastly, companies can be engaged in eco-labels and certification programmes, executed by local or national government units. Certification programmes aim to reward companies for improving their environmental behaviour. Different certification programmes may have divergent parameters, but generally, it focuses on actions like waste minimisation, energy efficiency and the control of non-biodegradable and harmful substances (Mihalič, 2000).

The reasons for companies to take part in environmental management may vary. It is suggested that environmental management allows tourism related businesses to both respond to environmental challenges and create entrepreneurial advantages (Ayuso, 2006; Carmona-Moreno et al., 2014; Park & Kim, 2014; Rivera, 2002). Firstly, a company's motivation to engage in environmental management may be financial, by increased premium prices, saving costs and improved competitive position (Ayuso, 2006; Kirk, 1998; Rivera, 2002). Moreover, financial benefits may even go further, by improving efficiency and access to new markets (Carmona-Moreno et al., 2004). Secondly, according to Park & Kim (2014), the urge to implement environmental management can be social and driven by the need to achieve socially constructed environmental credibility. Then, the main motivation for companies to engage in environmental management is to enhance their corporate reputation. Moreover, it is believed that initiated environmental actions are acknowledged by the society and may lead to an improved image (Carmona-Moreno et al., 2004). Thirdly, motivation can be environmental, by aiming to improve the environment and protect local surroundings. Environmental motivations mainly arise from owners' personal environmental concerns. Therefore, owners' willingness to solve environmental issues influences companies' environmental commitment (Park & Kim, 2014). Furthermore, it is believed that hotels can make a significant contribution to environmental well-being (Knowles et al., 1999). Lastly, Rivera (2004) suggest that engagement in environmental management can be pressured by external factors. These external pressures may come from governments — but also media, environmental groups, business associations might influence companies to adopt environmental management. Therefore, environmental management may be a company's response to demands from various external actors. (Carmona-Moreno et al., 2004).

The opinions regarding the impact of environmental management diverge. As mentioned before, it various studies mention how engagement in environmental management can be beneficial for both the company and the environment (Ayuso, 2006; Carmona-Moreno et al., 2014; Park & Kim, 2014; Rivera, 2002). Environmental management may positively impact the environment, by constraining further natural degradation (Park & Kim, 2014). Furthermore, it is assumed that firms which engage in environmental management are more inclined to cause environmental balance than firms that do not partake in environmental efforts (Kirk, 1998). However, environmental management can also have an impact on the business itself, its customers and on the community (Blackman et al., 2014; Dodds & Joppe, 2005; Rivera, 2002). Blackman et al. (2014) suggest that eco-certification impacts companies economically. Eco-certificates, being an indicator for quality, may increase bookings and room prices (Blackman et al., 2014). However, in turn, these higher prices have an impact on guests and the local community (Rivera, 2002) In contrast to the aforementioned, Dodds & Joppe (2005) state that certification programmes do not create greater market opportunities for participating businesses, nor have they moved the tourism industry closer to sustainability. It may be clear, that there is no consensus regarding the exact impacts of environmental management, yet.

### *2.5 Conceptual framework*

Xu & Gursuy (2015) created a conceptual framework that visualises how sustainable management in the hospitality sector operates (Figure 2.2). The Sustainable Hospitality Supply Chain Management (SHSCM) framework, depicts how sustainable (environmental, social and economic) management

comes into being. For this research, merely the environmental dimension is interesting. As can be derived from the framework, environmental management is influenced by stakeholders' interests, motivators and inhibitors and the company's characteristics. Subsequently, the environmental management is translated into actions, like recycling, purchasing greener products, or utilizing solar power (Xu & Gursoy, 2015). Ultimately, companies' sustainable management and actions have an impact on a broad range of stakeholders, like the company itself, its customers and communities.

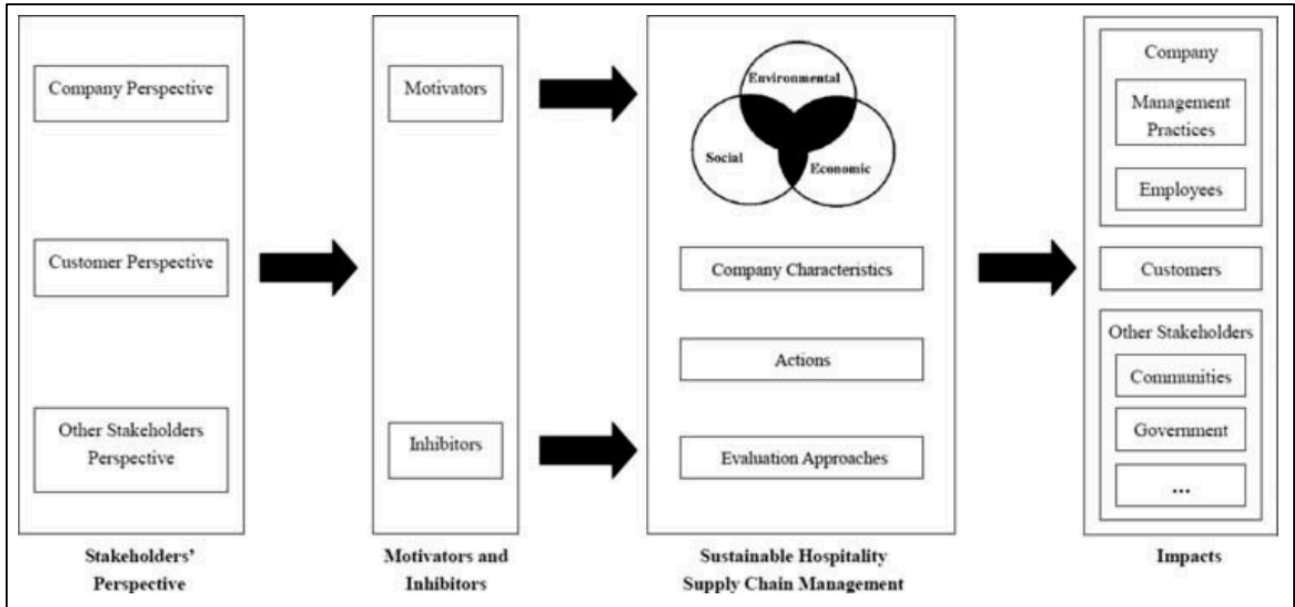


Figure 2.2 Sustainable Hospitality Chain Management framework. Source: Xu & Gursoy (2015)

According to Xu & Gursoy (2015) the potential impacts of sustainable management can equally be considered as motivations to engage in environmental management. For instance, financial benefits, competitive advantage and improved image may be both reasons for and consequences of environmental management (Xu & Gursoy, 2015). Moreover, Xu & Gursoy (2015) explain how businesses' characters like size, ownership and location influence their sustainable efforts.

The SHSCM framework is a good starting point, but for this research it is too extensive. It focuses on the hospitality sector at large, whereas this research is limited to the hotel sector. Moreover, the SHSCM framework encompasses three dimensions of sustainable management, whereas this research focuses only on the environmental dimension. Moreover, to achieve a comprehensive framework for hotels' environmental management, additional aspects need to be implemented. Therefore, a conceptual model is designed that combines the SHSCM framework with previously discussed theories on environmental management. This conceptual model can be found in Figure 2.3.

The conceptual model illustrates how hotels' environmental management in this research can be approached and how the different components within this research cohere. Step one distinguishes a hotel's different characteristics like size, ownership and customers. Based on earlier studies, it can be expected that these different characteristics have an influence on hotels' engagement in environmental management (Carmona-Moreno et al., 2014; Kasim, 2006; Mensah, 2004; Xu & Gursoy, 2014). Step two distinguishes different motivations that hotel managers can have for whether or not engaging in environmental management. These motivations can be financial (Ayuso, 2006; Carmona-Moreno et al., 2004; Kirk, 1998; Mensah, 2004; Rivera, 2002; Xu & Gursoy, 2014), social (Carmona-Moreno et al., 2004; Park & Kim, 2014; Xu & Gursoy, 2015) environmental (Park & Kim, 2014; Knowles et al., 1999) or originating from external pressures (Carmona-Moreno, 2004; Mensah, 2004; Rivera, 2002; Xu & Gursoy, 2014). The third step describes the possible forms of environmental management hotels may have adopted. This can be either environmental policies (Carmona-Moreno et al., 2004; Mihalič, 2000; Ramus, 2002) or certification (Blackman et al., 2014; Dodds & Joppe, 2005). The fourth step describes the impacts that environmental management may

have for different stakeholders. Environmental management can impact the company (Mensah, 2004), the community (Xu & Gursoy, 2015), customers (Blackman et al., 2014; Rivera, 2002; Xu & Gursoy, 2015) and the environment (Kirk, 1998; Mensah, 2004; Park & Kim, 2014).

This conceptual model can be used to analyse hotels' considerations regarding the implementation of environmental management. This is essential in this research, because it helps to discover what motivation hotel owners have to engage in environmental management. This model approaches environmental management from a chain perspective, going from hotels' characteristics and motivations, to management, to impacts. This conceptual model helps to establish a comprehensive picture of the factors that influence hotels' engagement in environmental management in Puerto Viejo. In Chapter 4, the core concepts of this conceptual model are operationalised.

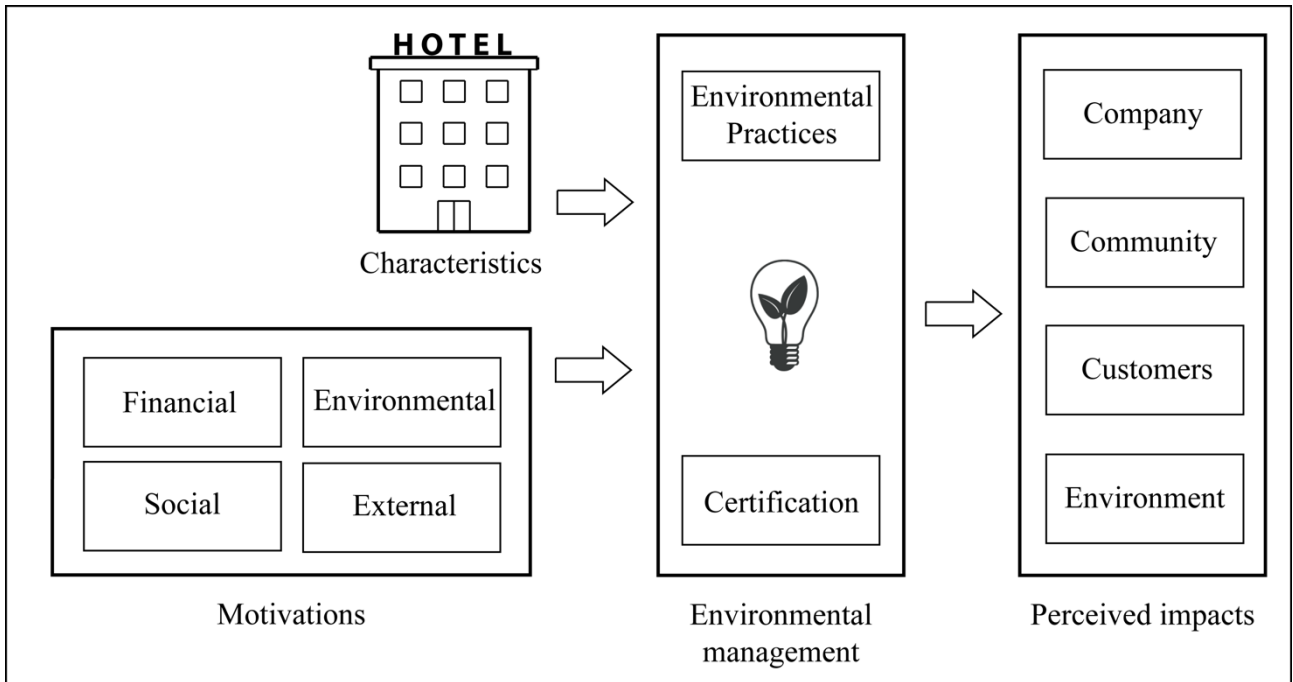


Figure 2.3 Conceptual model



### 3. RESEARCH QUESTIONS

*This chapter discusses the research's objectives, followed by the main research question, sub questions and the most important hypotheses.*

#### 3.1 Research objectives

Firstly, to provide this research with some historical context, it is essential to look at how the hotel sector in Puerto Viejo developed over the last two decades. By comparing old maps of Puerto Viejo with an actual map, the evolution of this sector during can be analysed. Additionally, it is interesting to explore when the shift towards environmentally sound management occurred. Secondly, this research's aim is to learn more about how hotels in Puerto Viejo try to counteract environmental degradation. I want to study this by addressing how hotels in this area are engaged in environmental management. Hereto, it is important to distinguish what programmes, policies and strategies hotels are engaged in. Moreover, this research analyses how hotels' characteristics and owners' motivations possibly influence engagement in environmental management. Lastly, this research examines what the perceived impacts of hotels' environmental management are.

#### 3.2 Research questions

In order to research this, the following research question is formulated:

What explains hotels' engagement in environmental management in Puerto Viejo?

To answer this question, the following sub questions are formulated:

Sub questions:

1. How did the tourism sector in Puerto Viejo evolve over the last 20 years?
2. What are the characteristics of hotels in Puerto Viejo?
3. To what extent are hotels in Puerto Viejo engaged in environmental management?
4. What are the owners' motivations for engaging in environmental management?
5. What are the perceived impacts of hotels' environmental management?

#### 3.3 Hypotheses

The analysed literature gives reason to expect the following outcomes. These expected outcomes are formulated as hypotheses, which are reviewed after data analysis and subsequently accepted or rejected in the conclusion.

##### *Hypotheses*

H1: There has been an increase in the number of hotels over the last decades.

Research by Bontenbal (2003) demonstrated a growth of Puerto Viejo's tourism sector between 1991 and 2001. Online maps indicated that this growth continued after 2001. Moreover, Gormsen (1997) suggest that coastline towns move through three stages of tourism development, with the last stage involving large tourism projects.

H2: Large hotels are mostly foreign owned and small hotels are mostly local owned.

According to Christian et al., (2011), foreign companies focus on the midrange and luxury market and predominantly consist of large hotels. Local companies however, are typically smaller and target the lower end of the market (Christian et al., 2011; Hampton, 1998).

H3: Large hotels are more often involved in environmental management than small and medium hotels.

Large hotels have more access to means, knowledge and resources than small and medium-sized hotels. Therefore, large hotels are more inclined to engage in environmental management than smaller hotels (Carmona-Moreno et al., 2014; Kasim, 2006; Mensah, 2004; Xu & Gursoy, 2014).

H4: Hotel owners mainly have financial and social motivations for engaging in environmental management.

According to Rivera (2004) a company's enrolment in environmental management is mainly driven by financial considerations and the need to obtain socially constructed environmental credibility. Therefore, hotel owners are mainly concerned with attaining economic benefit or social credibility from environmental management, rather than to improve the environment.

## 4. METHODOLOGY

*This chapter highlights the key methods used to answer the research questions. First, the key variables are operationalised, followed by a description of the used research instruments, positionality, and the limitations and risks of this research.*

### 4.1 Scope of the research

This research was conducted by conducting fieldwork for a total period of 16 weeks, from February 8<sup>th</sup> until May 31<sup>st</sup>. The research took place in the region of Puerto Viejo de Talamanca, in the Limón Province of southern Costa Rica. It describes the evolution of tourism in Puerto Viejo, hotels' characteristics and the forms of environmental management hotels are engaged in. Also, it aims to explain the motivations and perceived impact of environmental management. Therefore, this research is both descriptive and explanatory of nature.

### 4.2 Operationalisation

Before this research could be conducted, the core concepts needed to be operationalised. Table 4.1, explains the main concepts of the conceptual model and the research questions. For each concept, four variables are distinguished. Note, Table 4.1 follows a different order than the conceptual model. Obviously, it made more sense to first examine hotels' engagement in environmental management, before examining owners' motivations.

Table 4.1 Operationalisation of variables

Characteristics	Environmental management	Motivations	Perceived impacts
Size (by number of beds)	Absent	Financial (increased income, improved competitive position)	Company (management, employees)
Type (by type of hotel)	Environmental practices	Social (social credibility, reputation)	Community (inhabitants of Puerto Viejo)
Luxury (by offered facilities)	Certification programmes (CST framework & other eco-labels)	Environmental (improve environment, protect surroundings)	Customers
Ownership (by owners' origin)		External pressures (governments, media, environmental groups, business associations)	Environment

#### 4.2.1 Evolution of tourism in Puerto Viejo

Sub question 1 focuses on the evolution of the tourism over 20 years. This evolution comes in twofold: the increase of tourism related businesses during this period on the one hand; the shift towards environmental management on the other. The first part was measured by comparing contemporary maps of Puerto Viejo with earlier ones. The contemporary map was created by me, as a part of this research. Earlier maps were derived from previous research and online sources. The shift towards environmental management was measured by conducting in-depth interviews with hotel owners.

#### 4.2.2 Characteristics

Sub question 2 focuses on hotels' characteristics. The characteristics of the hotels are being studied based on the classification frameworks that Ghana's Tourism Board developed (Mensah, 2006). This framework determines the characteristics of various categories of hotels by looking at number of

rooms, ownership and regular customers. For an overview of these characteristics, see Appendix 2. Ownership can be local, foreign or a combination of these two. Mensah (2006) uses another model to classify hotels into three categories, based on the services they offer to customers. For a complete overview of the classification table, see Appendix 3. In this research, hotels' characteristics were studied by conducting surveys. Moreover, hotels' size was measured by number of beds instead of number of rooms, because of the high presence of dorm rooms.

#### *4.2.3 Environmental management*

Sub question 3 focuses on the engagement of hotels in environmental management. Environmental management can be defined a management system that includes responsibilities, practices and processes that are aimed to reduce environmental degradation (Chan, 2011; Mihalič, 2000). When a hotel does not make any efforts, environmental management is absent. When a hotel does make efforts, two forms can be distinguished: environmental practices (hotels adopt and communicate explicit policies regarding environmental performance) and certification programmes (Certification for Sustainable Tourism). Hotels' environmental management was measured by conducting surveys and in-depth interviews. Engagement in certification programmes could be questioned with a survey. Other forms of environmental management had to emerge during in-depth interviews.

#### *4.2.4 Motivations*

Sub question 4 focuses on hotel owners' motivations to whether or not engage in environmental management. Hotels can have different motivations for engagement. They can be financial, by looking for opportunities to increase income, raise room prices and save costs. Social motivations can come from a desire to increase environmental credibility, receive public recognition and improve corporate reputation. Environmental motivations are the willingness to improve the local environment, protect its surroundings and do good for local communities. Lastly, hotels can also feel pressured by external actors and institutions like governments, media or environmental groups. Owners' motivations were measured by conducting in-depth interviews.

#### *4.2.5 Perceived impacts*

Sub question 5 focuses on the perceived impacts of hotels' environmental management. Environmental management can have impacts within different layers. First it can bring along consequences, benefits and challenges for hotels as a company. It also may affect the training of employees. Secondly, hotels' environmental management can have consequences for the local community. Thirdly, it can have an impact on hotels' customers. It might affect their experience, but also prices they pay. Lastly, environmental management can impact the environment. The perceived impacts were measured by conducting in-depth interviews.

### *4.3 Research instruments*

This research is both qualitative and quantitative. It covers factual information, by analysing hotels' characteristics, environmental efforts, and how these two relate. Additionally, this research studies subjective matters, by analysing hotel's motivations and perceived impacts. By using a mixed-methods design, this research tries to answer the research questions in the most comprehensive way.

To create an inventory of the present tourism sector, function mapping was used. By walking around with a notebook, all of Puerto Viejo's buildings were pinpointed. The buildings were divided six categories: hotels, houses, restaurants, stores, tourist services and public services. Subsequently, a map of Puerto Viejo was created. This map provided me with a clear overview of Puerto Viejo's buildings and their function. For the map, see Appendix 4.

Surveys were used to determine the characteristics and environmental management of hotels. The surveys were structured questionnaires that were conducted with hotels' employees. Hotels' characteristics were determined by questions about hotels' size, type, luxury and ownership. Hotels' environmental management was determined by 10 questions that inquire about hotels' environmental efforts. about waste management, energy use and other environmental efforts. Respondents were

allowed to indicate to what extent they engaged in the particular activity on a five-point Likert scale. The optional answers were: not at all; little; somewhat; very; and entirely. For the complete survey, see Appendix 5. The surveys took approximately five minutes. The majority of the surveys was conducted in English, five were in Spanish. In total, 49 surveys were conducted.

In-depth interviews were used to determine owners' motivations for environmental management, as well as the perceived impacts. The interviews were semi-structured. A topic list with the most important questions was used to give the interviews structure, but interviewees were allowed to deviate from the initial topics. This ensured that new, unexpected information was not excluded from data collection. Interviews were conducted with the hotels' owners or managers. Moreover, expert interviews were conducted with the Talamanca municipality, Puerto Viejo's tourism board, ATEC, Planet Conservation and SALUD. For each interview, the topic list was adapted to the particular circumstances. For an example of the topic list, see Appendix 6. The interviews took approximately one hour and were all conducted in English. In total, 22 interviews were conducted.

#### *4.4 Data analysis*

The gathered data was analysed by using various programmes. First of all, mapping was done by using Adobe Illustrator, a vector graphics editing programme. In this programme, Puerto Viejo's buildings were drawn and categorised by colour. The data from the surveys was analysed in SPSS Statistics, a statistical analysis programme. This programme was used to document and analyse the quantitative data. The in-depth interviews were recorded on a telephone and later transcribed in Pages, a word processing programme. The same programme was used to code and analyse these transcriptions.

#### *4.5 Sampling strategy*

For the hotel surveys, sampling was unnecessary. There were 55 hotels in Puerto Viejo, so all hotels qualified for taking part in the survey. The sampling strategy that was used for the in-depth interviews with hotels and organisations is 'purposive or non-probability convenience sampling' (Sumner & Tribe, 2008). For hotels, only hotel owners and managers were qualified to take part in an interview. For other organisations, selection depended on relevance (one's position or role within the company) and availability (the availability of the respondent during the research period). Therefore, interviews were conducted with presidents, directors and other representatives of the particular organisations.

#### *4.6 Positionality*

During this research, there were moments when my identity and positionality affected the process of data collection and data analysis. Firstly, as an outsider, it was not always easy to understand Puerto Viejo's complicated culture. Puerto Viejo is a town in Costa Rica, but a large part of its inhabitants are descendants of African and Caribbean migrants. Sometimes, this complicated things.

For instance, when people speak of 'locals' or 'original inhabitants', they refer to the African and Jamaican descendants, not to the Hispanic Costa Ricans. As an outsider, it took me quite some time to figure this out. I had to learn about Puerto Viejo's history before I could understand such small, but salient details.

