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Seattle University

**Entry Point for Assessing Sustainability in Ecotourism:
Insights from Costa Rica**

A Thesis Submitted to
The Faculty of the College of Arts and Sciences
In Candidacy for the Degree of
Departmental Honors in International Studies

By
Monica McKeown

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This honors thesis by Monica McKeown is approved

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Entry Point for Assessing Sustainability in Ecotourism:

Insights from Costa Rica

Abstract: Tourism is a rapidly growing industry and the prospect of development in small communities from opening ecotourism enterprises is attractive to many. Increasingly, tourists are interested in visiting places for their natural beauty and adventure opportunities. Frameworks of assessment for the sustainability of ecotourism projects exist, but there is an absence of broader criteria meant to act as an entry point into the on-going process of sustainability assessment. In order for assessments to be more useful and easily conducted, there is a need for a new set of sustainability indicators. Because the ecotourism industry is growing rapidly, assessments are important in order to keep the sustainability goals of ecotourism from being overlooked. This paper defines ecotourism and sustainability and reviews the literature on sustainability indicators recommended for assessing ecotourism. A new set of assessment criteria is proposed for implementation in systematic evaluations of ecotourism for large-scale use as well as a first step in beginning assessments. An in-depth evaluation of the assessment tools used to evaluate ecotourism in Costa Rica is presented in a meta-analysis of 8 case studies. Sustainability indicators in the literature can be overly complex, so this proposed set of criteria is more user-friendly and can be applied to a broad industry. Because it can be applied more widely, it has the potential to have a greater impact on global progress towards sustainability in the ecotourism industry.

Keywords: assessment criteria; Costa Rica; ecotourism; sustainability assessment

1. Introduction

Tourism is the largest and most rapidly growing industry worldwide with over 7 trillion dollars in revenue annually and a growth rate of around 25 percent per year, and ecotourism is expanding most rapidly within that sector (Cox, 2006; Jones, 2005; Thomas, Williams, & Trotz, 2014; Van Tassell & Daniel, 2006). Ecotourism draws on people's desire for adventure and to be environmentally friendly. Activities such as hiking to a waterfall, birdwatching, visiting indigenous lands, and kayaking are all examples of ecotourism. There has been an increasing number of people that are interested in the excitement of exploring nature and this type of adventure travel has become highly marketable with the addition of conservation drawing in more clients as well (Tsaur, Lin, & Lin, 2006; Van Tassell & Daniel, 2006). In comparison to other types of tourism, this new wave of ecotourism is supposed to provide more benefits for local communities and their livelihoods, reduce leakage of profits out of the country, and promote sustainable development and conservation (Jones, 2005; Lee & Jan, 2018). This has

represented a shift from the goal being tourism development to a goal of wellbeing in the host community (Gary & Campbell, 2009). Ecotourism is important because it is, in theory, a way to protect natural ecosystems while cultivating environmental appreciation and education in the local communities as well as in the tourists who come to enjoy the natural beauty. Ecotourism locations are now featured in travel guides like large cities have always been, and the national identity in places like Costa Rica, Peru, Nepal, and many more has been shaped by the environmental appeal (Cox, 2006).

Sustainability indicators proposed in the literature as tools for assessing ecotourism are excellent and thorough forms of assessment, but a starting point that is easy to access, implement, and monitor is missing. Choi (2006) as well as Tsaui et al. (2006) emphasized that a common framework for assessment does not exist and neither does a shared management tool. Choi's proposed checklist indicators are meant to assist local communities in examining the current condition of their resources but they say that the support of both national and international government is crucial because local governments often do not have enough resources for success (Choi, 2006). Thomas et al. (2014) states that for sustainability indicators to be successful they need to be technically and economically feasible in addition to being easy to understand. Also mentioned in Thomas et al.'s (2014) study was the possibility of adding assessment of political cohesion to future studies, which this paper includes as an important aspect in the social indicators. Tsaui et al. (2006) states that additional measurements would be needed for locations different from the type in their case study.

Because ecotourism is supposed to be a more sustainable form of nature-based tourism, it must be assessed for its sustainability success. Frameworks of assessment for the sustainability of ecotourism projects exist, but there is an absence of broader criteria able to systematically assess a wider region or act as an entry point into the assessment process. The existing lists of sustainability indicators are far too complex and not applicable to a wide array of ecotourism businesses. So that assessments can be more easily conducted there is a need for

a new set of sustainability indicators. Since the ecotourism industry is growing rapidly, simple assessment tools that can be applied widely are important in order to keep the sustainability goals of ecotourism from being overlooked.