Secondly, as a Dutch, rushed man, I had to get used to the laid-back vibe that is part of Puerto Viejo's culture. People take more slowly than I am used to and are not always committed to the appointments they make. There were multiple times where I was waiting for someone who eventually did not show up. Although this is apparently no abnormality in Puerto Viejo, it is quite different from my own principles. A few times, this led to irritation.

Thirdly, as a relatively young, white researcher, there were moments I felt like an outsider. Once, when I was walking around with my notebook, a woman came outside, blaming me for looking around and making notes. She asked me how I would like it if she did the same in my country. Clearly, the woman was unamused with me researching 'her' hometown. For me, it was difficult to understand why anybody would worry about this. For me it is normal to be curious and interested. For her it might have felt like another foreigner not minding his own business.

Fourthly, as an educated student, there were moments I experienced a certain hierarchy between me and my respondents. Sometimes they appeared to be humble, because my English was more proficient or because I knew a lot about this particular subject. During these moments, respondents had trouble with understanding me, because they were not familiar with certain words or jargon. On the other hand, sometimes I felt like a hypocrite, grilling local owners about numerous types of eco-friendly practices, while I do not even separate my garbage at home.

#### *4.7 Limitations*

This research was conducted during a period of 16 weeks, from February 8<sup>th</sup> until May 31<sup>st</sup>. However, because of health issues, I needed to return to the Netherlands. Eventually, I was back home for more than three weeks, from March 13<sup>th</sup> until April 8<sup>th</sup>. During this period, I received medical examination and treatment. When it became evident that I did not suffer from anything serious, I decided to go back to Puerto Viejo, to resume my research. This incident affected my research in various ways. Firstly, it affected the amount of collected data. For more than three weeks I was unable to collect data, because of my absence. Obviously, this affected the extensiveness of this research. Moreover, the incident affected both my attitude and mental state. Being in hospitals is an unpleasant experience, especially when you are alone and overseas. Therefore, it took quite some effort to get over this. Secondly, I experienced how hard it is to resume a research. Leaving the field for three weeks may seem like a short time, but in reality, it feels like an eternity. It took quite some energy to continue from where I left off. It is safe to say that this is the biggest limitation of my research.

A second limitation was the language barrier. Costa Rica's official language is Spanish. Although I obtained a certificate in Spanish A1.1 before leaving, my communicative skills proved to be quite limited. Although my Spanish gradually improved during my stay, I remained unable to conduct in-depth interviews in Spanish. Luckily, most of the hotel owners were proficient in English. However, some of the hotel owners only spoke Spanish. Since I did not have a translator at my disposal, these hotels were excluded from in-depth interviews.

Lastly, one has to keep in mind that the number of hotels in Puerto Viejo is quite low. Despite the fact that the response rate of the surveys was quite high, the final sample remains relatively small. This might be the reason that the statistical analysis did not lead to any significant results.

## 5. REGIONAL THEMATIC FRAMEWORK

*This chapter provides an overview of relevant information regarding Costa Rica and Puerto Viejo de Talamanca. This chapter provides some basic statistical information, as well as essential historical context.*

### 5.1 Costa Rica

Costa Rica is a country in the Middle American isthmus, located in between Panama and Nicaragua. It is a small democracy, often renowned for its peaceful political climate and natural beauty. Partly thanks to the abolishment of the army in 1949, Costa Rica was able to spend a considerable percentage of its budget on education, healthcare and the conservation of nature. Costa Rica has a total area of approximately 50,000 square kilometres, of which a quarter consists of national parks, bio-reserves, wild parks, nature reserves. Moreover, 6 percent of the world's biodiversity can be found in Costa Rica, including more than 850 bird species and 250 different species of mammals. The country has a great geographical diversity, and is home to rainforests and jungles, active volcanos and pristine beaches. It may be clear why 'Costa Rica' literally means 'rich coast'.

Moreover, Costa Rica is frequently called 'the country of the happy middle', referring to both its geographical location and relatively high standards of living. Although Costa Rica's economy is far from perfect, it has been certainly improving. In accordance with its nickname, Costa Rica can be considered an upper middle-income country (The World Bank, 2018b) Over the last decades, Costa Rica has been making progress in terms of both economic and human development. Costa Rica's GNI per capita has been steadily increasing over the last years, reaching a height of 16,000 USD in 2016 (The World Bank, 2018c). Between 1990 and 2015, Costa Rica's Human Development Index (HDI) value increased from 0.653 to 0.776, positioning it at 66 out of 188 countries (UNDP, 2016). During the same period, life expectancy increased to 79.6 years and mean years of schooling increased to 8.7 years (UNDP, 2016). On the other hand, almost a million people in Costa Rica are living below the international poverty line (The World Bank, 2018d). Also, a Gini-index of 48.2 illustrates the fact that income inequalities are still present in Costa Rica to this date.

Over the last 20 years, tourism has become one of the most important sectors for Costa Rica's economy. In 2016, nearly 3 million tourists visited Costa Rica, contributing approximately 14 percent to total GDP, equivalent to 7 billion USD (ICT, 2017a; ICT, 2017d; WTTC, 2017). Costa Rica's tourism industry provides roughly 160,000 tourism related jobs, of which 30,000 in the hotel sector (ICT, 2017c). Figure 5.1 shows where Costa Rica's tourists come from. As the diagram illustrates, most visitors originate from North America and Europe. A lot of these 'gringos' (foreigners) are wealthy pensioners, attracted by Costa Rica's pleasant climate and relatively low costs of living and cheap healthcare (Bos, 2016). But also expatriates, surfers and ecotourists have found their way into Costa Rica. Moreover, tourists have different motivations to visit Costa Rica, of which Table 5.1 shows the most important ones. As becomes clear from this table, sun and beach attract the most tourists, followed by the Costa Rica's opportunities for ecotourism.

Table 5.1 Percentage of tourists involved with activities (2014 – 2016)

Motivation	Percentage
Sun and beach	72.1
Ecotourism	66.3
Adventure	53.3
Wellness (health)	35.0
Sport	22.2
Cultural	17.2

Source: ICT, 2017b

At the moment, Costa Rica's ecotourism is at crossroads. Costa Rica is one of the main destinations when it comes to ecotourism, with more than a quarter of its landscape consisting of protected

nature (Zambrano et al., 2010). On the one hand, the country wants to be the ecotourism champion by pursuing and promoting environmental protection and responsible travel. On the other hand, ecotourism in its purest form might not gain enough revenue to be economically sustainable. The result is a mass of ‘passive’ ecotourists, creating a hybrid of ecotourism and mass tourism (Ayala, 1996; Weaver, 1999). Therefore, Costa Rica struggles to find a balance between ecotourism and other income-generating leisure activities. The challenge is to develop ecotourism in a way that is both beneficial for local communities and in line with broader development goals, like environmental sustainability (Hampton; 1998). This research is conducted in Puerto Viejo de Talamanca, a tourism destination that experiences both the positive and negative effects of (eco)tourism development.

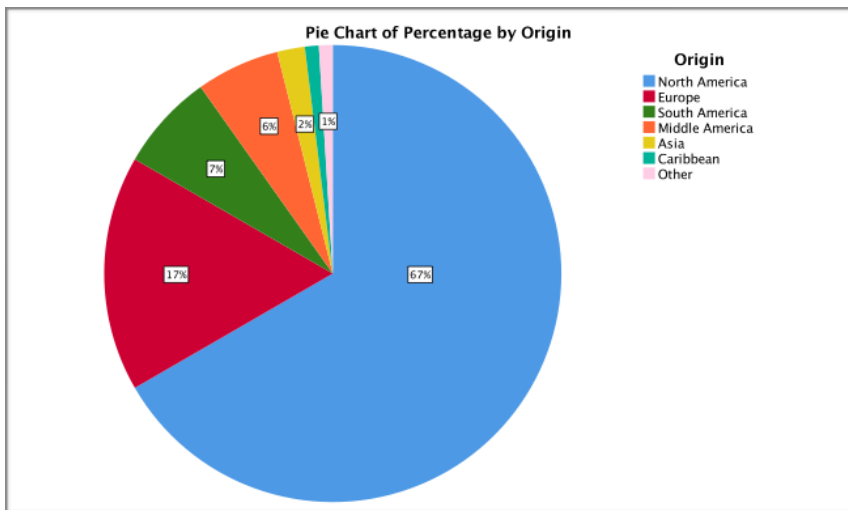


Figure 5.1 Origin of tourists in Costa Rica (2015). Source: ICT, 2015b

### 5.2 Puerto Viejo de Talamanca

Puerto Viejo de Talamanca, not to be confused with the more northern village Puerto Viejo de Sarapiquí, is a small coastal town in the Limón province of Costa Rica (Figure 5.2) The town used to front a small harbour, hence the name ‘Puerto Viejo’, which translates to ‘old harbour’. Nowadays, a stranded containership on the shore of Playa Negra is the only thing reminding one of these bygone times. For a long time, Puerto Viejo was rather remote: there were no roads, no cars, no tourists and therefore no money (Bos, 2016).

In the late nineteenth century, large groups of Afro-Caribbean men entered Costa Rica to work on the construction of a railway between San José and the harbour of Puerto Limón. After finishing this railroad, a lot of these workers settled on the Talamanca coast, becoming the main inhabitants of this region. Here, they earned a living with cacao cultivation and fishery. Around the eighties, when *Monilinia Roreri*<sup>3</sup> spread among the cacao plantations, local landowners were forced to adapt their lands to grow sugarcane. When sugarcane turned out to be unsuccessful, the locals switched to banana plantations (local restaurant owner, 2018). To this day, bananas are Costa Rica’s biggest agricultural export product, accounting for approximately 1.5 billion USD every year (OEC, 2018). Alongside route 36, hundreds of kilometres of Chiquita-branded containers give the traveller a grasp on the extent of this huge industry

Until the late 1970’s, the small fishing village was isolated from both national and international tourism. This enabled its inhabitants to maintain traditional cultures and customs, and its forest and beaches to escape the grip of development (Greencoast, 2016). However, this changed when a road connected Puerto Viejo to Puerto Limón in 1979. Soon Puerto Viejo had all modern conveniences, including electricity, private phones and internet. Nowadays, Puerto Viejo is only a five-hour drive away from Costa Rica’s capital city, San José (Greencoast, 2016). Moreover, the

<sup>3</sup> A species of fungus that causes rot among crops.



beautiful, pristine beaches and relaxed atmosphere are discovered by tourists and investors. New hotels, ‘cabinas<sup>4</sup>’ and other tourism facilities are increasingly emerging (Bos, 2016).

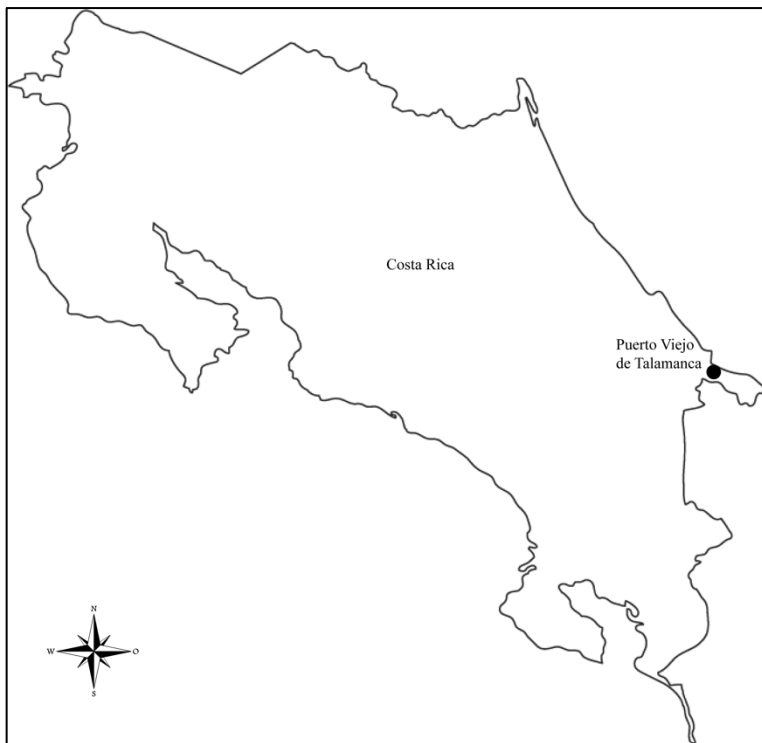


Figure 5.2 Costa Rica and Puerto Viejo

As mentioned before, Puerto Viejo is an attraction for both ecotourists and people looking for sun, sea and beach. Several natural parks can be found in Puerto Viejo’s direct surroundings. National Park Cahuita, The Gandoca Manzanillo Wildlife Refuge and the Jaguar Rescue Center are some of them. These conservations aim to protect some of the region’s most endangered flora and fauna. Especially National Park Cahuita is popular among locals and ecotourists, with more than 65,000 visitors per year (ICT, 2015a). But its abundance of natural beauty makes Puerto Viejo a popular destination for everyone. Thanks to the warm weather and regular rainfall, the area is lush and green throughout the year and the clear water, great surf and Caribbean ambiance yearly attract approximately 660,000 tourists (ICT, 2016). Nowadays, Puerto Viejo is a mixture of indigenous Costa Ricans, called ‘Ticos’, descendants of Afro-Caribbean migrants, and European and American expats. Supplemented by local and international tourists, the town developed into an actual tourist centre with many shops, bars, restaurants and hotels.

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<sup>4</sup> Cabinas are small vacation homes, which can take various forms. Some are completely equipped apartments, while others are simple garden sheds with a bed, shower and small kitchen.

## 6. THE EVOLUTION OF TOURISM IN PUERTO VIEJO

*This chapter describes how Puerto Viejo's tourism sector developed over time. Through looking at the town's tourism facilities and the shift towards environmental management, this chapter gives a clear overview of the most important changes. Subsequently, this chapter provides an extensive analysis of Puerto Viejo's main environmental issues, which is essential for understanding hotels' environmental efforts in later chapters.*

### 6.1 Puerto Viejo as a tourism destination

Puerto Viejo has become an indispensable stop for all tourists travelling through Costa Rica. A lot of backpackers start or end their journey with a visit to 'little Jamaica', as it is jokingly referred to by the San Josean taxi drivers swarming around Terminal Mepe (the station for public buses to and from Puerto Viejo). Travel guides further strengthen this image:

“Street vendors tout Rasta trinkets and Bob Marley T-shirts, stylish eateries serve global fusion, and intentionally rustic bamboo bars pump dancehall and reggaeton. It can get downright hedonistic, attracting revellers wanting to marinate in ganja<sup>5</sup> and guaro<sup>6</sup>” (The Lonely Planet, 2018).

This description is in line with the traditional character of Puerto Viejo. The Caribbean vibe seeps through in its music, food, and people. Many restaurants and houses are painted in the famous green, gold and red colours, emphasising their affiliation with the Rasta culture. Supplemented by Hispanic and Western influences, tourists are treated to a hodgepodge of local and international dishes. During the day, one nods his head to the bass of soothing reggae music, while enjoying a cocktail. At night, Spanish hit songs lure the crowd to the dance floor.

The area is home to the most beautiful beaches, clear waters and lively nature. At a small distance from the city centre, ample conservations and reserves quench the ecotourists' thirst for natural beauty, while howler monkeys, birds and sloths are easily spotted in the trees on the side of the road. Moreover, with average temperatures between 25 and 30 degrees Celsius, Puerto Viejo is an excellent beach destination. Sprawled tourists are basking in the blazing afternoon sun, or engage in leisure activities like snorkelling, swimming or kayaking. Beginning surfers are floating on the heaving waves in front of the Playa Negra coast; more experienced surfers take their chances near Playa Cocles, where the Salsa Brave breaks are most powerful. During the weekends, Costa Rican families stall out their barbecues and rice-cookers, and nosh until the sun sets.

It is no surprise that this place is a favourite among tourists. However, Puerto Viejo has not always been the flagship of Costa Rica's tourism destinations. Actually, merely 30 years ago, tourism in this area practically did not even exist. The following section addresses how Puerto Viejo transformed from a remote fishing village into the bustling tourist destination it is today.

### 6.2 Tourism development

Tourism towards Puerto Viejo is a relatively new phenomenon. Merely 50 years ago, the Talamanca area was a rather remote and isolated part of Costa Rica. Lack of passable roads made travelling nearly impossible and impeded Puerto Viejo's accessibility. Back in those days, Puerto Viejo was inhabited only by locals<sup>7</sup>, supplemented by some indigenous families and Hispanics from the Pacific side of the country. However, most of the residents were Jamaican and African descendants. According to a former congressman who grew up in Puerto Viejo, its remoteness was partly due to Costa Rica's government, which actually shunned the Caribbean coast for a long time:

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<sup>5</sup> Ganja is another word for marihuana.

<sup>6</sup> Guaró is a local spirit distilled from sugar-cane.

<sup>7</sup> As described in Section 3.2, when people talk about 'local' or 'original' inhabitants they refer to Jamaican and African descendants, and not to 'Ticos' (the Hispanic Costa Ricans).

“At first, they [the Hispanic Costa Ricans] did not want to live over here. They claimed it was too rainy, it was too far, it was too hot, there was too much swamp and too many blacks. So, they focused on the Pacific side and destroyed it. They cut down all the trees and turned it in to a desert” (Former congressman, 2018).

During the late 60's, Puerto Viejo's economy was still mainly based on chocolate farming, fishery, and working on banana plantations. Both this self-subsistence character and its remote geographical location, made it so that Puerto Viejo remained isolated from outsiders for a reasonable time. A 50-year-old restaurant owner born in Puerto Viejo, describes his first encounter with a tourist, almost 40 years ago:

“When I saw the first clear-skinned person, I was so afraid. Me and my brother were walking on the beach and there was this guy lying with no shirt, and we thought it was the devil. So, we ran back home, and my father had to explain to us that there also existed people with different skin colours than ours” (Local restaurant owner, 2018).

With clear-skinned person he refers to Europeans and Americans, who were increasingly making their ways into Puerto Viejo. They were tourists, but also businessmen and retirees who settled and opened up businesses in town. A Swiss hotel owner who has been living in Puerto Viejo for 23 years, describes how the town looked like when she settled down there:

“When I came here, there was almost nothing. There were four restaurants and ten hotels, maximum. But there was no supermarket, no bakery, no dentist and no medical clinic. I had chickens that laid eggs and with that, I cooked all my own stuff. I needed to travel to Limón with a backpack if I needed something important” (Swiss hotel owner, 2018).

However, this simple town, where agricultural activities played first fiddle, gradually started to change. More and more people became acquainted with the area's natural beauty and slowly, Puerto Viejo's popularity started to grow. To prevent the same course of events happening on the Caribbean coast, the government decided to start protecting its nature. During the late 70's, Cahuita National Park, Manzanillo National Wildlife Refuge, the indigenous reservation and the maritime zone were declared conservation areas, which would later be targeted as tourism hotspots.

According to many owners, an important tipping point within this development was the construction of the road between Puerto Limón and Manzanillo in the late 70's, making the once remote communities of the Talamanca more accessible for people from outside. Naturally, Puerto Viejo started growing. Initially, backpackers, researchers and other adventurers were the first tourists that visited Puerto Viejo. Since these people needed places to sleep, eat and relax, new businesses arose. With this increasing demand for tourism-related services, a new form of gaining revenue was born: tourism. Locals adapted their lands, houses and businesses to meet the needs of the tourists. In the beginning, travellers were not particularly demanding; they were happy with just a bed and did not wish for too much luxury. Hence, the accommodation supply mainly consisted of simple rooms or cabins that were rented out by local residents.

Quite recently, the infrastructure has been even further improved, by asphaltting the road from Cahuita to Manzanillo. Before, travellers had to drive for hours on unpaved roads with boulders and holes, which could be quite unpleasant. Nowadays, Puerto Viejo is only a six-hour drive away from Costa Rica's capital city. With this new flow of people, the development of new technologies was also triggered. Soon, Puerto Viejo was equipped with all modern conveniences. The first telephones were introduced in 1996 and internet connection became available around 2006 (Van Oostrum, 2009). Nowadays, almost every restaurant, bar and hotel lures their customers with free Wi-Fi.

### 6.3. Tourism sector

The growing influx of tourists affected the way Puerto Viejo's private sector is organised nowadays. More and more enterprises focus on offering tourism related services, reflecting the shift towards an increasingly tourism-based economy. Especially in the hospitality sector, business opportunities arose at a fast pace. Mapping shows that, currently, Puerto Viejo counts 55 hotels, 70 restaurants, 43 stores and 31 tourism services. This is completely different from how Puerto Viejo looked approximately two decades ago.

As mentioned in Section 6.2, 23 years ago, one needed to travel to Limón for specific products and services, because of the lack of supermarkets and other establishments. The current map of Puerto Viejo, as displayed by Figure 6.1, shows that there is no shortage of anything anymore. In fact, the town looks relatively crowded. Compared to the maps from 2001 (Appendix 7) and 2008 (Appendix 8), a lot has changed.

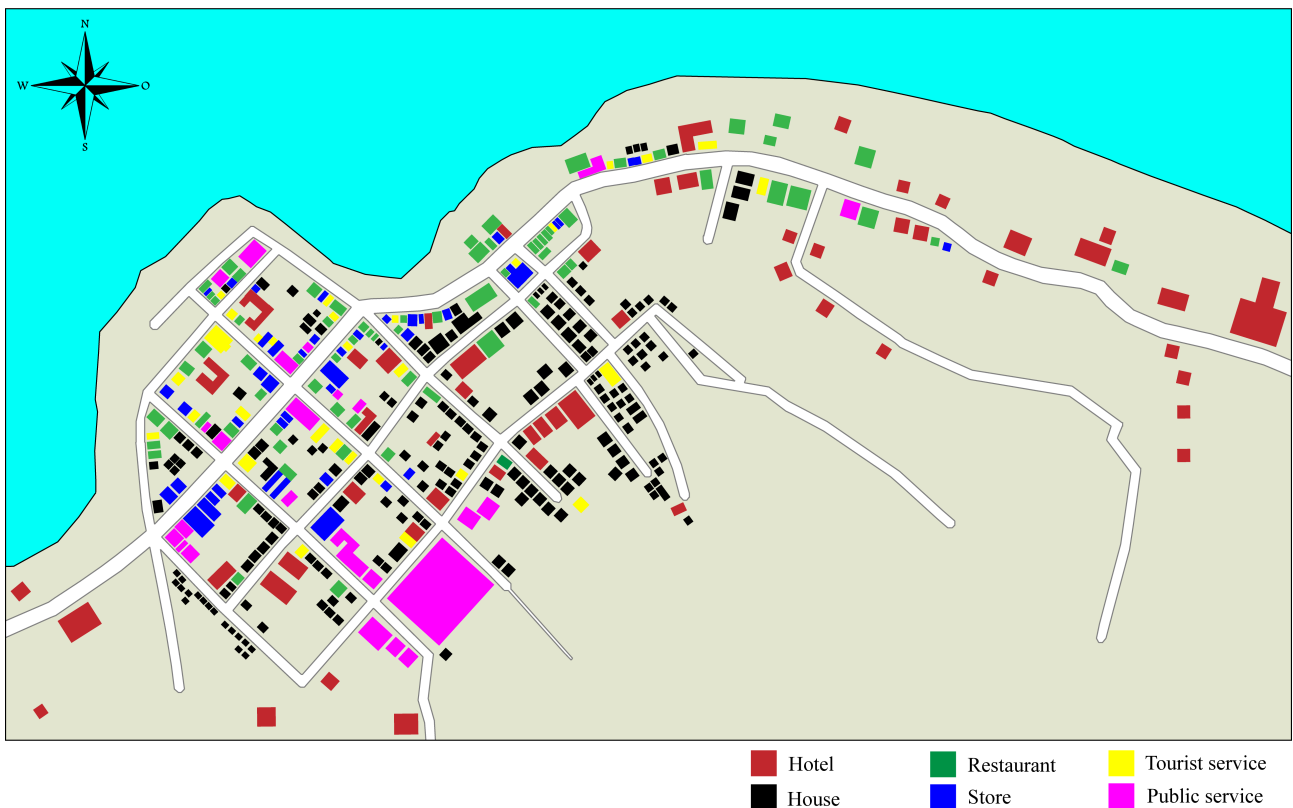


Figure 6.1 Map of Puerto Viejo (2018)

#### 6.3.1 Facilities

Most of Puerto Viejo's popular restaurants and shops can be found near the main street. The main street is the asphalted road that runs through the city centre, from the west to the east. This road is shared by pedestrians, bikes, cars, buses and trucks, ensuring heavy traffic during rush hours. All other side roads are paved as well, but much less busy. The further you get from the main road, the less dense buildings become, as is also illustrated by the map.

Puerto Viejo is easily accessible by public transport. There is a bus going from San José to Puerto Viejo, that runs eight times per day. This bus drops you off at the bus stop in the centre of Puerto Viejo. From this bus stop, it is also possible to travel to the neighbouring towns of Cahuita, Bribri and Sixoala and Manzanillo. However, most tourists prefer getting around on a bike or by taking a taxi. There are two taxi stands that offer both official and unofficial taxis.

Nowadays, Puerto Viejo has multiple tourist offices, four big supermarkets, a post office, a medical centre, two veterinarians and a police station. According to Bontenbal (2003), in 2001, there were no banks in Puerto Viejo. Currently, two banks are present, Banco de Costa Rica and Banco Nacional de Costa Rica, and there is another Scotiabank ATM located in the Megasuper.

In total, 416 buildings were distinguished in Puerto Viejo. Almost half of these buildings (193 to be exactly) are houses with a residential purpose. The other 223 buildings are categorised according to the service they offer. As the map illustrates, there are 55 hotels, 70 restaurants, 43 stores, 31 tourism services and 24 public services in Puerto Viejo. It may be clear that the majority of businesses consists of restaurants, closely followed by hotels. Together they account for 56.1 percent of all businesses in Puerto Viejo. Figure 6.2 shows the division of businesses.

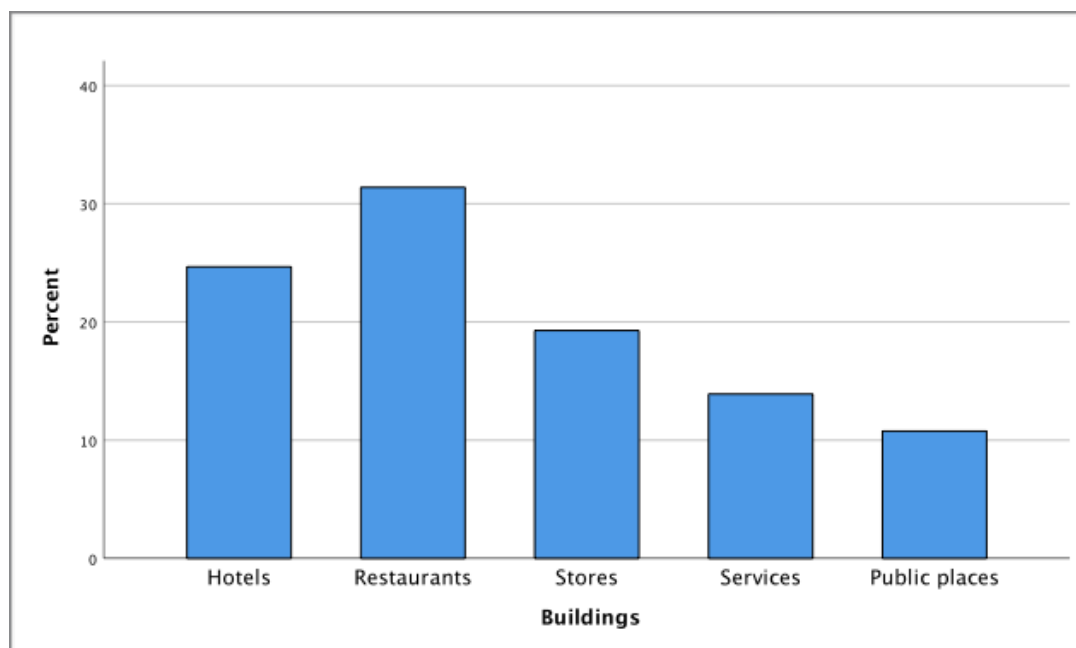


Figure 6.2 Division of businesses

### 6.3.2 Restaurants

In this research, restaurants are all places that offer food, drinks, or a combination of these two. Therefore, bars are also included in this category. Most of the restaurants are small, family-owned sodas<sup>8</sup> that offer dishes from the local cuisine, like casado<sup>9</sup> and rice and beans, supplemented by comida rapidas<sup>10</sup>. Most of the clients are local residents and backpackers, since the portions are big and the prices affordable. The average price for a simple casado is approximately 4,000 CRC, or 8 USD.

As mentioned in the previous section, Puerto Viejo offers 70 restaurants. Compared to earlier data, it can be cautiously stated that the amount of restaurants has been increasing over the last two decades. A map dating from 2008 (Appendix 8) provides a clear overview of the then present restaurants. It distinguishes 24 restaurants. The map from 2001 (Appendix 7) does the same but is much less detailed. According to that map, only two restaurants were present at the time. Probably this has more to do with the extensiveness of the map, than the actual supply of accommodations and restaurants, since research by Bontenbal (2003) indicates presence of 37 restaurants during this period. However, that would mean that the number of restaurants in 2001 was larger than the number of restaurants in 2008. This seems unlikely, because tourism in Puerto Viejo rather increased than decreased over time. However, according to an American hotel owner that has been living in Puerto Viejo for seven years, the supply of hotels and restaurants has indeed been fluctuating over time:

“When I first was here, you would see a couple of little places here and there. Then suddenly, there was this turnover. People started coming in saying: ‘I’m going to start this hotel, I’m

<sup>8</sup> A soda is a local, small, often family-owned restaurant, that serves typical Costa Rican dishes.

<sup>9</sup> Casado is the traditional dish of Costa Rica. Casado literally translates to ‘marriage’, and it consists of rice, beans, salad and meat of your choice.

<sup>10</sup> ‘Comidas rapidas’ is Spanish for fast food.

going to start this restaurant, and it is going to be so great!’ But then they became aware of the challenges of getting things done here and down here, and saw that it was pretty difficult setting up a business. And that was just a time when you saw things close and open, close and open” (American hotel owner, 2018).

### 6.3.3 Stores

Figure 6.2 shows that almost 20 percent of the businesses in Puerto Viejo are stores or shops. Stores vary from large supermarkets to small convenience stores, greengrocers and butcheries. As mentioned before, Puerto Viejo offers four large supermarkets, of which one is a nationwide franchise: Megasuper. Most of the other shops are boutiques, selling local art or clothing, souvenir shops and electronics stores.

Puerto Viejo offers 43 stores to this day. According to Bontenbal’s (2003) research, in 2001 this amount was five, while the map from 2008 distinguishes eight stores and shops. This means that the amount of stores in Puerto Viejo has been dramatically increasing, especially over the last ten years.

### 6.3.4 Tourist services

Tourist services account for approximately 15 percent of the businesses in Puerto Viejo. Tourist services are all places that provide tourists with any kind of tourism related service. These include tourism offices, tour operators, surf schools and bike rentals. But, also services that are not necessarily targeted at tourists exclusively, like laundromats and internet cafes, are included as tourist service providers.

Currently, 31 places in Puerto Viejo offer tourist services. A lot of these are tour operators that advertise chocolate tours, boat trips to Bocas del Toro and Tortuguero and trips to National Park Cahuita, but bike rentals are broadly present as well. In 2008, there were 20 places in Puerto Viejo that offered tourist services. Thus, the amount of services has been slightly increasing over the last decade. The map from 2001 only pinpoints one tourism service provider, namely the Asociación Talamaneña Ecoturismo Conservación (ATEC). ATEC was the first tourism office/NGO in Puerto Viejo and was also the first place where people could use public phones and internet.

### 6.3.5. Public services

Public services are not necessarily part of Puerto Viejo’s tourism sector. Nevertheless, it is essential to include this category in this chapter, since these institutions also illustrate Puerto Viejo’s development. The category public services covers all buildings or establishments that serve a kind of public purpose, like schools, health clinics or police stations.

At present, Puerto Viejo counts 24 public services. A couple of these are schools and associated playing fields. Furthermore, there is a health clinic, a police station, and a cultural centre. Both the maps from 2001 and 2008 do not distinguish any public services, therefore it is difficult to say something about the growth of buildings within this category. However, a French hotel owner affirms how the development of these public services is a quite recent phenomenon:

“Since a couple of years, we have our own health clinic. Before, you needed to go to Hone Creek or San José to get medical assistance. Also, the police station is something new. Because, drugs are a big problem in Puerto Viejo. So, there is more police, to make it safer for tourists” (French hotel owner, 2018).

### 6.3.6 Hotels

Hotels are all places that offer guests a form of lodging. Typical hotel types in Puerto Viejo are hostels, bed & breakfasts and cabins. As will become evident in Chapter 7, the majority of the accommodations are small, family-owned establishments. At the moment, 25 percent of all buildings in Puerto Viejo offer a form of lodging to tourists. In 2001, Bontenbal (2003) reported 29 hotels in the area. The map from 2008 shows a presence of 32 hotels. Currently, the number of hotels in Puerto

Viejo is 55. Compared to the data from 2001 and 2008, it is safe to state that the hotel sector has been steadily expanding over the last years. This finding is supported by Figure 6.3, which illustrates in what year hotels were established. Despite some fluctuations, since 2006, the amount of hotels has been growing almost annually. From 2010 onwards, the hotel industry has been booming.

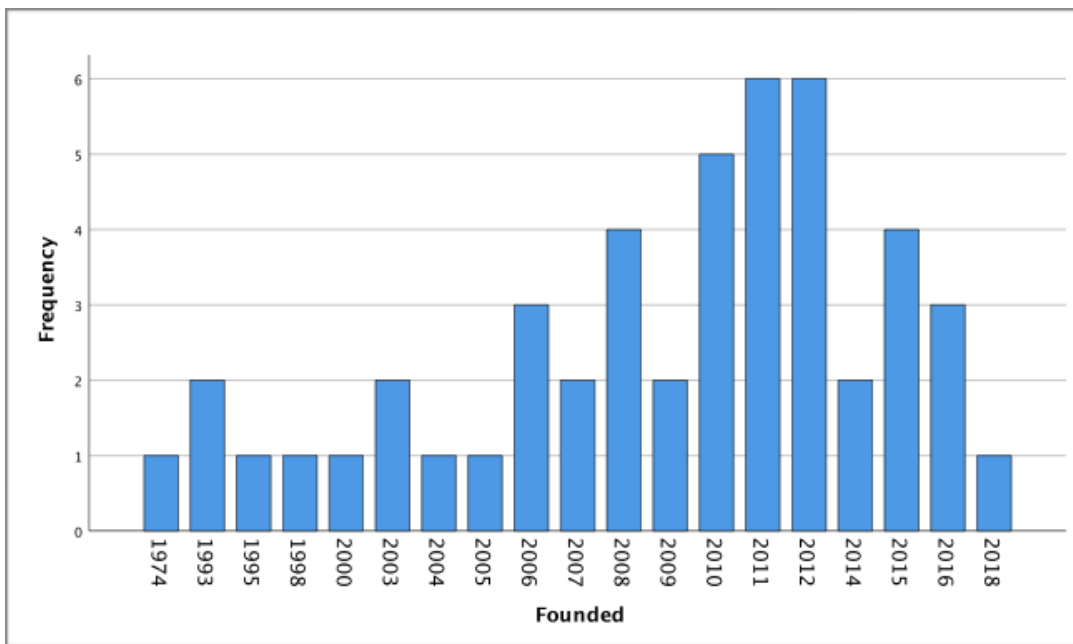


Figure 6 3 Hotels' foundation year

Most likely, this course will be persevered, judging from the ample construction sites. A lot of land is for sale and building opportunities are widely advertised throughout the town. Of course, the increase of tourism related businesses is a logical consequence of Puerto Viejo's growing tourism and economy. However, this phenomenon also exerts pressure on the village's surrounding nature. Trees and plants are being cut down to make way for concrete buildings, asphalt roads and electricity lines. Moreover, the increase of tourism related businesses also leads to more and more garbage, wastewater, and other polluters, pushing the limits of disposal companies. In the following section Puerto Viejo's environmental challenges will be discussed.

#### 6.4 Puerto Viejo's environmental challenges

Tourism affects Puerto Viejo in various ways. Besides the obvious positive impacts, like economic growth, job opportunities and business development, the growing tourism sector also causes less desired consequences. On the one hand, there is the increasing amount of outsiders residing in Puerto Viejo, both temporary and permanently. They travel to Puerto Viejo for tourism or business opportunities and introduce new lifestyles, demand different ways of consumption and contribute to waste production. On the other hand, there is the ever-expanding tourism sector, indicated by the number of hotels, restaurants and other tourism related facilities. For a small town like Puerto Viejo, the abundance of such businesses weights heavy on the environment. Not only because nature needs to make place for construction projects, but also because of the side effects that are inextricably linked to companies' operations. In the following sections, Puerto Viejo's biggest environmental challenges will be elaborated on in detail.

##### 6.4.1. The new road

As mentioned in earlier sections, the improvements of the road from Limón to Manzanillo has had a big impact on Puerto Viejo. The road was constructed in the late 70's and got tarred in 2000. The road dramatically increased Puerto Viejo's accessibility, especially since the most recent adjustments. Around 2016, the road was covered with high-quality, thick asphalt, making it easily passable for

transport and road haulage. An American owner of a bed & breakfast, explains why this has become a big problem over the last two and a half years:

“The biggest change in Puerto Viejo has been the road. It has been repaved, which has made the traffic more and faster. There are a lot of trucks driving here at high speed now, and they are killing sloths, dogs and other animals that are crossing the street” (American bed & breakfast owner, 2018).

Indeed, when walking around Puerto Viejo, it is easy to understand what the owner means with this description. There is a plenitude of trucks on the main road, driving right through the already busy town centre of Puerto Viejo. Upon leaving the centre, they continue their journey with 80 kilometres per hour, on a road where only 40 is permitted. Only during this research, both a dog and a sloth were badly injured as a result of speeding traffic. But there are more challenges when it comes to the new road. The coordinator of Planet Conservation — an NGO that focuses on environmental education — warns for different types of pollution:

“We need to see the side effects from all the people coming in. Just from the years I have been here, we did not have this paved, nice road all the way to Manzanillo. But, all the amount of traffic that is coming in, it is a huge issue. The traffic, the pollution, the noise pollution. We are in the middle of a jungle, but you can hear cars honking” (Coordinator of Planet Conservation, 2018).

Pollution, either from noise or through dust and exhaust gases, is a serious issue. It not only harms the environment, it also makes Puerto Viejo less attractive for tourists. If the latter is true, the road could actually achieve the opposite of what is desired, namely, less tourism.

The last side effect of the road constructions is the loss of nature. Obviously, to build a road, space needs to be cleared. This goes at the expense of trees and other plants, which have to be cut down. With the latest improvements, the road was also widened, so all the trees alongside the road needed to be removed. In the next section, deforestation in Puerto Viejo will be further elaborated.

#### *6.4.2 Deforestation*

Puerto Viejo becomes more crowded every day and therefore, the town is expanding. The demand for accommodation and other types of tourism facilities is increasing, but space to build is scarce. Since the centre is already crammed with properties, projects are initiated outward. According to an American owner, slowly, Puerto Viejo is actually expanding its boundaries:

“The town has shifted. The primary part of town used to be on this side [towards Hone Creek]. That is where the restaurants and everything was; located along the beach and the main street. But it has all shifted south of town towards Cocles” (American hotel owner, 2018).

So, the development of hotels and other tourism related businesses is moving inland, towards Cocles and the rural areas of Puerto Viejo. To make room for construction, the land is cleared from trees, plants and undergrowth. Obviously, this is harmful for the environment. It directly affects the animals, whose natural habitat is taken away. But it also affects nature’s potential ability to process wastewater, says another American bed & breakfast owner:

“In the past, when people did that [produce wastewater], that water would absorb back into the soil. But now there is so much more building, that it does not have the ability to do that. The trees are not there to do it, the landscape is not absorbing any of that now. The environment is unable to support it” (American bed & breakfast owner, 2018).



Moreover, a lot of building is taking place in protected areas. There is a lot of protected nature between Cocles and Manzanillo, and it is illegal by law to build there. However, it seems that these rules do not always apply to investors. Especially wealthy investors seem to have found a way to bypass municipal regulations. According to an American hostel owner, money plays a big role:

“Everyone is trying to do things for the environment, but then you see these bigger companies coming in and chopping down trees. They just pay money to get things done quickly. Apparently, money is always going to talk” (American hostel owner, 2018).

Thus, doing business seems more important than taking care of the trees, in most of the cases. But, oftentimes, hotels are just not aware to what extent their presence affects the forest by and large. Because, it is not only about cutting trees; it is about all actions somehow modify nature.

A Belgian environmentalist describes how hotels are oblivious to the consequences of their operations.

“To build a hotel, they need a piece of land of approximately 2,000 metres. And everything on that is chopped down. The undergrowth is taken away. Two weeks ago, I visited a plot of land that used to be a protected area. And all that was left, were some tree trunks. All the branches and leaves were gone. And then they say: ‘But we did not chop the trees down’. But where do all the animals that live between those branches and leaves have to go? [...] They say it is because they need light on their soil, so it can dry out” (Belgian environmentalist, 2018).

According to the environmentalist, hotels are destroying the forest. In his eyes, hotels see the jungle as nothing but weed that needs to make place for tourism purposes. He gives another example:

“The same is happening to the trees along the coast. They are removed to provide tourists with a nice view. And the few trees that hotels leave unharmed, are no longer surrounded with undergrowth, but with cement. That is the ironical part; tourists come here to see the jungle, but the jungle is actually disappearing because the place is being overbuilt with hotels for the tourists” (Belgian environmentalist, 2018).

#### *6.4.3 The garbage problem*

Not only the amount of tourists, but their habits too, affect Puerto Viejo’s environment. The influx of — mostly Western — tourists, entails new ways of consuming and producing. They consume more, faster and more often. Moreover, their consumption patterns demand for more pre-packaged and ready-to-use products. These new ways of consuming are not limited to tourists only, but have also transmitted to local residents. Naturally, this affects both the quantity and type of waste that is being produced in Puerto Viejo. Therefore, the garbage problem is bilateral. On the one hand, the ever-increasing amount of waste is stretching the waste disposal system to its limits. On the other hand, the emergence of non-biodegradable waste is challenging Puerto Viejo’s yet premature recycling system.

##### *6.4.3.1 The amount of garbage*

Puerto Viejo visibly struggles with handling the growing amount of waste. The garbage bags — piled up alongside the road and ripped open by black vultures — have almost become part of the landscape. The view of the beach is just as poignant. Plastic bottles, cigarette buds and cans of beers lie motionless in the white sand, abandoned by their owners. At the heart of this problem lies not only the quantity of garbage, but also the lack of adequate places to dispose it. According to the president

of the Cámara de Turismo y Comercio del Caribe Sur (CATCCAS<sup>11</sup>), there are not enough garbage bins on the street and the beach:

“The community has a real problem with the amount of garbage bins in the town. If we want to solve our trash problem, this is something we need to think about. Because now, people just don’t know what to do with their trash, so they leave it anywhere” (President CATCCAS, 2018).

Another dimension of Puerto Viejo’s garbage problem is the trash collection. The trash collection is organised by the Talamanca municipality, which utilises a truck that picks up and disposes the garbage. The garbage truck comes once a week, mostly on Wednesdays. A representative of the municipality summarises how the system is arranged at the moment:

“We have a truck that picks up the garbage. For the regular garbage all the houses and businesses need to pay a yearly fee. Because we have to pay to dispose it. For the moment, the truck comes once a week. We do not have the capacity to do it more than once a week. The garbage needs to go to Limón, it is pretty expensive” (Representative of the Talamanca municipality, 2018).

However, a lot of owners in Puerto Viejo are displeased with how the municipality organises the waste management. According to them, the truck runs too little and does not pick up the garbage according to the schedule. Sometimes it does not even come at all. A German hotel owner explains how this indistinctness leads to a lot of irritation on her side:

“The trash car comes once a week — if it comes. If they do not oversleep, it does not rain too much, and they do not have troubles with their truck. They are supposed to come in the morning, but sometimes they come very early, sometimes they come very late. However, you cannot leave your trash outside on the road, because the animals will come and take it apart. So, you have to wait for them to come in and listen to the beep [that comes from the truck]. If you do not hear it when they pass, you are stuck with you trash for another week. Just like me now. (German hotel owner, 2018).

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<sup>11</sup> In English: the Chamber of Tourism and Commerce Caribe Sur. This is a non-profit organisation, that promotes sustainable tourism and businesses in the South Caribbean.



Image 6.1 Garbage alongside the road in Puerto Viejo

#### 6.4.3.2 *The type of garbage*

Secondly, the town is suffering from an actual plastic invasion. Nowadays, almost everything comes in plastic packaging, from the cutlery you use in a restaurant to most products in the supermarket. Cashiers eagerly put every single item you buy into a plastic bag and leftovers from sodas are carried home in styrofoam boxes. Moreover, since Puerto Viejo's tap water is not drinkable, many people buy their water from stores, which comes in plastic bottles. All these habits contribute to the ever-growing mountain of plastic.