This paper reviews the literature on ecotourism, sustainability, and indicators of sustainability while providing definitions of said topics and then propose a new set of simple criteria (see Table 1) for systematically assessing the sustainability of ecotourism in an entire region and for use as an entry point into the on-going assessment process. This new set of criteria is based on an analysis of sustainability indicators in the literature and the examination of 8 ecotourism case studies from Costa Rica (see Table 2). Finally, this paper discusses the application of the proposed assessment criteria using the example of three case studies (see Table 3).

2. Background Information

2.1 Sustainability

Sustainability is a commonly used term that has a widely agreed upon definition, but there is variance in the way that the definition is implemented. Ko (2005) spoke of sustainability as a fluid term that signifies something happening or not. They also suggested that because there is such a wide range of factors within ecotourism practices, it could be impractical if not dangerous to use only one definition of sustainability (Ko, 2005). This is where indicators of sustainability are used to create specialized ways of defining whether the broad definition of sustainability is being met for individual locations. Within the fundamentals of sustainability, a consensus has mostly been reached in defining the term. The World Commission on Environmental Development defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Choi, 2006). Choi (2006) in agreement with the United Nations (2002, Chapter IV, Section D) suggested that cultural and natural resource degradation and depletion should be

subtracted from GDP because they are typically taken for granted at the expense of economic growth (Choi, 2006). Similarly, Tsaur, Lin and Lin (2006) proposed that complete sustainable development should consider the economic as well as environmental and social aspects of development with the objective to create a healthy balance where all three are preserved.

2.2 Ecotourism

With the rise of ecotourism as a sector of the massive tourism industry, defining what constitutes ecotourism is important. There is already an extensive amount of literature suggesting assessment frameworks and evaluating case studies related to the sustainable development of tourist locations and most have defined what elements were used in their assessment of ecotourism. One of the most widely accepted definitions of ecotourism, as defined by the World Conservation Union's (IUCN) Commission on National Parks and Protected Areas, is:

“Environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features – both past and present) that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local populations.” (Choi, 2006; Jones, 2005; Kiss, 2004; Lee & Jan, 2018; quote from Thomas et al., 2014; Tsaur et al., 2006)

Ecotourism is popular as a way of supporting the local community and biodiversity conservation especially in developing countries (Kiss, 2004; Lee & Jan, 2018; Tsaur et al., 2006).

Fundamentally, ecotourism has three elements: environmental, economic, and social sustainability (Tsaur et al., 2006). Social sustainability applies to the livelihoods of the local people and the benefits they draw from participation in creating ecotourism enterprises (Kiss, 2004; Thomas et al., 2014). In order to apply this definition of ecotourism to an activity, all the community and economic benefits have to be continuous with environmental protection and low impact on the ecosystem (Thomas et al., 2014).

2.3 Components of Sustainability in Ecotourism

Buckley (2012) suggested that the basic premise of defining ecotourism relies on the literature of sustainability rather than that of tourism because it applies the key components of sustainability to tourism. The three elements mentioned above in the definition of ecotourism are revisited in this section to address their relationship to the sustainability of ecotourism. First, the environmental sustainability of ecotourism lies in the ability to recognize that natural resources and the environment are finite and must be protected in order for future generations to enjoy the benefits they provide us (Choi, 2006). Ecotourism is used as a method of conservation and sustainable development because the industry would not be able to exist without the continued ability of tourists to see and experience the natural beauty that the world provides (Tsaor et al., 2006). Second, the economic feasibility of an ecotourism operation must be realized, because tourism at its base is an economic activity (Choi, 2006). In order for the economic sustainability to be in line with the definition of ecotourism there must be an emphasis on distribution of benefits throughout the local community as well as taking into consideration the limits of the destination environment (Choi, 2006). Third, in order to be socially sustainable, ecotourism enterprises must benefit local community and respect local cultures (Choi, 2006). Fostering pride and cohesiveness within the community as well as designating all leadership roles and decision-making processes to the local community helps the people take control of the success of an ecotourism enterprise through personal connection to the benefits of preserving the environment (Choi, 2006).