To manage all of this synthetic waste, the municipality started a free recycle project. Without charge, a truck picks up recyclable waste and brings it to Bolio's<sup>12</sup> recycle centre. Here, the waste is separated and processed. Moreover, according to the representative of the municipality, recycling is encouraged and promoted, and the community is educated on how recycling can be beneficial. However, a lot of locals are uninformed about these municipal efforts. An American hostel owner, who has been living in Puerto Viejo since 2012, tells about his experience with the recycling project:

“[...] but in six years, we have never seen the government recycling. We saw them show up at our house for the first time, a few months ago. And that is the only time I have seen this recycling programme. We saw the truck, and the man in the truck yelled something like: ‘Recycling!’ And I was like: ‘Really? You guys actually do this?’ Before that, it was kind of a phantom” (American hostel owner, 2018).

When there is no regular collection of recyclable waste, people get demotivated to recycle. Of course, it is possible to bring recyclables to one of the few collection centres, but many people are not enthusiastic about toting five bags of plastic bottles on their bicycle. A German owner of cabins, describes how many people turn to alternative methods for getting rid of plastic waste:

“If you collect bottles and cans in your house and somebody passes by to collect it, it is way more motivating than if you have to drive it yourself to some place in the mountains where you do not know if you will come home safely or not. For some time, we even burned our trash. And actually, that is what many people do, because of a lack of service” (German hotel owner, 2018).

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<sup>12</sup> A small community nearby Puerto Viejo.

Therefore, many people have an arrangement with Corridor Biologico, a private company that also collects recyclable waste. The company has an agreement with the municipality but operates as an independent organisation. They bring the recyclables to Bribri, from where it is transported to San José. Corridor Biologico charges a fee of 5,000 CRC (10 USD) per month for waste collection. This fee evokes a lot of dissatisfaction in Puerto Viejo, because some locals do not have the means to pay it. Furthermore, Corridor Biologico's recycling process also has its defects. The coordinator of Planet Conservation explains why recycling is so difficult in Puerto Viejo:

“The recycling plant only has like five people really working there. There are piles and piles of trash there, and they are doing it all by hand. There are no machines to help them sort the trash, it is all by hand. So that is a huge issue as well. Even if you do recycle, it is not extremely efficient. A lot of people are ignorant about plastic. A lot of it cannot even be recycled here, if you do not have the technology or the man power” (Coordinator of Planet Conservation, 2018).

In short, there is a lot of waste, and no adequate system in place to get rid of it. The last dimension of this problem is education. As long as the community is not informed about the harmful effects of littering and burning waste, people will keep doing it. Currently, the garbage problem mostly revolves around waste management, which eventually, is not a solution. Therefore, it is important to effectuate a shift towards minimising waste and discouraging the use of synthetic materials.

#### *6.4.4 The water problem*

Clean water is important for Puerto Viejo's tourism sector. People need water to drink, obviously, but water is also used in showers, toilets, sinks and washing machines. Furthermore, natural waters like the ocean and rivers are used for leisure activities like swimming, surfing and canoeing. However, the tourism induced growth of both Puerto Viejo and its population, jeopardises the access to clean water in its broadest sense. The water problem in Puerto Viejo is two sided. On the one hand, the community is increasingly experiencing problems with access to drinking water. On the other hand, the lack of an adequate drainage system for wastewater is contaminating ground water, rivers and the ocean.

##### *6.4.4.1 Drinking water*

Puerto Viejo's tap water is not potable. There is access to city water, but the water that runs through is not particularly hygienic. Therefore, drinking water mostly comes from plastic bottles and tanks, available in supermarkets. The price for one litre is approximately 1,000 CRC (2 USD), which is not cheap for a necessity of life. According to the director of ATEC, access to clean drinking an urgent problem, for both the community and the sake of tourism development:

“Drinking water is a big problem, because there is no more water right now. That is just the reality. Before we expand our capability of receiving more people, we really need to work on the infrastructure of water” (Director of ATEC, 2018).

With the infrastructure of water, she alludes to the improvement of the water supply system. There is a pipe system in place, operated by the national water company, AYA (Acueductos y Alcantarillados), but it is outdated and damaged. A German hotel owner describes how in some places, the pipes are visibly affected by erosion, leaving holes that reveal the silted inside of the pipes. According to the local owner of a guesthouse, the water is virtually unusable once it arrives at her property:

“[...] The water that we get is not potable. It is not healthy to drink. If you put the water that comes out of the faucet in a jar, in two days it is green. You cannot even use it to wash, because your white clothes will turn beige” (Local guesthouse owner, 2018).

Moreover, the springs from which AYA gets the water to supply Puerto Viejo, are drying out. Initially, the water was sourced from a spring nearby Playa Negra. After this spring was emptied, it came from the mountains of Hone Creek. Nowadays, the water comes from Bribri, even more inland. Simply put, Puerto Viejo is depleting its natural springs.

Lastly, AYA's water supply system is not yet inclusive enough. Especially the rural areas are not connected to the water pipes. These households are forced to get their water from a well. However, as will be elaborated in the next section, well water is often contaminated by the unmanageable amount of wastewater.

#### *6.4.4.2 Wastewater*

As mentioned in Section 6.4.4, people use water for various purposes. Through human use, water gets affected and turns into wastewater. When people speak of wastewater in Puerto Viejo, they refer to greywater and blackwater. Greywater is the result of showering, flushing the toilet and doing the laundry, and mainly contains non-contagious substances, like hair, dirt and soap. Blackwater is wastewater that results from toilet use. It contains faeces and urine, and is a lot more contagious than greywater. Wastewater itself, is not necessarily the problem; every country in the world needs to deal with this. However, the amount of wastewater combined with the absence of an adequate sewage system, is a big challenge in Puerto Viejo.

Since there is no sewerage in Puerto Viejo, a lot of properties use septic tanks to process wastewater. A septic tank is an underground tank that moderately treats wastewater, before releasing it back into the soil. In the tank, scum and sludge are filtered from the water, and the excess liquid flows into an adjacent drain field. The excess water is not completely purified, but safe enough for irrigation use.

However, the use of septic tanks is not without risk. Firstly, the septic tank does not filter all harmful substances. Since a lot of hotels and households are using non-biodegradable products for cleaning and washing, a lot of these substances are directly absorbed by the soil. Secondly, tourism is making the use of septic tanks more and more outdated. The growing number of tourists is pushing the septic tanks to their limits, especially in hotels. Larger amounts of wastewater, combined with tourists' habits like flushing down toilet paper, cause clogging and leakages. Also, because the amount of buildings in Puerto Viejo keeps increasing, space becomes scarce. The distance between septic tanks and water wells becomes smaller, increasing the risk of drinking water contamination. In the words of an American hotel owner:

“The whole idea of septic, is just way beyond. Because it is an invisible pollution. Once it is in the ground, no one thinks about it. But then you take the drinking water from your well to be tested, and it has got stuff in it that you should not be ingesting. Say, you have a property, and your well is in a certain corner. If I put my septic too close to it, it will float into your well water. You will be showering and cooking with blackwater. And that is what is happening in town. Everyone needs a well and everyone needs a septic, but they are just all too close” (American hotel owner, 2018).

Since septic tanks are expensive in both purchase and maintenance<sup>13</sup>, many properties do not have them. These properties have no water treatment at all. Back in the days, this was not a big problem. Puerto Viejo was a small village, and the nature was able to break down wastewater on itself. However, Puerto Viejo has been expanding, and its nature is no longer able to process all of the produced wastewater. Now, many houses and hotels have their wastewater flowing directly into the rivers, before it ends up in the ocean. Two American hotel owners explain the seriousness of this phenomenon:

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<sup>13</sup> Approximately every six months, the septic tank needs to be emptied and cleaned, which costs around 400 USD.



“[...] Other places literally just have a pipe going into a ditch. So, it goes down that pipe and out: into the rivers and then into the sea. If you walk in the town, you can smell where the sewage goes into the beach. And if you can smell it, it is bad. It is a huge issue, it is killing the corals. It is a mess” (Interview, American hotel owners, 2018).

So, at the moment, much of the wastewater is ending up in the ocean untreated. Obviously, this is extremely harmful for the environment. The chemical substances from cleaning products and detergents that are carried by greywater, endanger maritime life. Additionally, blackwater is contaminating the ocean with bacteria from urine and faeces. According to a study by the United Nations Office for Project Services (UNOPS), the majority of the coastline from Puerto Viejo to Punta Uva is contaminated with faecal matter (UNOPS, 2018). This basically means that people in Puerto Viejo are currently swimming in sewage, entailing the obvious risks for public health.



Image 6.2 Blackwater coming from a hotel in Puerto Viejo

### *6.5 Chapter conclusion*

This chapter analysed how tourism in Puerto Viejo developed over time. Over the last decades, Puerto Viejo transformed from a simple fishing village into a bustling tourism hotspot. Hotels, restaurants, stores and services have been springing up at a rate of knots, making Puerto Viejo busier and bigger. However, this tourism induced expansion also brings along environmental challenges. The new road, deforestation and problems with waste and water management are pushing Puerto Viejo’s environment to its limits.

## 7. CHARACTERISTICS OF PUERTO VIEJO'S HOTEL SECTOR

*This chapter analyses the characteristics of Puerto Viejo's hotel sector. Through looking at size, type, ownership and offered facilities, this chapter paints a comprehensive picture of Puerto Viejo's hotel sector.*

### 7.1 Hotels' characteristics

Chapter 6 focused on Puerto Viejo's tourism industry at large. Now that we have a better understanding of tourism development and the corresponding challenges, it is important to have a closer look at Puerto Viejo's hotels. Characteristics like size, type and ownership will be discussed to define what the hotel industry exactly comprises. Moreover, these characteristics not only indicate what Puerto Viejo's hotel sector has to offer, it also reveals something about the character of development in Puerto Viejo. The following sections will respectively elaborate on hotels' size, type, facilities and ownership.

#### 7.1.1 Size

The size of hotels was determined by the amount of beds. The average amount of beds is 37. However, the height of this average is greatly affected by two disproportionately large hotels. If these hotels are excluded from analysis, the average drops to 26 beds (Figure 7.1). The smallest hotel counts 1 bed and the largest hotel counts 430 beds, but it should be noted that a big part of these 430 beds are actually hammocks. Together, all hotels in Puerto Viejo account for 1,819 beds.

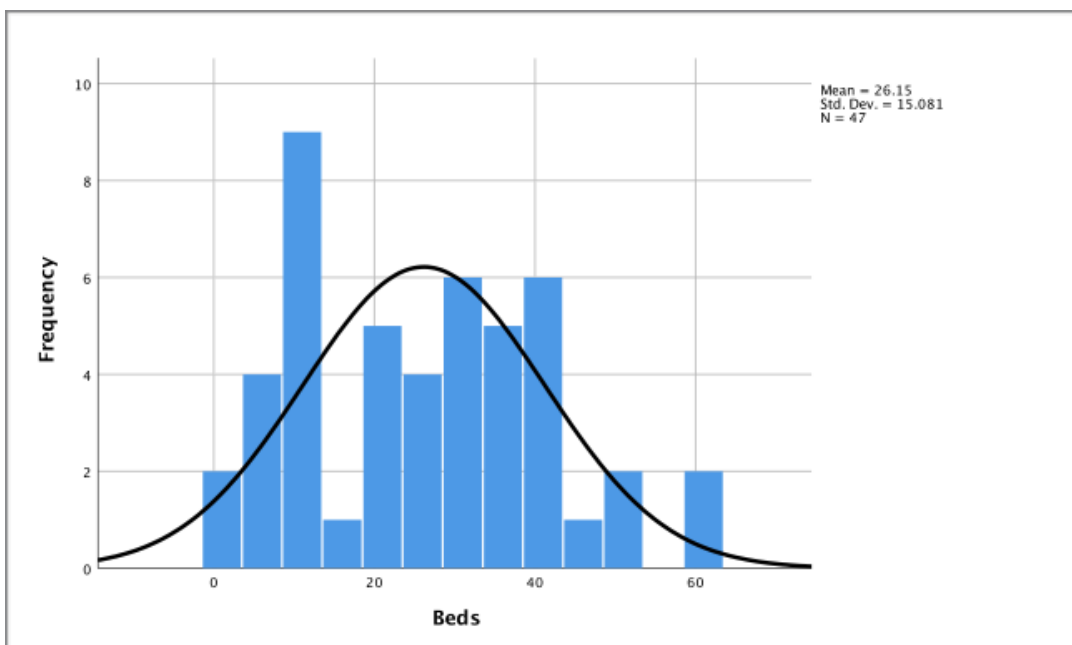


Figure 7.1 Hotels' size (n = 47)

In accordance with the Cámara Costarricense de Hoteles (the Chamber for Costa Rican hotels), the hotels are divided into three size groups: small hotels, medium hotels and large hotels (Cámara Costarricense de Hoteles, 2015). Small hotels range from 1 to 20 beds; medium hotels range from 21 to 50 beds; and large hotels range from 51 beds and up. In Table 7.1, the distribution of hotels based on their size can be found. As can be derived from this table, medium-sized hotels form the largest group in Puerto Viejo, accounting for more than half of all hotels. Only four hotels can be considered a large hotel. According to some owners, the absence of large hotels could be due to Puerto Viejo's climate, in its widest sense:

“We still do not have the big hotels, with maybe 500 beds, 800 beds. That is because of the weather. We don't have the dry season. On the Pacific side, between February and March it

does not rain. Here, it is different, you never know. So, the big hotels, they prefer not to be here. So, the tourism that we have here is more like small hotels, hostels and cabinas” (German hotel owner, 2018).

Table 7.1 Distribution of hotels based on size

Hotel size	N	Percentage
Small	19	38.8
Medium	26	53.1
Large	4	8.1
Total	49	100.0

The average amount of employees working in the hotel (including the owner) is 4. As we can see in Figure 7.2, most of the hotels have between 1 and 3 employees. Moreover, it is interesting to note, that ten hotels have no employees apart from the owner. The maximum number of employees working in a hotel is 32. This hotel is excluded from Figure 7.2, to improve readability. The average amount of employees is unaffected by this exclusion.

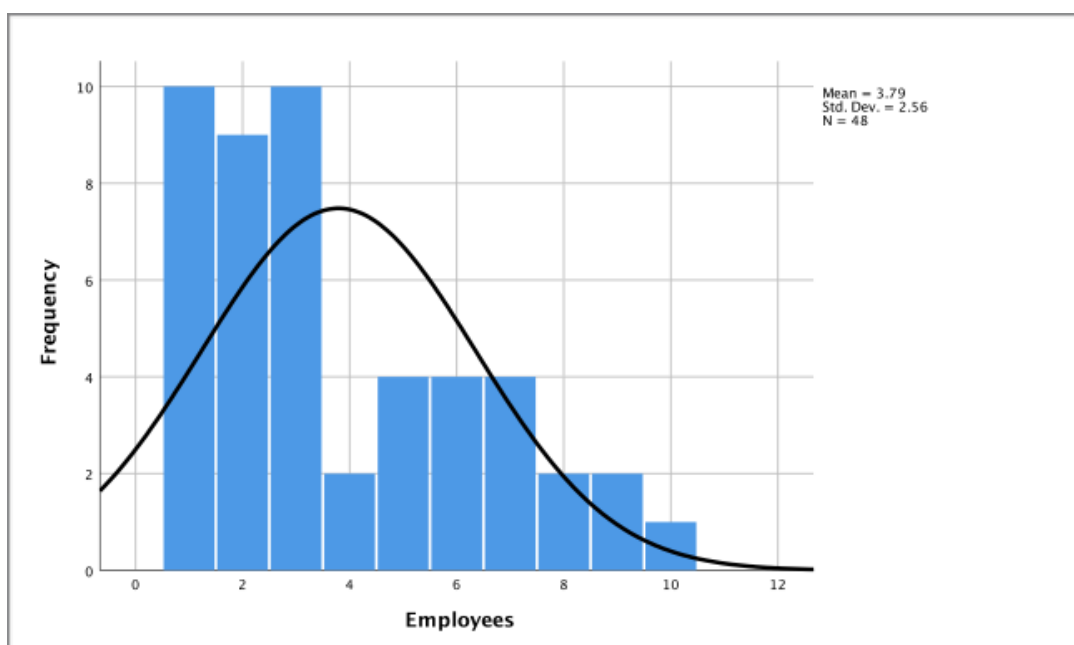


Figure 7.2 Hotels' employees (n = 48)

### 7.1.2 Type

The different types of accommodation in Puerto Viejo are ample, varying from simple hostels to luxurious boutique hotels. For this research, the hotels are divided into five hotel types. Figure 7.3 shows how often each hotel type occurs in Puerto Viejo. Hotels and apartments are equally present, accounting both for 15 businesses. Maybe, the notion of 'apartment' is too broad for this research, because, the majority of hotels within this category are cabinas. Furthermore, there are three bed & breakfasts and nine hostels. Seven hotels typified themselves as being either a bungalow, yoga retreat, guesthouse, camping, resort or boutique hotel, which are merged in the category 'other'. Finally, it should be noted that these hotel types do not indicate certain service levels or comfort standards, like Bontenbal (2003) also concluded. The definitions are rather chosen based on the owner's liking.



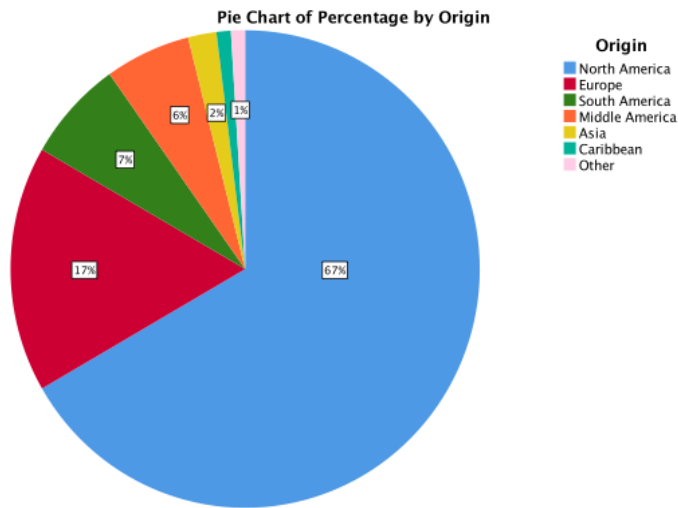


Figure 7.3 Hotel type (n = 49)

### 7.1.3 Luxury

The facilities that a hotel offers might say more about service levels and comfort standards than hotel type. Figure 7.4 gives a good overview of which facilities are offered most by hotels in the area. This graph shows that all hotels in Puerto Viejo offer Wi-Fi, which is quite impressive for a town where internet was only introduced in 2006. And considering the amount of hotels that offer hot water, television and even air conditioning, it could be stated that hotels in Puerto Viejo offer a lot of Western conveniences. This actually illustrates how the character of the hotel sector is shifting. Influenced by the desires of their customers, hotels are inclined to focus more and more on luxury and comfort. The Swiss hotel owner describes how the needs of tourists changed over time:

“People no longer come for adventure. They want their own home, here. A while ago there was an American girl asking for air conditioning and a swimming pool. I told her that there was a swimming pool 100 metres from here: the ocean” (Swiss hotel owner, 2018).

With a total of 11, swimming pools are also the least offered facility. This anecdote might explain why.

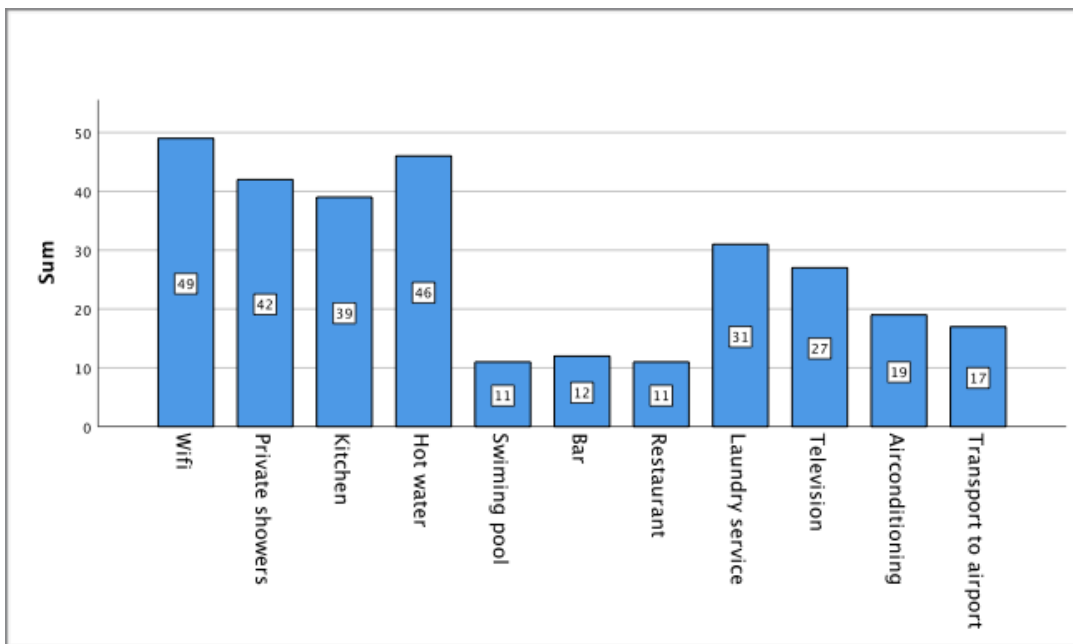


Figure 7.4 Hotels' facilities (n = 49)

On average, hotels offer six facilities. The most facilities offered is 11. The hotel that offers the least facilities, offers three. For this research, it is assumed that the more facilities a hotel offers, the more luxurious a hotel is.<sup>14</sup> Therefore, the amount of facilities can be divided into three ranking groups: budget, ranging from 0 to 3 facilities; comfort, ranging from 4 to 7 facilities; and luxurious, ranging from 8 to 11 facilities. In Table 7.2, the distribution of hotels based on luxury can be found. Based on this classification, only three hotels can be regarded as budget. Most of the hotels (71 percent) fall within the comfort category. Lastly, there are 12 luxurious hotels in Puerto Viejo.

Table 7.2 Distribution of hotels based on luxury

Hotel luxury	N	Percentage
Budget	2	4.1
Comfort	35	71.4
Luxurious	12	21.8
Total	49	100.0

Moreover, it is also interesting to analyse how hotels' luxury correlates with hotels' size. Therefore, Table 7.3 shows how the size groups of Table 7.1 can be divided among the luxury groups. As can be derived from Table 7.3, most of the comfort hotels are small, while luxury hotels are mostly medium-sized.

Table 7.3 Hotels' luxury in relation to size

	Small	Medium	Large	Total
Budget	0	1	1	2
Comfort	17	16	2	35
Luxurious	2	9	1	12
Total	19	26	4	49

#### 7.1.4 Ownership

Another distinctive characteristic of hotels is the type of ownership. Hotels owners can be either Costa Ricans or foreigners. Furthermore, they can be Costa Ricans that originate from Puerto Viejo or compatriots from elsewhere in the country.<sup>15</sup> The data shows that 38 of the 49 hotels have at least one foreign owner, making up almost 70 percent. Figure 7.5 demonstrates that some of these foreign owners have been living in Puerto Viejo for over 20 years now. However, most owners arrived six to seven years ago. On average, foreign owners have been living in Puerto Viejo for 11 years. Moreover, of the 49 hotel owners, six do not live in Puerto Viejo. These owners either live in their home country or elsewhere in Costa Rica.

<sup>14</sup> For this research, luxury is translated into terms of facilities. The distinguished facilities, as shown in Figure 7.4, say something about hotels' service and comfort level. For instance, hotels that offer air conditioning are more luxurious than hotels that do not offer air conditioning. Moreover, every facility equally contributes to hotels' luxury. This allows the facilities to be divided into three equal ranking groups. Therefore, a kitchen is just as much of a luxury facility as a swimming pool. This division corresponds with my observations in the research area.

<sup>15</sup> Costa Ricans that do not originate from Puerto Viejo are also referred to as 'nationals'.

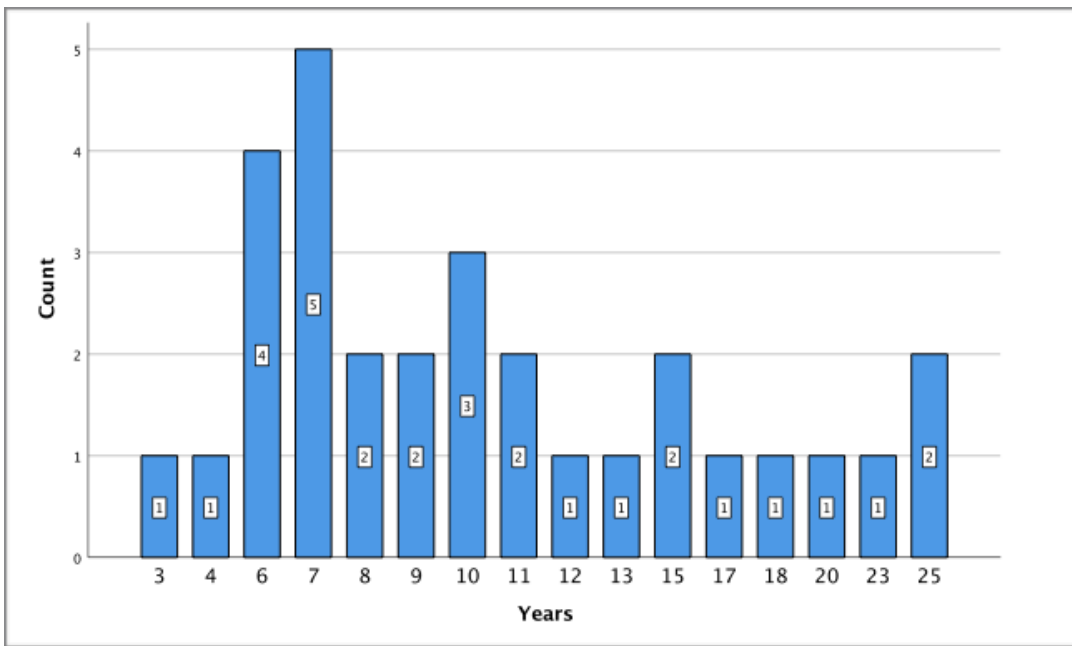


Figure 7.5 Foreign owners' years living in Puerto Viejo (n = 29)

Figure 7.6 illustrates from which country the foreign owners originate. Most of the foreign owners are from Germany and the United States, both accounting for eight hotels. Five hotels are owned by Spaniards. Furthermore, 12 hotels are owned by Costa Ricans, either locals or nationals. Six hotels had a shared ownership. This means that the hotel is owned by two people, usually a couple. In five of those cases, one of the owners is Costa Rican, while the other is foreign. Three were shared ownerships with nationals outside of Puerto Viejo, in the other two cases one of the owners was a local.

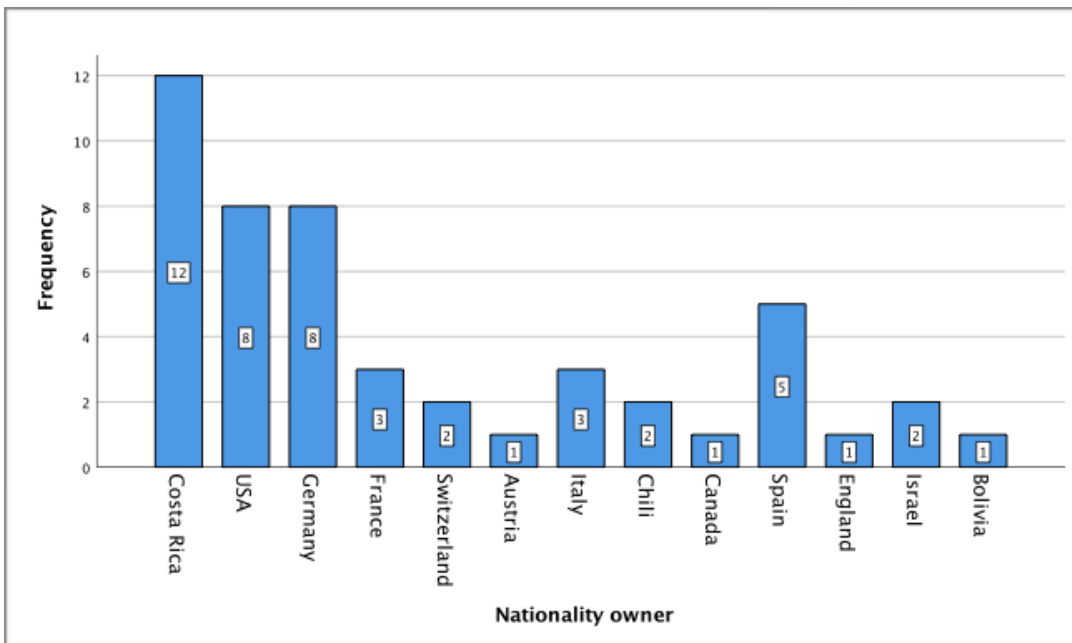


Figure 7.6 Nationality of hotels' owners (n = 49)

It is also interesting to look at how ownership relates to hotel size. Figure 7.6 shows how most of the locals own a small-sized hotel. Moreover, almost all of the large-sized hotels are foreign owned. Furthermore, most of the locals own comfort hotels. Only one local owns a hotel with minimal facilities. It is also interesting to see that almost all the luxury hotels are in foreign owners' hands.

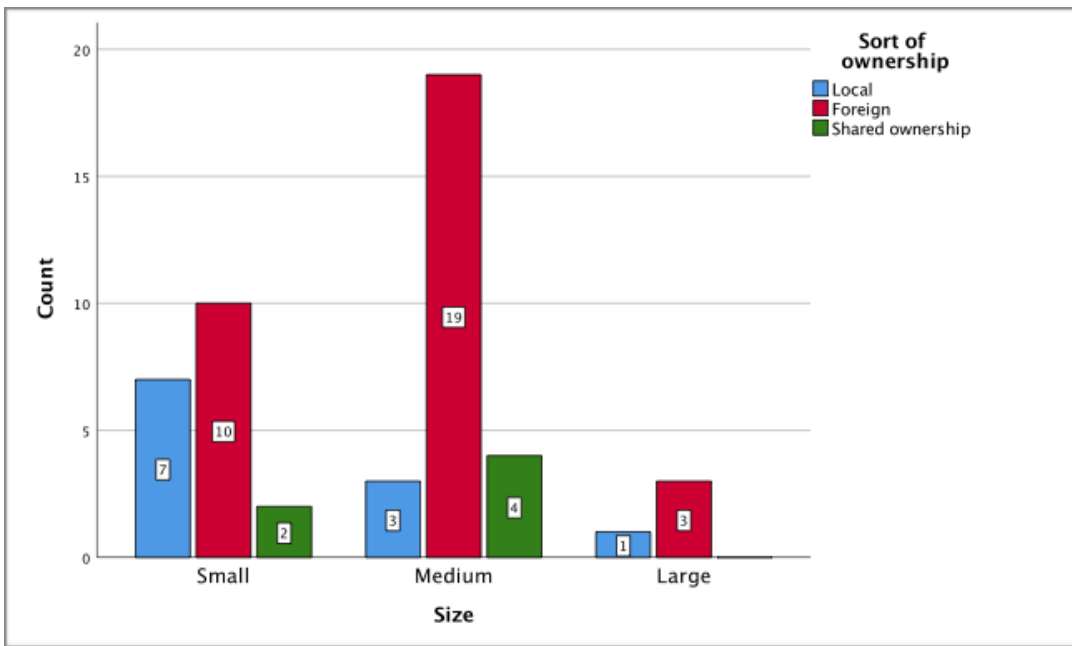


Figure 7.7 Hotels' ownership and size (n = 49)

### 7.2 Chapter conclusion

This chapter analysed the characteristics of Puerto Viejo's hotel sector. Analysis demonstrated that most hotels in Puerto Viejo are small or medium-sized. The hotel sector mostly consists of modest cabins with no or a few employees, attesting Puerto Viejo's small-scaled character. Most of the hotels are comfortable places to stay, equipped with conveniences like Wi-Fi, hot water and private showers. Moreover, the Puerto Viejo's hotel industry is largely in foreign hands, with more than 75 percent of the hotels having at least one foreign owner. On average, foreign owners have been living in Puerto Viejo for 11 years.

## 8. HOTELS' ENVIRONMENTAL MANAGEMENT

*This chapter describes the engagement of hotels in environmental management. Through discussing the shift towards environmental consciousness and highlighting some environmental practices, this chapter shows how environmental management emerged in Puerto Viejo. Subsequently, the relation between environmental management and hotels' characteristics will be analysed.*

### 8.1 Environmental efforts

In Chapter 6, Puerto Viejo's biggest environmental challenges were explained. As was discussed, these environmental problems can be partly attributed to the workings of tourism. These challenges should be given serious thought, since they affect Puerto Viejo in various ways. Firstly, problems regarding pollution, drinking water, wastewater and garbage affect the quality of life in Puerto Viejo. Nobody wants to live in a place where the rivers colour grey and trash piles up along the side of the road. As a matter of fact, the same issues jeopardise people's health. Secondly, these environmental challenges make Puerto Viejo less attractive for tourism. Trees are disappearing, beaches are littered with plastic and sewage water flows directly into the Caribbean Sea. If these natural beauties disappear, Puerto Viejo risks losing its main source of income: tourism. In the words of a French hotel owner:

“I have to preserve my business. Puerto Viejo is famous for having all these ecosystems and all this nature. Imagine if Puerto Viejo's nature was lost. If you don't do anything, everything will die, and you will lose your customers” (French hotel owner, 2018).

To maintain Puerto Viejo's attractiveness as a tourism destination, it is important to counteract environmental problems. Therefore, environmental actions are taken to combat these problems. Environmental actions, or environmental efforts, are the strategies or policies that businesses and organisations include in their management to positively impact the environment. In the following sections, hotels' involvement in environmental management will be addressed. This chapter provides a comprehensive description of how hotels approach the environmental issues in Puerto Viejo, by addressing the shift towards environmental consciousness and hotels' environmental management.

### 8.2 The environmental shift

If the activities of the tourism sector are not properly managed, they are inclined to have an adverse effect on the environment. Therefore, it is important to ascertain how hotels, being at the core of the Puerto Viejo's tourism industry, are trying to counteract environmental degradation. Hotels attempt to reduce environmental damage by including environmentally friendly practices and policies in their business management. Interestingly, these environmental efforts are a relatively new phenomenon within the hotel sector.

According to a German hotel owner, the shift started approximately five years ago —sparked by the tourism boom and changing tourists' mindset. She explains how the emergence of environmental consciousness can be largely attributed to the expansion of Puerto Viejo's tourism sector. Originally, Puerto Viejo was just a little village, so people did not really need to worry about harming the environment. However, over the last years, the amount of people and hotels has been increasing, and the negative impacts on the environment are becoming evident. With this, the vigilance for Puerto Viejo's environment grew. Moreover, because tourism in Puerto Viejo is relatively young, the town was able to learn from mistakes that were made in other Costa Rican tourism destinations. According to the director of ATEC, the Pacific coast is a good example of how tourism in Puerto Viejo should not develop:

“Before, Costa Rica offered a tourism model that was not sustainable. If you go to the Pacific side, you see all these huge all-inclusive hotels. On the Pacific side, they wanted to go with that massive, thousand-room hotel, all-inclusive tourism. But what happens now? It is dirty.

They ran out of water. The beach is disappearing. So, that is an example we do not want to follow. We want to offer a kind of tourism that is really sustainable. And that is working” (Director of ATEC, 2018).

For the director of ATEC, sustainable tourism mainly involves community-based, eco-friendly tourism. This type of tourism ceases to exist when Puerto Viejo keeps growing uncontrolled. Therefore, it became essential for both the municipality and the hotel sector to take care of nature — Puerto Viejo’s most important resource.

Secondly, the mindset of travellers in general is changing. According to many owners, environmental issues are a global phenomenon, and people are becoming increasingly aware about the need for sustainability. Mass tourism and its accompanying practices are becoming less popular, also in Costa Rica. Nowadays, tourists are seeking for nature and adventure, and relevant to this are hotels with an eco-friendly attitude. A Costa Rican hotel owner, who has been living in Puerto Viejo for three years, also notices this new attitude:

“Puerto Viejo is becoming more and more popular in Europe and the States, because we take care of nature more. At the moment it is a trend to take care of yourself and the environment. People are more environmentally friendly and looking for sustainable places to stay” (Costa Rican hotel owner, 2018).

However, hotels’ environmental efforts are not only a consequence of the growing demand for eco-friendly accommodations. According to a German hotel owner, a lot of hotel owners in Puerto Viejo try to incorporate their personal beliefs into their businesses management:

“Being environmentally friendly is becoming more popular. Especially here in Puerto Viejo, a lot of expats are yoga-teachers, vegetarian or crazy about biological products. So yes, if they own cabins or hotels, they will try to make it environmentally friendly as well” (German hotel owner, 2018).

So, the environmental shift arose as an interaction between the emerging environmental problems, tourists’ changing mindset and the eco-friendly character of Puerto Viejo’s hotel owners. Hotels’ environmental management is a result of this environmental shift, to both satisfy environmentally conscious tourists and reduce environmental degradation. The next section will provide an extensive analysis on how this environmental management looks like in practice.

### *8.3 Hotels’ environmental management*

Hotels can include strategies or policies in their business management that are ‘green’ and environmentally sound. In other words, by including certain measures in their management, hotel owners may strive to have a positive impact on the environment. To determine hotels’ environmental management, 10 different environmental practices are assessed.<sup>16</sup> Using a five-point Likert scale, hotel owners would indicate to which extent they were engaged in each practice. In order to say something about hotels’ environmental management, for each hotel, the average score of all environmental practices combined is calculated. Together, these environmental practices make up a hotel’s environmental management. Eventually, this results in an overall score for environmental management, ranging from 0 to 4, with 0 being the lowest and 4 being the highest score possible. Figure 8.1 is a visual representation of hotels’ environmental management.

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<sup>16</sup> For the average score per environmental practice, see Figure 8.2. This figure depicts how each environmental effort scores separately.

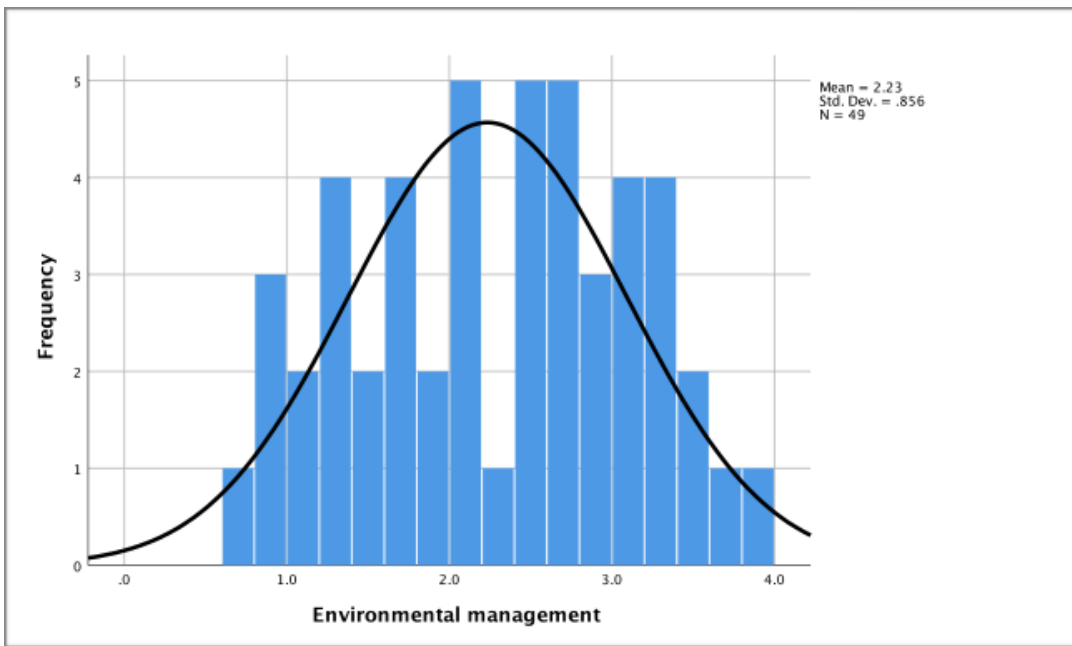


Figure 8.1 Hotels' environmental management (n = 49)

The hotel that is least engaged in environmental management has a score of 0.7 and the best scoring hotel had a score of 3.8. On average, hotels' environmental management is 2.2. As figure also 8.1 displays, most of the hotels in Puerto Viejo have an environmental score between 2 and 3.

For a better understanding, these numbers are translated into comprehensible terms. Therefore, the environmental scores are divided into three equal groups: low (ranging from 0 to 1.3); medium (ranging from 1.4 to 2.7) and high (ranging from 2.8 to 4). Table 8.1 shows how the hotels are distributed over the environmental management groups. Interesting to note, is that only 10 hotels show a low degree of environmental management, which is less than 20 percent. The majority of the hotels in Puerto Viejo appear to be moderately engaged in environmental management. Lastly, more than a quarter of the hotels show high degrees of environmental involvement.

Table 8.1 Hotels' environmental management

Environmental management (scores)	N	Percentage
Low (0 - 1.3)	10	18.2
Medium (1.4 - 2.7)	24	43.6
High (2.8 - 4)	15	27.3
Total	49	100.0

#### 8.4 Relationship between hotels' characteristics and environmental management

Subsequently, it is interesting to see if there exists a relationship between hotels' characteristics and environmental management. As described in Chapter 7, hotels differ in size, type, facilities and ownership. In this section will be analysed to what extent hotels' environmental management is influenced by these characteristics.

##### 8.4.1 Size

Starting with hotel size, Table 8.2 shows how the three size groups score on environmental management. The environmental scores of the groups are practically the same. Only large hotels seem to score slightly higher than the other two groups. A One-way ANOVA was conducted to compare the effect of hotel size on environmental management. An analysis of variance showed that the effect of hotel size on environmental management was not significant,  $F(2, 46) = .062, p = .940$ . Moreover, a Pearson product-moment correlation coefficient was computed to assess the relationship between

the amount of beds and environmental management. There was no correlation the two variables,  $r(47) = .188, p = .195$ . Overall, there is no relationship between hotel size and environmental management. Therefore, the size of hotels does not affect the extent to which hotels are involved in environmental practices.

Table 8.2 Environmental management in relation to hotel size

Hotel Size	N	Environmental Management (M)	Standard Deviation
Small	19	2.2	1.0
Medium	23	2.2	0.7
Large	4	2.4	1.0

#### 8.4.2 Type

Table 8.3 displays how the different hotel types score on environmental management. The environmental scores between the groups slightly differ. The lowest scoring hotel type is apartments, while the highest scoring category is ‘other’. A One-way ANOVA was conducted to compare the effect of hotel type on environmental management. An analysis of variance showed that the effect of hotel type on environmental management was not significant,  $F(4, 44) = 2.079, p = .100$ . Overall, there is no relationship between hotel type and environmental management. Therefore, the type of hotels does not affect the extent to which hotels are involved in environmental practices.

Table 8.3 Environmental management in relation to hotel type

Hotel Type	N	Environmental Management (M)	Standard Deviation
Hotel	15	2.5	0.8
Apartment	15	1.9	0.9
Bed & Breakfast	3	2.0	0.9
Hostel	9	2.1	0.8
Other	7	2.7	0.8

#### 8.4.3 Luxury

In this research, the amount of facilities that a hotel offers, is used as an indicator for hotels’ luxury. In Chapter 7, three groups were created to rank hotels, based on the amount of facilities they offer. Table 8.4 shows how these different groups score on environmental management. Here too, the environmental scores of the groups are very close. However, budget hotels show the highest environmental score on average. A One-way ANOVA was conducted to compare the effect of hotel luxury on environmental management. An analysis of variance showed that the effect of hotel luxury on environmental management was not significant,  $F(2, 46) = .256, p = .775$ . Moreover, a Pearson product-moment correlation coefficient was computed to assess the relationship between the amount of facilities and environmental management. There was no correlation the two variables,  $r(47) = -.028, p = .850$ . Overall, there is no relationship between hotel luxury and environmental management. Thus, the amount of facilities does not affect the extent to which hotels are involved in environmental practices.

Table 8.4 Environmental management in relation to hotel luxury

Hotels’ Luxury	N	Environmental Management (M)	Standard Deviation
Budget	2	2.6	1.2
Comfort	35	2.2	0.9
Luxurious	12	2.3	0.7



#### 8.4.4 Ownership

Lastly, the type of ownership in relation to environmental management will be assessed. Table 8.5 displays how the different ownership groups score on environmental management. Again, the environmental scores hardly differ from each other. Locally owned hotels are scoring slightly worse than hotels with a foreign or shared ownership. A One-way ANOVA was conducted to compare the effect of hotel ownership on environmental management. An analysis of variance showed that the effect of hotel ownership on environmental management was not significant,  $F(2, 46) = .172, p = .842$ . Overall, there is no relationship between hotel ownership and environmental management. Therefore, the type of ownership does not affect the extent to which hotels are involved in environmental practices.

Table 8.5 Environmental management in relation to hotel ownership

Hotels Ownership	N	Environmental Management (M)	Standard Deviation
Local	11	2.1	1.2
Foreign	32	2.3	0.9
Shared	6	2.3	0.7

#### 8.5 Environmental practices

It should also be considered how each practice scores separately. Figure 8.2 illustrates how each category scores on average. The best scoring activity is separating waste. This is no surprise, since separating waste is obligated by law. In the words of a small guesthouse owner: “The government obligates us [hotel owners] to purchase three trash cans for separating waste. They are very expensive, but if you do not do it, you get fined” (Interview, local hotel owner, 2018). Accordingly, almost all hotels in Puerto Viejo have three different garbage bins: one for plastic; one for paper; and one for organics. Some hotels even have extra bins to also separate glass and tin.

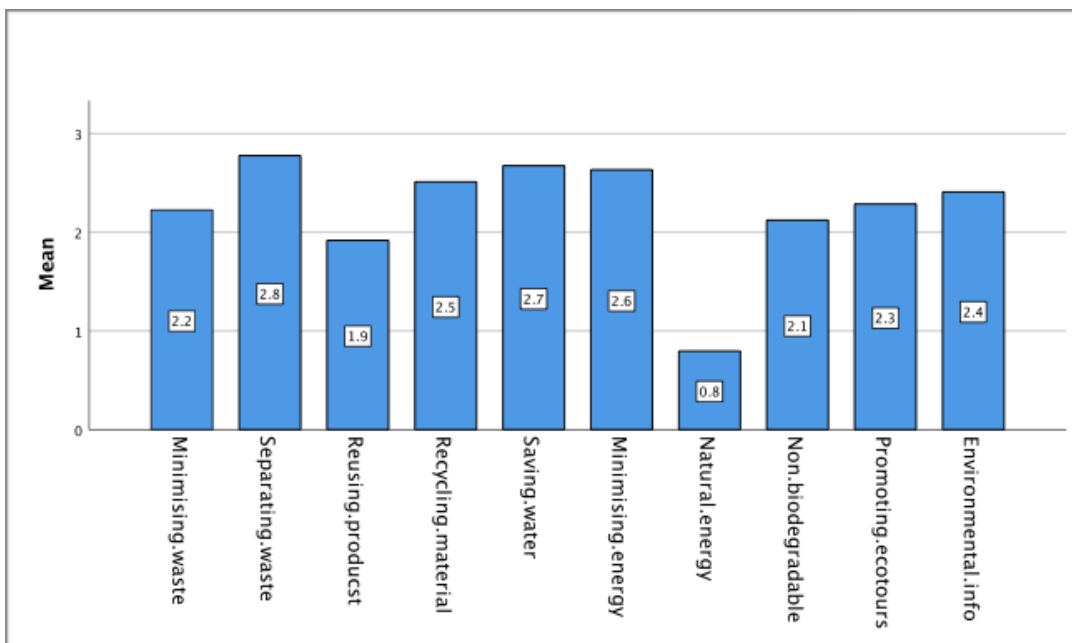


Figure 8.2 Average score per environmental activity (n = 49)

Other activities that score well are saving water and minimising energy consumption. A lot of hotels have a piece of paper hanging on the inside of bathroom doors, asking guests to consciously use water and electricity, of which Appendix 9 is an example. Moreover, many small hotels have their own rain barrel or water well. Since these hotels are not connected to the water supply network, it is easier to

keep the water usage within limits. However, according to an American owner, for large hotels it is a different story:

“Saving water is a difficult thing for large hotels. I used to work in a local hotel with 16 rooms, equivalent to 32 people. If you think about their water usage in terms of having a restaurant, laundry, showers — there is only so much you can do to minimise that. [...] I think that hotels could do more if the standards were in place and reinforced by the municipality. Because it can be very simple. Like having flow restrictors on your shower heads. Or keeping your hot water set to a certain degree. Or using double-flush toilets” (American hotel owner, 2018).

Another practice that is scoring fairly high is recycling material. Recycling material is different from separating waste, because it entails the action of either bringing recyclables to a collection centre or arranging the pick-up service. Most people let Corridor Biologico drive by to pick up their recyclable waste. It is also possible to bring the recyclable material to ATEC, but in general owners consider this to be laborious. Some hotels that do not score high on recycling material, are experiencing trouble with making arrangements for the pick-up. According to an American hotel owner, it took months to properly arrange the recycling service. Apparently, it is rather challenging to figure out who to call and what to do. If the owners are not persistent enough, nothing is going to happen.

“It really took months for this recycling to set up. Who do we call? How do we do it? We have called multiple times. Then, the person does not come. If you are not determined to get it done, it is not going to happen. Then, no one is going to do it (American hotel owner, 2018).

Others find the pick-up fee too expensive or unnecessary. As mentioned before, the fee for the private recycle service is 5,000 CRC. This comes on top of the regular waste charges. Also, Corridor Biologico is pretty strict when it comes to picking up trash; if it is not separated perfectly they will not take it. So, for some owners, it is just not worth the money and time.

“I have to gather the staff at least once or twice a week for separating the trash. That is an extra task they have. Then we also have to pay the recycle truck to pick up recyclable material every week. I told the owners: ‘We can have a recycle programme, but you have to pay for it.’ They said: ‘Why should I pay for something that is not part of my business?’” (Local hotel manager, 2018).

Promoting environmental information is something that some owners do, while others do not. It mainly depends on the character of the owner. If the owner is really committed to nature, chances are that they will inform guests about the surroundings, how to deal with waste and where to buy organic products. This includes talking with guests about how not to leave a big imprint. The owner of a one-bedroom boutique hotel explains:

“If this is where I am going to live, I want it to be a reflection of what I believe in. So, we talk to them [the guests] about how important it is to not leave an imprint when living here. We make sure that they understand that part of living here, is not impacting nature” (American hotel owner, 2018).



Image 8.1 Different recycle bins at a hotel

The same goes for promoting ecotours. Some hotels have a colourful collection of brochures available at the reception counter, informing guests about tours organised by the Ara Project<sup>17</sup>, the Jaguar Rescue Center or ATEC. Other owners explain how they preferably do not meddle in their guests' business. They simply provide accommodation for the guests, everything else is the guests' decision.

Activities like minimising waste and minimising non-biodegradable products are challenging for many owners. Minimising waste is a difficult task for hotels, because they are also lumbered with the waste that guests produce. Hotel owners can minimise the waste they produce as a business, but it is almost impossible to keep track of what tourists bring from the supermarkets. A French hotel owner expresses her frustration:

“I cannot control it. It is unbelievable. You will not believe what I see when I have to clean the rooms. It literally looks like a dump. There are empty bottles, bags of chips, cans of beer. All this trash. By the time I see it, they have already left” (French hotel owner, 2018).

Furthermore, minimising the use of non-biodegradable products is not easy in Puerto Viejo. First of all, the majority of soaps and detergents from the supermarkets have a lot of harmful substances in them. Secondly, the supply of biodegradable products in the area is limited. Only a few places sell biodegradable items, and obviously, they are pricey. A German hotel owner describes why it is challenging to minimise the use non-biodegradable products:

“You can buy them [biodegradable products]. There are two companies that offer them. But, they are significantly more expensive. Maybe three or four times as expensive as normal products. For instance, a liquid detergent for laundry will cost you around 7,000 CRC. So, I try to use just as much detergent as necessary. But it is very difficult. The climate makes it quite hard. We live in the jungle, so there are a lot bugs. And of course, it is easier to just take out a bottle of poison and spray” (German hotel owner, 2018).

An American hostel owner tells a comparable story. He explains how the current biodegradable products are not economically achievable for his business:

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<sup>17</sup> The Ara Project is a conservation organisation operated by the NGO Asociación El Proyecto Ara. It is dedicated to saving the Costa Rica's native macaws (a type of bird).

“Affordability is an issue. There is a lot of products that we would like to use, but it is just not feasible. A while ago, we were looking for sustainable products, that are not harming the environment. But with the costs of doing business here, it is just too expensive. [...] Finding affordable solutions to actually be environmentally friendly, are still very hard to find” (Interview, American hotel owner, 2018).

Owners that are really devoted to using biodegradable items, are likely to pursue other options. However, these alternatives are often cumbersome and cost more time. Some owners buy their organic and biodegradable products from companies in San José or Limón. An American hotel owner describes how she orders gallons of detergent with a company in San José, that gets delivered to her with the public bus system<sup>18</sup>. With these large bottles she refills the small bottles in the room. It is a good solution but it does take some devotion.

The last activity is the use of natural energy sources. The use of renewable sources mainly comes down to using solar power, because wind and water power are difficult to deploy for private use. Only three hotels are powered by solar panels. With that, the use of natural energy sources is relatively low. There are multiple reasons for this. The first is, once again, money. For most hotels, installing solar panels is a huge expense. Secondly, some owners question the added value of solar panels. More than 90 percent of Costa Rica’s electricity is already generated by renewable sources. From their perspective, private solar panels are unnecessary. Thirdly, the system in Puerto Viejo is not yet tailored to handle this relatively new technology. An American bed & breakfast owner explains how Puerto Viejo is still missing expertise in this respect:

“There are just not enough people to service it [solar panels]. There is a handful of people who are kind of starting to talk about doing it here. And I think it could work here. But, I do not even know where to start with it. I do think, that it could be very beneficial. But I do not know of anybody here who has the expertise to really do it, or, what you would do if something goes wrong. If it was available, and it was more readily available, then it would make sense” (American bed & breakfast owner, 2018).

### 8.6 Certification

Another dimension of environmental involvement is certification. Costa Rica uses a certification system (CST) to determine to what extent hotels (and other tourism businesses) are operating in a sustainable manner. Figure 8.3 illustrates the number of hotels that is engaged in CST in Puerto Viejo. As expressed by the pie chart, the majority of hotels is not engaged in the certification programme. Currently, only eight owners are in possession of the certificate. According to them, it costs a lot of effort to acquire the certificate from the Instituto Costarricense de Turismo (ICT). Apart from the paperwork, the list of requirements to get the certificate is pretty extensive:

“It is a massive list of things. They ask you everything. The percentage of your lightbulbs that are LED in the front of the house, in the back of the house. What type of shampoos you use. What kind of soaps you use. If you do recycling. How you sort your recycling. What happens with your waste water. What happens with your black water. What happens to your grey water. How you manage the laundry. How you dry your laundry. It is really an extensive list of requirements” (Interview, American hotel owner, 2018).

Besides the effort it takes to get enrolled in the certification programme, there are other reasons why not many hotels are engaged in CST. According to the president of CATCCAS, the absence of certificates in Puerto Viejo is caused by two things. Firstly, there is no zoning plan in Puerto Viejo. A zoning plan regulates building within an area, and makes sure every building meets certain spatial

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<sup>18</sup> With this system, the product is put on a public bus in San José and gets delivered at the bus station in Puerto Viejo, where it can be picked up.

requirements, like leaving room for drainage and greenery. Because this plan is absent, many owners do not take these spatial requirements into account and are automatically excluded from taking part in the CST. Secondly, a lot of hotels do not meet the requirements of the maritime zone. Officially, it is prohibited to build anything within 200 metres from the ocean. However, a lot of hotels are built within this region. Automatically, they do not qualify to be engaged in the CST.

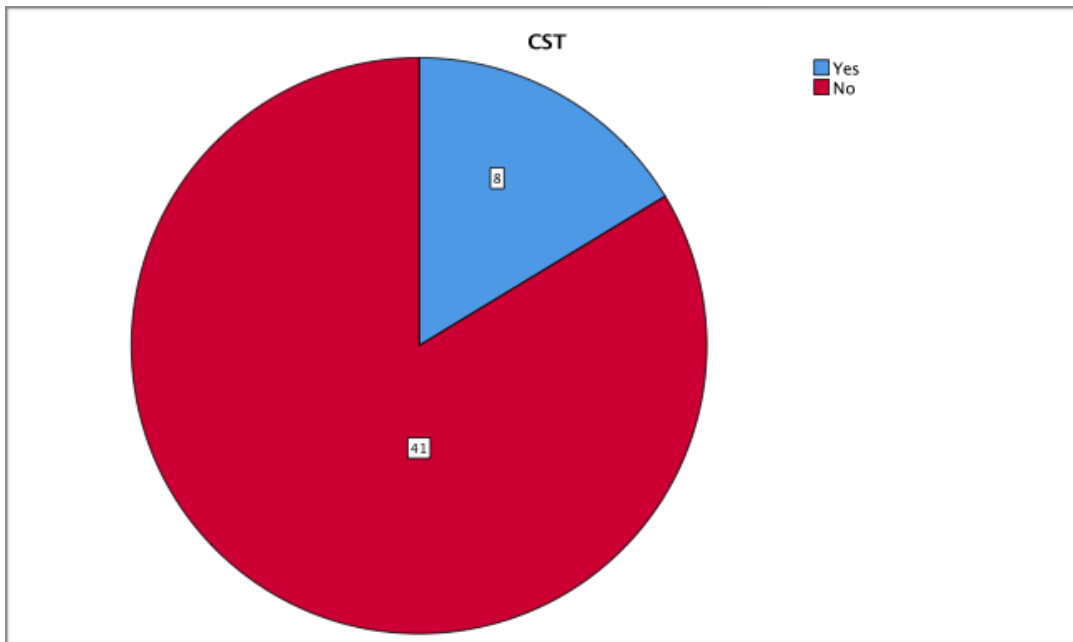


Figure 8.3 CST among Puerto Viejo's hotels (n = 49)

### 8.7 Chapter conclusion

This chapter analysed hotels' environmental management. Environmental management emerged approximately five years ago, during a time when tourism's negative impacts became increasingly evident and environmental consciousness grew more popular. As a result, hotels engaged in practices that are environmentally friendly. Currently, most hotels are moderately engaged in environmental management. Separating waste and saving water are the practices that scored best among hotels, while the use of renewable energy sources scored lowest. No significant relations were found between hotels' environmental management and hotels' characteristics. Lastly, only a few hotels in Puerto Viejo are enrolled in Costa Rica's certification programme for sustainable tourism.

## 9. MOTIVATIONS, DIFFICULTIES, IMPACT AND OPPORTUNITIES

*This chapter addresses the different motivations owners have for engaging in environmental management, as well as the difficulties they experience. Secondly, the perceived impacts of hotels' environmental management are discussed. Lastly, some promising projects regarding Puerto Viejo's environmental challenges will be highlighted.*

### 9.1 Motivations

The analysis in Chapter 8 showed how hotels' engagement in environmental management cannot be explained by hotels' different characteristics. Therefore, engagement in environmental management may be explained by other factors. The conceptual model from Chapter 4 illustrates how hotels' environmental management can be influenced by motivations. Owners have particular reasons for engaging in environmental management, emanating from certain business perspectives or personal beliefs. These reasons can be financial, social, environmental or external. In this section, these different motivations will be discussed respectively.

#### 9.1.1 Financial

Motivations can be financial, by approaching environmental management as a way to attract new customers or save costs. According to some owners, environmental efforts and saving money go hand in hand. Of course, it is easy to understand how eco-friendly alternatives like water flow restrictors, LED lights and solar panels are more economically viable than conventional options. In fact, most owners confirm that you can save money by saving energy or saving water. However, in most cases, saving money is not the objective of hotel owners. A local hostel owner explains:

“By saving water and using less power, of course, you will be paying less money. If you make a nice note for people to see, they use less power. And I will feel benefit because of that. My bill will be lower. But it is not actually the objective. It is one of the consequences, but that is it” (Local hostel owner, 2018).

Moreover, for many owners it is difficult to see the financial benefits of taking environmental measures, because of the high, one-off costs of certain investments. While double-flush toilets and LED lights may save money in the long term, initially, purchasing them is more expensive. This is why, financially, most environmental efforts are more deterring than encouraging. An American hostel owner explains this crux by describing his thoughts on solar panels:

We know that, on the long run, it [solar panels] is probably cheaper for our business. The thing is, for us to invest 30,000 USD, when we are just trying to rent out some rooms, is just impossible. If there was some kind of investment plan, we would have done it. Because we would probably have saved money over the years by having solar or renewable energy” (American hostel owner, 2018).

Another financial motivator for engaging in environmental management is the attraction of new customers. As was also mentioned in Chapter 8, there is a growing interest for environmentally conscious hotels among tourists. A local guesthouse owner describes how Costa Rica is being more and more advertised as ‘green’, resulting in a growing group of tourists that is looking for an ‘eco-experience’. According to her, hotels that advertise their ‘eco-friendliness’ on their website, even attract more customers (Local hotel owner, 2018). Obviously, this is financially attractive.

However, the financial benefit of these new customers should not be exaggerated. One has to keep in mind that only a particular group of travellers is sensitive for this kind of marketing. An American hostel owner explains:

“A bigger share of the sustainable community is travelling now. These are the people who are looking for more eco-friendly hotels. So, if we do these kinds of things [environmental management], we can market it to that clientele. [...] But it is not making the guy that grew up here come here any faster” (American hostel owner, 2018).

### 9.1.2 Social

Motivations are social, when owners utilise environmental management to increase their environmental credibility, receive public recognition or improve their overall image. Moreover, an improved reputation may indirectly better hotels’ market position and is therefore closely linked to commercial and financial benefits. A local hotel owner explains how social considerations influence his hotels’ environmental management:

“The better you do [for the environment], the better it is for your business. If I am not going to have a trash organisation in my own hotel, that is going to be bad for my image and for my clients. ‘Green’ is what you sell now. If you are going to sell ‘black’ or ‘grey’<sup>19</sup> you are going to have a bad time” (Local hotel owner, 2018).

Environmental management can be very helpful when it comes to marketing. According to the director of ATEC, being environmentally friendly as a hotel can make you stand out from the rest, contributing to an improved market position. An American owner illustrates how some of his hostel’s environmental efforts are influenced by such social considerations:

“It can be good for you image. [...] At the moment, we are advertising some environmental things we do as a hotel. We no longer provide plastic straws, we are part of the recycle programme, we have a compost system and we give our organic waste to a local farmer. All these things help for your reputation as a hotel” (American hostel owner, 2018).

However, not many owners in Puerto Viejo have social motivations for engaging in environmental management. Although they generally agree with the potential commercial power of environmental management, it is not their primary reason. Also, for environmental management to trigger social benefits, marketing is essential. Many owners just do not feel the urge to market themselves.

Actually, CST is the perfect example of environmental management that is utilised for social reasons. CST gives hotels the opportunity to distinguish themselves from other hotels, based on their environmental performance. The fact that only eight out of 49 hotels are engaged in this programme, says a lot about the lack of hotels’ social motivations. In the end, hotel owners mainly have other reasons to engage in environmental management.

### 9.1.3 Environmental

Motivations are environmental, when owners adopt environmental measures out of a willingness to contribute to Puerto Viejo’s environmental quality and prevent natural degradation. Obviously, environmental management is mainly devised to restrain hotels’ negative impact on the environment, so it is easy to understand why owners’ motivations would be environmental. Therefore, it should be no surprise that environmental considerations are the main reason for environmental management among hotel owners.

There are multiple dimensions to owners’ environmental motivations. For some owners, it stems from a deep-rooted love for Puerto Viejo and its surroundings, either because they grew up there, or made it their home over time. They feel connected to the environment and want to harm nature as little as possible. A local hotel owner explains why she feels prompted to take environmental measures:

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<sup>19</sup> The use of the words ‘black’ and ‘grey’ is with a nod to the blackwater and greywater.

“We need to preserve this. It is beautiful. It was more beautiful before than it is now, but we got to hold on to what we got. [...] That is why we need to do something. We have been gifted this beautiful home, we need to take care of it” (Local hotel owner, 2018).

Although Puerto Viejo has been definitely touched by the workings of tourism, many owners still appreciate the abundance of nature in their beloved home. Frankly, hotel owners are aware of Puerto Viejo’s natural beauty, and are determined to preserve this. Moreover, for many foreign owners, their connection with nature is the exact reason they moved to Puerto Viejo in the first place. Therefore, it is no surprise that they are highly involved with environmental issues. For some of these owners, the motivations for environmental management are almost spiritual of character:

“I always wanted to save this planet. I feel this place breathing. It needs us just as much as we need it. I have been gifted this beautiful home, it is amazing here. We need to create a better world for humans and animals. We need a clean planet” (American hostel owner, 2018).

For other owners, environmental motivations come from certain feelings of responsibility towards the environment. They feel the need to counteract the negative impacts resulting from tourism development. Essentially, hotels, as accommodation providers, are both the cause and the result of tourism. Therefore, some owners think it is important to play an active role in the environmental debate. An American bed & breakfast owner describes how she wants to be part of the solution, rather than the problem:

“For me, it is the responsible thing to do. I try to lower my own footprint. The tourism takes enough away, as it is. I am here at the kindness of the government allowing me here. This is not my home country. Therefore, I want to take responsibility for being here. The last thing anyone should do is trying to take advantage of either the people or the environment. If you are coming here and live, you should be making things better here for people, not take something away” (American bed & breakfast owner, 2018).

Lastly, some owners’ environmental motivations derive from a care for the future. They are committed to the environment because they are concerned about future generations, but also the future of their own business. Some owners want to prevent Puerto Viejo from turning into a big garbage dump and are therefore inclined to engage in environmental management. Other owners are more concerned about the future of their hotel. They are afraid that Puerto Viejo might lose its value as a tourism destination, and with that miss out on customers:

“We have a business here, but if the environment keeps changing, soon we are not going to be able to run it anymore. If we lose our nature, we also lose our customers. That is why I think it is important that everyone tries to do something about it. If you have a business here, or if you live here, you need to take care of it. You need to do something (Costa Rican hotel owner, 2018).

In fact, most hotel owners live in Puerto Viejo, so they care about their direct environment. A representative of the municipality explains how the mindset of people in Puerto Viejo is very important:

“When you talk about environment, the cultural part is very important. Communities like Puerto Viejo turn out to be sustainable, because they take positive actions towards preserving the environment. And also, the local tour guides and other tourism organisation, the way how they promote the area is very sustainable” (Interview, representative of the Talamanca municipality, 2018).



#### 9.1.4 External

Lastly, motivations to engage in environmental management can be external. Environmental measures are not only the result of owners' initiatives but are also initiated by overarching government bodies. Resolving Puerto Viejo's environmental issues is a complicated endeavour, and therefore requires efforts from a broad range of actors. These actors all have their own strengths and weaknesses, and more importantly, carry a certain responsibility towards the environment. Table 9.1 roughly illustrates how the tasks in Puerto Viejo are divided.

Table 9.1 Division of tasks in Puerto Viejo

Government Unit	Tasks	Partner
Municipality	In charge of waste management	Together with SALUD
SALUD	Monitoring public health and legislating	
MINAE	Monitoring quality of forest and rivers	Together with SALUD
AYA	Monitoring quality of forest and rivers	

The Ministerio de Salud de Costa Rica (SALUD<sup>20</sup>) monitors if hotels comply with the environmental regulations. According to the law, hotels are obligated to have a solid waste plan, which contains guidelines for waste disposal, waste separation and waste recycling. For example, hotels should have at least two garbage bins; one for recyclables and one for non-recyclables. Every five years, SALUD checks if the hotels follow such rules. If not, they risk being fined, or worse, shut down. Obviously, this could explain why a large amount of the hotels is separating its waste:

“If you do not want to have any trouble with SALUD, you have to be enrolled in the recycling programme. So, they push you a little bit. They can come here with a checklist, to see if everything is conforming to the regulations” (Local hostel owner, 2018).

Despite such efforts, many owners think that the government should play a more active role within Puerto Viejo's environmental challenges. Obviously, hotels are not able to solve Puerto Viejo's environmental challenges single-handedly. Some problems are not in their power to solve, especially those that ask for a more overarching approach. In the end, the government is responsible for solving Puerto Viejo's environmental challenges, by organising an adequate system that is able to deal with garbage and waste water. However, the government does not make enough efforts in the eyes of the owners, and many feel unheard or ignored. A Swiss hotel owner tells how she has been trying to raise awareness for the wastewater problem, without success:

“I have been writing letters to SALUD for three years. But they do nothing. Only after I contacted the Defensoria de los Habitantes [organisation that protects the rights of inhabitants] they told me they would look into it. But, nothing changed. The wastewater still goes into a ditch. The government works very slow. For them, money is more important than health issues” (Swiss hotel owner, 2018).

Therefore, many owners believe that external pressures should actually be increased. In other words, the government units should do more to push hotels in the right direction. Currently, the government sets the wrong priorities, according to some owners. Many owners express how the rules do not apply to the ones with money. For instance, it is obligated by law to leave 40 percent of a property unbuilt, to leave room for septic tanks and water wells. However, when there is money involved, the municipality turn a blind eye. A French hotel owner tells a similar story about the maritime zone:

<sup>20</sup> In English: The Ministry of Health of Costa Rica.

“There needs to be more vigilance from the municipality to check where the money goes. So no more corruption. The first locals here, they build small bungalows and cabinas on the beach, but everything was cut down by the government, because it became a maritime zone. But just after this, they gave permission for big houses and hotels, because there was money involved” (French hotel owner, 2018).

## 9.2 Difficulties

Now that the motivations for hotels’ environmental management have been analysed, it is also interesting to look at the difficulties that owners encounter. As may be expected, hotel owners face certain inhibitors that complicate the implementation of environmental management.

First of all, many owners have difficulties with minimising the use of non-biodegradable products. Whether it depends on the abundance of harmful products or the shortage of eco-friendly alternatives, hotel owners find it difficult to completely shift to biodegradable products. Biodegradable products are scarce and significantly more expensive than cheaper, conventional products. An American owner explains how the lack of access to biodegradable products complicates her tasks around the hostel:

“Getting the right detergents is the worst. There is only one place where I can buy it and it is so expensive. As an alternative, I try to clean everything with hot water and vinegar. But then, the guests complain about the smell. Also, it is not that strong, so I still have to use products with all these chemicals” (American hostel owner, 2018).

Actually, most difficulties come down to challenges regarding access and costs. One of the biggest stumbling blocks for environmental management is the financial aspect. Most owners find being environmentally friendly quite expensive. This is no surprise, considering the fact that taking environmental measures always brings along extra expenses. Recycling; renewable energy; LED lights; eco-friendly products — it all costs money. A French owner describes how environmental practices swallow up a large part of her budget:

“For me, it is more expensive to buy specific products. And it is also a lot more complicated. To recycle, to call the truck, it all costs time. And also, solar panels are more economic for me, but to maintain the panels is very hard. It is difficult. You also spend three times as much on recyclable cups” (French hotel owner, 2018).

Clearly, it is very expensive to adopt environmental measures. According to an American hostel owner, who has been living in Puerto Viejo for seven years, budgetary issues are also the reason that a lot of environmental ideas and initiatives eventually strand. He explains how most hotel owners are only moderately engaged in environmental management, because of money. Basically, a lot of hotels in Puerto Viejo do not have the means to become completely sustainable. As long as there is no adequate system in place to support hotel owners, most places can only do so much.

With a system in place, he aims at both the costs and availability of certain products and services. If these were more readily available, or at least more affordable, more owners would probably be environmentally engaged. On top of that, owners need to have an appropriate budget available to take these environmental measures. Eventually, hotel owners run a business, so subsisting is more important than contributing to the environment. In the words of an American hostel owner:

“[...] But, if things [eco-friendly products] are pricey, and the product that keeps your doors open is one tenth of something that is going to be good for the environment, obviously, you are going to buy the latter. For a lot of places, it is more in the back of their head; they want to do things, but they need to do other things first. So, I think it is really more of an economical sort of thing, that is the biggest barrier for most businesses” (American hostel owner, 2018).

However, having an adequate system in place is also a matter of organisation. Many owners would be happy to dispose their wastewater in a different way, but the current system is not adapted to this yet. The same goes for the garbage pick-up and the recycling programme; hotels cannot manage their waste differently as long as they cannot count on a reliable waste management system. According to the president of CATCCAS, the garbage truck is supposed to drive a certain route every week. The municipality has three trucks to make this work. However, two of these trucks are broken, and cannot be repaired because of financial shortcomings. Therefore, the pick-up truck does not come as often as it is supposed to do, leaving many owners dissatisfied.

Moreover, to the chagrin of many owners, it is unclear who is in charge of Puerto Viejo's waste management. The municipality and Corridor Biológico are simultaneously operating a recycling programme, leading to a lot of confusion among the owners. According to many owners, the current waste management system lacks transparency and collaboration between various actors. The president of CATCCAS acknowledges these organisational barriers:

“There are difficulties in the term of organisation. We need to integrate all these institutions and community leaders to work together. However, it is very hard to put these groups together. Various actors play a role when making decisions. However, it also leads to a lot of bureaucracy, slowing down possible improvements” (President CATCCAS, 2018).

### *9.3 Perceived impact*

Hotels' environmental management can have various impacts. The main objective of environmental management is to positively affect the environment, so obviously, hotels try to have an impact on the environment. However, environmental management can also have an impact on the hotel as a business, hotels' customers and the community at large. Since these impacts are approached through the lens of hotel owners, they are described as perceived impacts.

#### *9.3.1 Environment*

Owners' opinions towards hotels' environmental impact are divided. Where some think that Puerto Viejo is showing a lot progress, others believe that the impact of environmental management is rather minimal. Mainly, owners think that it is hard to make a difference as a small hotel. Indeed, individually, hotels' environmental management will not trigger big environmental changes. However, all these efforts combined may certainly induce some favourable changes. The director of ATEC illustrates some promising developments:

“Most of the hotels now have a properly working waste disposal system. We produce a lot of trash as a region in general, but I do not see a lot of trash on the streets. So, I feel we are doing a good job, and you can see it. [...] I also see more and more hotel owners buying eco-friendly products in our store” (director of ATEC, 2018).

Most owners are a bit more sceptical. They think environmental management is more of an image thing than anything else. Environmental management is a commendable endeavour, but it does not bring about the intended changes. According to an American hostel owner, 90 percent of Puerto Viejo's hotels is doing business as usual, inhibiting any significant impact. Moreover, he explains how hotels can only impact the environment to a certain extent:

“We are using some eco-friendly products, but it is impossible to avoid all harmful substances. We are trying a lot, but there is still more that could be done. But, this is not feasible yet. So, most places do a little bit, but not enough to make an impact, especially based on the amount of people coming in and out. It is just a drop in the bucket” (American hostel owner, 2018).

One bed & breakfast owner even thinks that environmental management is unable to compensate for the impacts of tourism in general. Regardless of hotels' environmental efforts, tourism's negative effects are always going to preponderate. The owner believes that attracting tourists and contributing to the environment are hard to combine:

“I still think I [as a hotel] have a negative impact on the environment, because I bring in tourists. They use sunscreens that are waterproof and not reef safe. No matter what I do, I cannot counteract that. I can do everything to lower my footprint at the hotel, but I cannot force my own concept on these other folks” (American bed & breakfast owner, 2018).

### 9.3.2 Company

Hotel owners also recognise how environmental management can affect their hotel as a business. First of all, there is the financial aspect. As was discussed in Section 9.2, most hotel owners regard the costs of environmental management as a stumbling block. However, on the long term, environmental management may indeed facilitate hotels' maintenance. When environmental management goes hand in hand with innovation and renewal, hotels' efficiency may improve. Therefore, environmentally friendly solutions have a certain impact on how hotels' function. A local hotel owner gives an example:

“Hotels that are engaged in environmental practices probably spend less money on maintenance. We all have septic tanks here, if you do not use biodegradable toilet paper, your septic tank will clog really quickly. So, it is better for your business to go ‘green’” (Local hotel owner, 2018).

Nowadays, going ‘green’ is essential anyway. Tourists are increasingly educated on environmental issues and as a result, looking for sustainable places to stay. Moreover, in Costa Rica, economical differences between people correlate to environmental consciousness<sup>21</sup>; people who are aware of the environment, usually have more money. Therefore, environmental management enables hotels to attract a broader and more prosperous clientele. Environmental management can be deployed as a successful marketing tool, according to a German hotel owner:

“It also benefits your position in the market. Some people really look for that [environmentally friendly hotels]. Imagine, tourists may have to decide between two or three hotels when they are booking their vacation. If our hotel is environmentally friendly, and the others are not, I think it might be a reason to go to our hotel” (German hotel owner, 2018).

Lastly, because environmental practices affect hotels' daily operations, hotels' staff may also be impacted. Employees have to be taught how to properly separate waste and what specifics to pay attention to when buying detergents. Although hotel owners need to invest time and money in such trainings, eventually they will be rewarded with a more proficient staff. Multiple hotels even take environmental commitment into account when hiring staff:

“I think we do a decent enough job here. When it comes to choosing volunteers and employees we try to choose people who are environmentally sound. They interact with our guests, so I think it is important that they share our vision. I think that this benefits both the hotel and our customers” (American hotel owner, 2018).

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<sup>21</sup> It is generally believed that income positively correlates with environmental awareness (Strieder Philipssen et al., 2016; Straughan & Roberts, 1999; Zhao et al., 2014). However, this particular statement was derived from an interview with an American hostel owner.

### 9.3.3 Customers

Many owners are determined to transmit their environmental mindset to their guests. Either by telling guests not to use harmful sunscreen, or by encouraging them to visit the Ara Project; owners try to increase awareness among their guests. Therefore, environmental management also impacts hotels' customers. Through hotels' environmental management, customers are actively involved in contributing to Puerto Viejo's environment. Moreover, environmental practices can have a contagious character. A Swiss owner gives an example of

“It is only me, here. But it can work like a virus. I had a guest here from France, and he never recycled in his life. I had to explain it all to him. When he left, he told me he was also going to start recycling in his own house in France. (French hotel owner, 2018)

Although environmental management is expensive, owners do not seem to internalise these costs into higher room prices. Therefore, customers are not necessarily affected by higher prices, as a result of environmental management. To ensure this, one could analyse how hotels' prices correlate with environmental management. Unfortunately, this was not included in this research.

### 9.3.4 Community

Most owners agree upon the idea that change has to start somewhere. Of course, a single hotel's environmental efforts will not make a difference, but if everyone joins together, progress can be made. Some owners speak of the 'ripple effect'; the efforts of a single hotel may inspire surrounding hotels to do the same, like the ripples that are produced by a drop in the water. A Costa Rican hotel manager illustrates how environmental management can set a plan in motion.

“I think at least we can have a psychological impact. When you do something, and your neighbours see this, maybe they want to do it as well. And then it also effects their neighbours and the one after that. And if they hear that customers like certain hotels because they care about the environment, they are going to take care as well. I think everything starts like this” (Costa Rican hotel manager, 2018)

Therefore, environmental management has the potential to proliferate. By inspiring others, hotel owners widen the support for eco-friendly practices and increase environmental consciousness among people in Puerto Viejo. It generates a community in which people push each other to act responsibly. In a town where education on environmental issues is rather lacking, this is welcome development. In the words of a local guesthouse owner:

“Environmental management is a good thing. It has the potential to make everyone in Puerto Viejo a little bit more conscious about the environment. [...] Eventually, everybody has to go for it [going green]. It improves the lives of everybody here” (Local guesthouse owner, 2018)

## 9.4 Opportunities

Despite the difficulties that some owners are experiencing, some promising developments are in the offing. First of all, there is a plan to build a wastewater treatment plant in Puerto Viejo. The municipality is collaborating with AYA and UNOPS to realise a system that gathers and processes the town's wastewater. The system is promoted as a “wastewater treatment plant according to the best international standards”, and it is supposed to solve Puerto Viejo's problems with blackwater and greywater. Image 9.1 is a visualisation of the prospective treatment system. All buildings would be connected to a pipe system, that transports the wastewater to a treatment plant. In the treatment plant, the water undergoes three stages of purification and disinfection, before being discharged into the ocean. Once the wastewater treatment system is fully operational, the pollution of ground water and ocean water will be significantly reduced.

With this development, Puerto Viejo would take a considerable step towards solving one of its main environmental issues. Moreover, the hotel sector would directly benefit from the treatment system. Since septic tanks would be no longer necessary, the risk of well water contamination decreases. Also, hotel owners would have fewer expenses, because they no longer have to worry about the purchase and maintenance of septic tanks. Supposedly, the first constructions are scheduled to begin in 2018, and the plant will be finished in the first half of 2019. However, since developments in Puerto Viejo have a habit of progressing slowly, some owners question this time span. A local expresses her uncertainty

“Eventually they are going to build a sewer system. It is going to change a lot of things here. Supposedly it is going to start in June. Next month it is June, but I did not see any progress. So, it is ‘mañana<sup>22</sup>’. We just have to wait. (Local hotel owner, 2018).



Image 9.1 Puerto Viejo’s future wastewater treatment system. Source: UNOPS, 2018

The second opportunity concerns Puerto Viejo’s waste management. Many owners are dissatisfied with how waste management is currently organised in Puerto Viejo. The garbage truck drives by sporadically, at random times and random frequencies. Owners would like the municipality to deploy more trucks, but until recently, the municipality did not have the means to make this happen. Moreover, increasing the amount of trucks is not as straightforward as most people think. A representative of the municipality explains why:

“Everybody wants the garbage truck to come more often. Every day, if it is possible. But it has to be worthwhile. Because we have to pick up a certain amount of tonnage [of waste]. We cannot take a truck to Limón with half a cargo. Because then, we get losses” (representative of the Talamanca municipality, 2018).

Despite these concerns, the municipality is prepared to deploy two new garbage trucks. In fact, the purchasing process was set in motion three months ago, so the new trucks are expected to arrive at any moment. Once the municipality has three working garbage trucks at their disposal, the functioning of Puerto Viejo’s waste management system could significantly improve.

<sup>22</sup> ‘Mañana’ is Spanish for ‘tomorrow’. ‘Mañana, mañana’ is a popular expression among locals, which loosely translates to: ‘When the time comes’. The expression fits the laid-back mindset of people in Puerto Viejo.

Lastly, there are plans to make Puerto Viejo plastic free. The Departamento Sanidad<sup>23</sup> is working on a campaign to discourage the use of plastics among restaurants and hotels. Initially, it would be an effort that comes from the businesses themselves, supported by the local government. However, eventually, the national government needs to create laws and regulations that prohibit national and international companies from importing and producing plastic products. As for now, this is not something that can be controlled on a local level. Therefore, this project is something for the future.

### *9.5 Chapter conclusion*

This chapter demonstrated that owners have various motivations for engaging in environmental management. Most environmental efforts are the result of owners' willingness to contribute to Puerto Viejo's environment, while the limited access and high costs of eco-friendly products and services are regarded as the biggest barriers. Furthermore, most owners believe that environmental management has the power to positively impact the attitude of customers and the local community. Although environmental management is a step in the right direction, it should not be expected that environmental management is a direct solution to Puerto Viejo's environmental problems. Luckily, Puerto Viejo can look forward to some promising plans, like the development of the wastewater treatment system and the improvement of the waste management system.

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<sup>23</sup> Departamento Sanidad is a department within the municipality that is concerned with waste and health issues.

## 10. DISCUSSION AND CONCLUSION

*This chapter describes and interprets the results of this research by reviewing the most important findings in relation to the theoretical framework. Subsequently, the research process will be discussed. This chapter is concluded by general conclusion, which answers the sub questions and the research question.*

### 10.1 Discussion of findings

This research aimed to explain how the tourism sector plays a role within Puerto Viejo's environmental challenges. By focussing on the hotel sector, it was analysed how characteristics and motivations influence environmental engagement, and how environmental efforts potentially impact various dimensions of Puerto Viejo's society.

The conceptual model that was developed for this research, indicated that environmental management can be influenced by both hotels' characteristics and owners' motivations. The findings of this research demonstrate that hotels' characteristics do not explain engagement in environmental management. Therefore, the extent of environmental management among hotels is not related to a hotel's size, type, ownership and luxury. Some studies claim that hotel size positively correlates with environmental engagement. Larger hotels would have economies of scale and more resources for investing in environmental management (Andersen, 1997; Carmona-Moreno et al., 2004; Christmann; 2000; Merritt, 1998; Sharma & Vredenburg, 1998). On the other hand, some believe that the environmental engagement of small and medium-sized hotels is more substantial (Kasim, 2006; Kirk, 1995). This study does not conform these findings. Although analysis indicated that large sized hotels are slightly more engaged in environmental management, there was no significant relationship. Moreover, this research also failed to demonstrate a relationship between hotels' type, ownership and luxury. This is in accordance with Kirk (1998), who found that there is no association between hotels' characteristics and written environmental policy. This lack of relationship between characteristics and environmental management may be explained by two aspects. Firstly, the characteristics of hotels may not say much about how owners organise their businesses management. Secondly, because of the high rate of independent hotels in Puerto Viejo, owners may individually decide on how to design their environmental management. Within this decision, owners' attitude towards the environment is crucial, regardless of the size, type, luxury or ownership of their hotel. This explanation is supported by the study of Park & Kim (2014).

Owners' attitudes relate to the second influencing factor in the conceptual model — motivations. The findings of this research suggest that the motivations for environmental management mainly derive from owners' personal drivers. In other words, owners are committed to Puerto Viejo's environment, and are determined to affect it in a positive way. This result was not expected. Earlier studies reported that environmental management is mainly induced by financial (Ayuso, 2006; Carmona-Moreno et al., 2004; Kirk, 1998; Mensah, 2004; Rivera, 2002) and social (Carmona-Moreno et al., 2004; Garay & Font, 2012; Park & Kim, 2014; Porter & Van der Linde, 1995; Rivera, 2002) motivations. Although many owners acknowledged the financial and social motivations, it was not considered to be a reason for engaging in environmental management. The importance of owners' personal drivers may be explained by the general mindset in Puerto Viejo. Many owners describe how people in Puerto Viejo have always been environmentally conscious. The fact that most owners settled down a while ago, out of love for Puerto Viejo's surroundings, can explain why environmental considerations play a significant role in engaging in environmental management. Therefore, this unexpected outcome may be caused by location-specific factors. This study was conducted in Puerto Viejo, a small town in the world's number one ecotourism destination. In other destinations, motivations for environmental management may differ.

Moreover, analysis demonstrated how many owners actually perceive the financial factors to be a barrier that inhibits environmental management. In contrast with studies that show how costs do not necessarily impede environmental participation (Hassan, 2000, Judge & Douglas, 1998; Kirk 1998), this research indicates that environmental management above all, is considered expensive.



According to the owners, Puerto Viejo lacks access to affordable eco-friendly products and services. Therefore, especially on the short-term, environmental management causes financial setbacks. These setbacks can be explained by two aspects: the small-scaled character of Puerto Viejo's hotel sector and the financial limitations of hotel owners. Firstly, Puerto Viejo is a relative small town, compared to other tourism destinations. Therefore, eco-friendly products and services are not only scarce, but also significantly more expensive than conventional products and services. Secondly, among small- and medium-sized hotels, the expenses for implementing and maintaining eco-friendly solutions are widely perceived as an obstacle (Chan, 2011). In a town like Puerto Viejo, characterised by small-scale hotels, this is exactly at issue. Moreover, it is important to note that the idea of financial limitations is mainly induced by short-term thinking. On the short term, financial factors can indeed discourage environmental management, on the long term however, environmental management may reduce costs and increase efficiency. This finding is supported by Cordeiro & Sarkis (1997). Therefore, for future research, it is important to distinguish between the short-term and long-term attitude towards the costs of environmental management.

A factor that is somewhat concealed in the conceptual model, but which did emerge during data analysis, is the role of the government. In this research, governmental pressure was assumed to be an external motivation for environmental management. However, the results demonstrated that hotel owners do not feel encouraged by the government to engage in environmental management. This contrasts the findings of earlier studies, suggesting that governments pressure the hotel industry to improve its environmental performance (Knowles, 1999; Mensah, 2004; Rivera, 2002; Xu & Gursoy, 2014) and even stimulate and support hotels to engage in environmental management (Carmona-Moreno et al., 2004). Even more interestingly, many owners believe that the governmental involvement should actually increase. The current environmental legislation in Puerto Viejo is deficient, inadequate, and poorly monitored. Therefore, for a great part, environmental management is the consequence of governmental lacking. Because governmental units are incapable of optimising systems and organisations that organise environmental solutions, the tourism sector jumps in. This is supported by Carmona-Moreno et al., (2004), who suggest that environmental management is a response to lax environmental legislation. Therefore, this research emphasizes the need for an all-encompassing approach of environmental management. In the end, environmental management is a collective endeavour that requires effort of all tourism related companies, government units and the community at large (Kasim, 2006)

### *10.2 Discussion of research process*

The results of this research can only be valuable if the collected data are valid and reliable. Therefore, it is important to reflect upon the validity and reliability of the data used in this research. The research instruments that were used in this research were a valid method for data collection. Hotels' characteristics, which is factual information, was determined by surveys. Hotels environmental management was also determined by surveys and complemented by interviews. Owners' motivations were measured by interviews. This mixed methods research design maximised the validity, because it allows for the qualitative data to support the quantitative data and vice versa.

The reliability of the qualitative data is guaranteed by conducting as many surveys as possible. Since all hotels were included to partake in the survey, reliability is maximised. Guaranteeing reliability for qualitative data is more challenging, because it consists of subjective information, rather than facts. However, at a certain moment, the data collection reached a saturation point. After this point, new information no longer emerges during interviews. This indicates that the given answers were somewhat consistent among hotel owners, confirming the reliability of the interview questions. Another challenge of qualitative data collection is the issue bias. Bias can occur on both the respondent's and the researcher's end. In this research, social desirability was the biggest threat to qualitative data collection. Especially with a subject like the environment, it is possible that respondents give answers that are deemed to be socially acceptable. Of course, it is difficult to control this.

### *10.3 Suggestions for further research*

This research is conducted in Puerto Viejo, with hotel owners that all have their own perception of reality. Obviously, this study's findings cannot be generalised. Therefore, further research has to ascertain if the same results apply in other tourism destinations. Moreover, future studies may want to focus some variable that were not yet included in this study. For instance, owners' education and socio-economical background might also be indicators for high environmental performance. Future research would need to confirm this. Lastly, it might be interesting to study how owners perceive Puerto Viejo's environmental challenges once the new waste and water management systems are in place, and if this affects environmental management.

### *10.4 Conclusion*

This research examined the role of Puerto Viejo's hotel sector within preserving nature and counteracting environmental degradation. Through looking at hotel characteristics, owners' motivations and perceived impacts, this study explained hotels' engagement in environmental management. In this research, 49 hotels participated in a survey that determined hotels' size, type, luxury, ownership and environmental management. To identify owners' motivations and perceived impact, 22 interviews were conducted. The collected data was used to answer the research question below. First, the sub questions and hypotheses are addressed. Finally, the research question is answered.

What explains hotels' engagement in environmental management in Puerto Viejo?

#### 1. How did the hotel sector in Puerto Viejo evolve over the last 20 years?

Tourism in Puerto Viejo has been significantly growing over the last two decades. This is noticeable in both the amount of people who reside in Puerto Viejo and the amount of tourism related businesses. Ever since the boom phase approximately 10 years ago, the number of businesses has been increasing rapidly. Mapping showed that, currently, there are 55 hotels, 70 restaurants, 43 stores, 31 tourism services and 24 public services in Puerto Viejo. The town is expanding southwards, while the city centre becomes more crowded with buildings. Hypothesis 1, that expected an increase in the number of hotels, can therefore be accepted.

The biggest challenge for Puerto Viejo's growing tourism sector is that the systems surrounding it did not grow with it. To this day, Puerto Viejo has no adequate waste and water systems to cope with the changing amount of people and their behaviour. This gives rise to some urgent environmental challenges.

#### 2. What are the different characteristics of hotels in Puerto Viejo?

Despite the growth of the tourism sector, Puerto Viejo has been able to remain its small-scaled character. Most of the hotels have less than 50 beds. Often, these are small cabins that are merely staffed by the owner or a few employees. Furthermore, most hotels fall within the comfort category, offering 4 to 7 luxury facilities. The hotel sector is predominantly in the hands of foreigners. Hypothesis 2, that expected large hotels to be mostly foreign owned and small hotels to be mostly local owned, is therefore rejected. All size groups (small, medium and large) are largely owned by foreigners.

#### 3. To what extent are hotels in Puerto Viejo engaged in different forms of environmental management?

Puerto Viejo's residents have always been committed to the environment, but the environmental shift really started approximately five years ago, around the same time most of the environmental issues arose. However, the environmental shift was also sparked by the growing global environmental

consciousness. Currently, a lot of hotel owners try to contribute to Puerto Viejo's environment by adapting environmental practices in their business model. Especially separating waste, recycling, saving water and minimising energy use are scoring relatively high among hotels. Some practices, like using natural energy sources and minimising the use of non-biodegradable products are challenging, because the system in Puerto Viejo is not adapted to these relatively recent developments. This results in a lack of knowledge and supply of these products, and higher prices. Therefore, most hotels are moderately engaged in environmental management. Moreover, there was no relation between hotels' size and environmental management. Hypothesis 3, that expected large hotels to be more inclined to engage in environmental management than smaller hotels, is therefore rejected.

#### 4. What are the different motivations for hotel owners in Puerto Viejo to be engaged in environmental management?

The motivations for hotel owners are mostly environmental. Owners are committed to the environment and dedicated to preserving the paradise they live in. This is no surprise, since a lot of hotel owners once came here for Puerto Viejo's natural beauty. Moreover, some owners acknowledge the potential commercial benefits of environmental management. They confirm that environmental management can be a tool to attain a 'green' reputation is important. The financial aspect is more of an inhibitor than a motivation. Being engaged in environmental management can be expensive, from paying a fee for recycling, to buying more expensive biodegradable soaps and LED lights. However, some owners recognise that on the long term, investing in environmentally friendly practices may be profitable. Lastly, the external pressures mainly come from the municipality and SALUD. They have certain rules that obligate hotels to engage in environmental practices. If hotels do not comply with these rules, they risk being penalised. However, as for now, this is mainly aimed at recycling and separating waste. Many owners actually think that the government should do more to push hotels in the right direction. Hypothesis 4, that expected environmental management to be mostly influenced by financial and social motivations, is therefore rejected. Environmental management is mainly driven by owners' willingness to contribute to environmental quality.

#### 5. What are the perceived impacts of hotels' environmental management?

Owners mainly believe that the impact of environmental management concerns their customers and the community. In their eyes, the power of environmental management is that it can have a contagious effect on others. By talking with guests or local residents, owners hope to propagate environmental consciousness. Some owners even think that environmental management can cause a 'ripple effect'; by initiating eco-friendly business methods, other hotel owners may follow in their footsteps. Although most hotels owners think that Puerto Viejo's hotel sector is too small-scaled to significantly impact the environment, they do believe that environmental management is a step in the right direction.

What explains hotels' engagement in environmental management in Puerto Viejo?

To explain hotels' engagement in environmental management, both hotels' characteristics and owners' motivations were analysed. Statistical analysis concluded that there is no relation between hotels' characteristics and environmental management. Although previous studies indicated that large and luxurious hotels are more inclined to engage in environmental practices, this research demonstrated that environmental management of hotels cannot be explained by hotel size, type, luxury or ownership. More than anything, environmental management can be explained by owners' motivations and experienced barriers. Therefore, owners' personal characteristics and beliefs play an essential part in the willingness to adopt environmental practices. If they are committed to Puerto Viejo's nature, or environmentally conscious in general, it is more likely that these values are

represented in the way the hotel is operated. On the other hand, if owners are merely focused on running a business and making profits, environmental management is not their priority.

To conclude, environmental management is an example of how the tourism sector can counteract environmental challenges that are partly induced by itself. Moreover, it is an adequate initiative in tourism destinations where governmental regulations are somehow lacking. Nevertheless, for environmental management to be optimally functioning, an integral approach is necessary. Therefore, opportunities lie in optimising collaboration and communication between hotels and governments, so that existing systems can be aligned with each other.

## RECOMMENDATIONS

Based on the findings of this research, some recommendations can be made. First of all, the current systems of waste and water management need to be optimised. The new water treatment plant and the intended purchase of two new garbage trucks are a great starting point, but do not answer all of Puerto Viejo's challenges. For instance, the unregulated expansion of tourism related businesses is still causing deforestation and beach erosion. New establishments continue to be built, although it is prohibited by law to build within the maritime zone and in protected woodlands. Therefore, regulation needs to be strengthened and better monitored.

Secondly, the government should seek opportunities to stimulate this environmental management. For many owners, financial factors are the biggest inhibitor for engaging in environmental management. Especially large investments, like solar panels and double-flush toilets, are unaffordable for small business owners. Financial support and investment programmes could help small hotels to overcome financial barriers.

Lastly, improvements are needed on an educational level. Especially the older generation in Puerto Viejo is unaware of how their behaviour negatively affects the environment. Habits like burning plastic and littering are still common use among a lot of locals. To change this, it is important that future generations are taught to act more sustainable. Eventually, environmental education needs to be initiated by the government. However, events like the 'Trash Monster' by Planet Conservation and the intended environmental classes by ATEC, show that environmental education can also be organised by private initiatives.

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## APPENDICES

### Appendix 1: List of environmental policies that exist in environmentally proactive firms

1. Written environmental policy
2. Specific targets for improving environmental performance
3. Publication of an environmental (sustainability) report
4. Environmental management system
5. Environmental purchasing policy
6. Environmental training and education
7. Employee responsibility for environmental performance
8. Life cycle analysis (assessment) policy
9. Management understands sustainable development
10. Fossil fuel use reduction policy
11. Toxic chemical use reduction policy
12. Policy of reducing use of unsustainable products
13. Same environmental standards at home and abroad

Source: Ramus, 2002

Appendix 2: Characteristics of various categories of hotels

<b>Characteristic</b>	<b>Detail</b>
Number of rooms	< 30
	30 - 59
	60 - 89
	90 +
Ownership	Local owner
	Local/foreign partnership
	Foreign owner
Customers	Sun and beach
	Ecotourism
	Adventure
	Wellness (health)
	Sport
	Cultural
Category	Budget/one star
	Guest house/two star
	Three star/four star/five star

Source: Mensah, 2006

### Appendix 3: GTB's classification of hotels

#### 1) Category one (Budget/one star)

- i) **Budget:** Provides the barest minimum of furnishing with no facilities, amenities or guest services.
- ii) **One star:** Provides basic furnishing and very limited or no facilities, amenities and guest services (Hot and cold water in rooms, central heating etc.)

#### 2) Category two (Guest house/ two star)

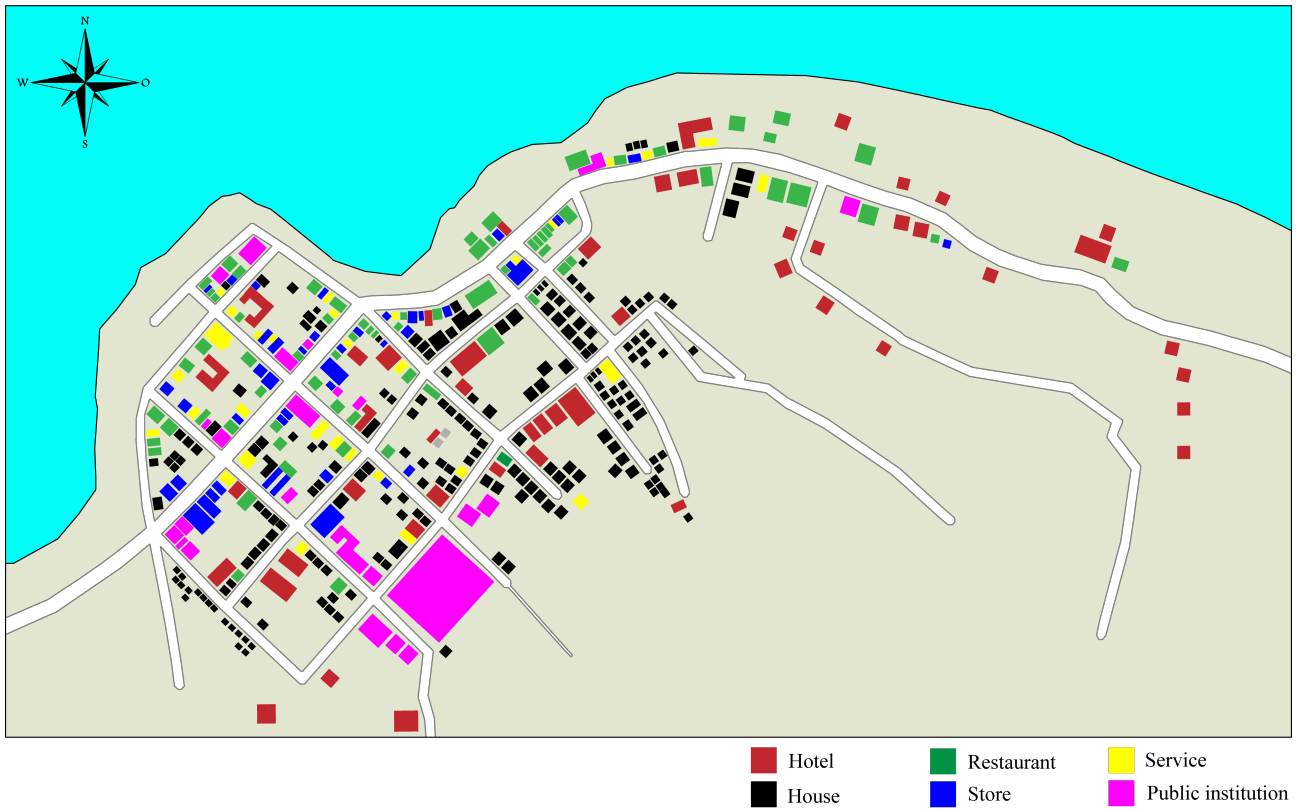
- i) **Guest house:** Provides good furnishing, facilities, amenities and guest services like a two star rated hotel but has less than eleven rooms.
- ii) **Two star:** Provides more furnishing and some facilities, amenities and guest services (Breakfast/dining room, TV lounge etc.)

#### 3) Category three (three star- five star)

- i) **Three star:** provides better quality furnishing and a more extensive range of facilities, amenities and guest services (private bath/shower, lounge area, bar, restaurant, staff assistance throughout the day etc.)
- ii) **Four star:** Provides superior quality furnishing and a complete range of facilities, amenities and guest services (all rooms with bath, direct dial telephone, radio and TV set, individual control heating and air conditioning, full room service, some shops and sports facilities etc.)
- iii) **Five star:** Provides deluxe accommodation and marked superiority in the extent and quality of facilities, amenities and guest services (minibar in rooms, 24-hour laundry service, several bars, restaurants and lounges, health club, shopping arcade etc.)

Source: Mensah, 2006

Appendix 4: Map of Puerto Viejo (2018)



Source: Fieldwork Puerto Viejo, 2018

Appendix 5: Survey

*Thank you for participating in this survey. I would like to ask you to answer the following questions about this hotel. This survey is part of my research on Puerto Viejo's hotel sector. Your answers will be processed anonymously, neither your name or the company's name will be used.*

*The survey will take approximately 3-5 minutes. Please make sure you answer all questions. There are no good or bad answers. If you have any questions during this survey, please feel free to ask them.*

*Niels van den Heuvel — International Development Studies, Utrecht University.*

1. Hotel number: \_\_\_\_\_

2. Type of accommodation:

- Hotel
- Apartment (including lodges, *casas & casitas*)
- Bed & breakfast
- Resort
- Hostel
- Other, namely:

\_\_\_\_\_

3. How many beds does this hotel count?

\_\_\_\_\_

4. How many employees work in this hotel?

\_\_\_\_\_

5. What is your function within this hotel?

\_\_\_\_\_

6. What is the nationality of the owner/owners?

\_\_\_\_\_

7. In what country does the owner/do the owners live?

\_\_\_\_\_

8. What are the main activities of this hotel's guests? Multiple answers are possible.

- Sun and beach
- Ecotourism
- Adventure
- Wellness (health)
- Sport
- Cultural

9. Which of the following services does this hotel provide? Multiple answers are possible.

- Wi-Fi
- Private showers
- Kitchen
- Hot water
- Swimming pool
- Bar
- Restaurant
- Laundry service
- TV
- Air conditioning
- Transport/airport shuttle

10. In which certification programmes are you engaged? Multiple answers are possible.

- None
- CST (Certification for Sustainable Tourism or Certificacion para la Sostenibilidad Turistica)
- Blue Flag Programme or Bandera Azul Ecológica
- Other eco-label(s), namely:

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11. To what extent is this hotel engaged in the following activities? Please check your answer.

- Minimising waste (reduce the amount of waste):

Not at all	Little	Somewhat	Very	Entirely

- Separating waste (separate plastic, paper, organic and other waste)



Not at all	Little	Somewhat	Very	Entirely

- Reusing products (using something again for its original purpose or different function).

Not at all	Little	Somewhat	Very	Entirely

- Recycling material (converting waste materials into new materials and objects)

Not at all	Little	Somewhat	Very	Entirely

- Saving water

Not at all	Little	Somewhat	Very	Entirely

- Minimising energy consumption

Not at all	Little	Somewhat	Very	Entirely

- Using natural energy sources (solar power, wind power, water power, etc.)

Not at all	Little	Somewhat	Very	Entirely

- Minimising the use of non-biodegradable materials (plastics, synthetics and tins)

Not at all	Little	Somewhat	Very	Entirely

- Promoting eco-friendly tours among customers

Not at all	Little	Somewhat	Very	Entirely

- Promoting environmental information

Not at all	Little	Somewhat	Very	Entirely

12. Does this hotel have an explicit list of environmental guidelines, noticeable for guests?

- No
- Yes

13. Does this hotel support local environmentally-friendly projects (nature conservation, preservation or restoration)?

- No
- Yes, namely:

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Lastly, I would like to do an in-depth interview with somebody of the management. Can I write down his or her contact details?

Name:

Function:

Telephone:

E-mail

## Appendix 6: Topic list

*Thank you for participating in this interview as a part of my research on Puerto Viejo's hotel sector. This interview will take approximately 60 minutes. The interview will be recorded, transcribed and analysed by me. This interview is for research objectives only and your answers are solely accessible for me and my supervisor. There are no good or bad answers. You can stop this interview at any time. Do you agree with this?*

*Niels van den Heuvel — International Development Studies, Utrecht University.*

Name \_\_\_\_\_ Signature \_\_\_\_\_

### **Personal information**

1. What is your name?
2. What is your age?
3. What is your nationality?
4. What is your highest level of education?
5. How long have you been living in Puerto Viejo?
6. How long have you been the owner of this hotel?

### **Evolution of Puerto Viejo**

7. How has Puerto Viejo changed since you have been living here?
8. Is tourism in Puerto Viejo now, different from how it was back then?
9. What are the biggest differences?
10. How about the amount of hotels, restaurants and other tourism related services?
11. How important is tourism for Puerto Viejo?

### **Puerto Viejo's challenges**

12. What are Puerto Viejo's biggest challenges?
13. What challenges do you experience as an owner?
14. What are Puerto Viejo's biggest environmental challenges?
15. How can these challenges can be tackled?
16. Why is it important to tackle these challenges?
17. What role does tourism play within these challenges?

### **Responsibility**

18. Who is responsible to solve Puerto Viejo's environmental challenges?
19. How does the national/local government help?
20. What responsibility does the hotel sector have?
21. Do you feel, as an owner, that you should do something?

### **Certification programmes**

22. Are you familiar with the Certification for Sustainable Tourism (CST)?
23. What are the requirements to be involved in CST?
24. What are your experiences with CST?
25. Is it difficult to get involved with CST?

### **Environmental management**

26. How do you, as a hotel, contribute to solving Puerto Viejo's environmental challenges?

### **Motivations and difficulties**

27. From the survey it became clear you do a lot to contribute to Puerto Viejo's environment. Why do you do this?

28. What are your reasons to adapt these measures/policies?
29. Is it difficult to be sustainable as a hotel?
30. What difficulties do you encounter in adapting these measurements/policies?

**Perceived impacts**

31. What is the impact of these measurements?
  32. Do these measurements impact your company?
  33. Do these measurements impact the local community?
  34. Do these measurements impact the customers?
  35. Do these measurements impact the environment?
- 
36. Do you have any additional comments or questions?

Appendix 7: Map of Puerto Viejo (2001)



Source: Green Coast, 2001

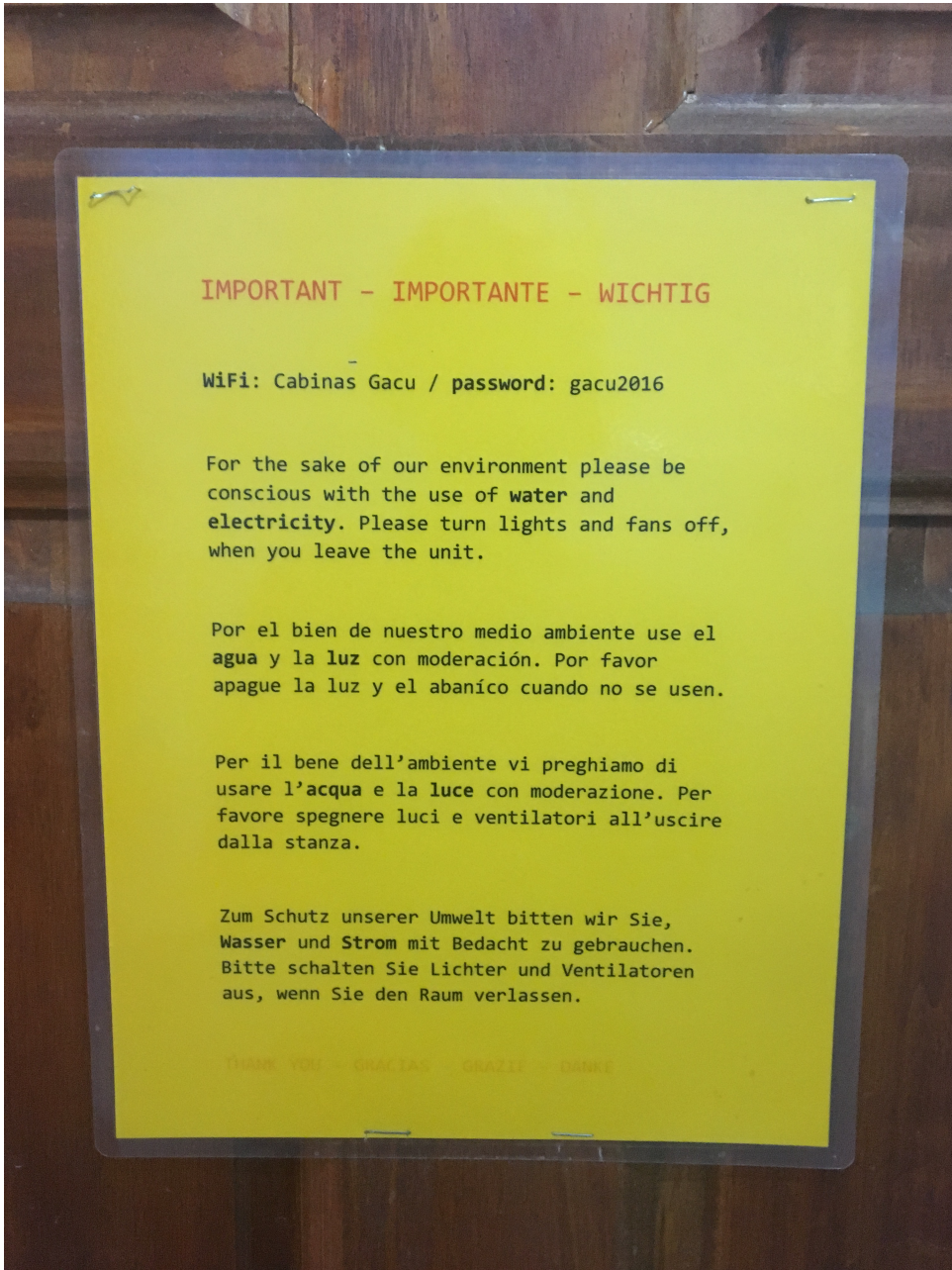


Appendix 8: Map of Puerto Viejo (2008)



Source: Costa Rica Guide, 2008

Appendix 9: Note on the inside of a hotel room



Source: Fieldwork Puerto Viejo, 2018