With each tourist destination, there will be differences in the balancing point between resource preservation and development, so Tsaor et al. (2006) suggested that different sustainability criteria are needed to assess different locations. Choi (2006) proposed that legislative reform should help guarantee more responsible corporate behavior, a point not commonly made in ecotourism literature. Ecotourism has been found to reduce threats to

biodiversity by limiting the expansion of agriculture, the unsustainable harvesting of wild plants and animals, and the killing of wildlife that threaten crops or livestock (Kiss, 2004). In a successful ecotourism venture, these environmental benefits are often synchronous with the economic benefits. There is an incentive of conservation built into ecotourism because of the need for natural landscapes and biodiversity to attract tourists who in turn fuel the local economy (Kiss, 2004). Ecotourism provides the economic alternative to the environmentally destructive uses of land such as in agriculture and livestock production (Kiss, 2004).

There is some controversy over the effectiveness of ecotourism on the global scale. Tsaur et al. (2006) claimed that many ecotourism destinations are labeled as such but are not actually practicing conservation because they are more focused on profit and use the ecotourism brand just to attract tourists. Tsaur et al. (2006) argued that the wide use of objective indicators can be misleading because when measuring quality of life there needs to be more qualitative assessment. Using qualitative indicators does not detract from the utility of such measurements, but rather gives a broader picture to examine. This matter of assessment in ecotourism leads to the question of how it is typically evaluated and what are important indicators of sustainability.

3. Frameworks of Assessment: Sustainability Indicators

There needs to be a framework for assessing sustainability within ecotourism. Numerous indicators have been identified as ways of informative measurement to assess and monitor the sustainable development or progress towards those goals (Choi, 2006; Thomas et al., 2014; Tsaur et al., 2006). Thomas, Williams, and Trotz (2014) suggested that indicators must be economically and technically feasible to measure as well as easy to understand or else they lose their effectiveness. Thomas et al. (2014) claimed that the sustainability of ecotourism can be measured with three core pillars: environmental, societal, and economic (the same three aspects mentioned in previous sections). Similar dimensions are used in Choi's (2006) study.

According to Choi (2006), sustainability measurement systems should be treated differently from how mass tourism is typically evaluated in a quantitative assessment of economics and growth. Instead the sustainability assessment of ecotourism activities should be measured through a qualitative approach in order to make improvements (Choi, 2006). Using indicators appears to be a quantitative form of measurement in the overall scheme, but the way that each indicator is individually assessed can be done in a qualitative fashion. Additionally, there needs to be structure and process in the assessment of ecotourism so that the long-term sustainability of the location is ensured (Choi, 2006). Thomas et al. (2014) provided a list of benefits resulting from good indicators. These benefits include, but are not limited to, lower risks and costs through better planning, timely identification of impacts and ability to take early corrective action, measurements of performance outcomes, more public accountability, and overall improvement through constant monitoring (Thomas et al., 2014).

There are many similarities in the extensive lists that Choi (2006), Thomas et al. (2014), and Tsaur et al. (2006) have each designed with indicators relevant to measuring sustainability in ecotourism. These three lists were chosen as a representation of the literature on sustainability indicators, and analysis of these specific studies is representative of the broader literature available on specific sustainability indicators. Many lists of assessment criteria are complex and are not applicable to a wide range of ecotourism projects. These three studies, Choi (2006), Thomas et al. (2014), and Tsaur et al. (2006), all have themes in the three pillars: economy, environment, and community. Choi (2006) has more emphasis on local policy and regulation such as land zoning and waste management policies whereas Tsaur et al. (2006) has more focus on visitor experience such as “satisfying interpreter service” and “providing excellent natural and humanistic experiences” which is not as important in the other two lists of indicators. Thomas et al. (2014) uses indicators relating to waste management that neither of the others specify such as “energy consumption/demand”. Within the definitions of ecotourism and sustainability the theoretical meanings are the same but how they are put into practice is where

it diverges. Applying the concepts can be done in numerous ways, and the variance in indicators described by Choi (2006), Thomas et al. (2014), and Tsaur et al. (2006) shows what they believe are most important measurements of achieving the same overall goal of creating sustainable tourism.

The literature on sustainability indicators is missing an important aspect of functionality. These long lists of indicators previously discussed are thorough but not applicable to a broader area or systematic review of a country's ecotourism industry because of their complexity and specificity. They all have upwards of fifteen different indicators, and some, such as "air quality index" (Choi, 2006) and "destroying public security" (Tsaur et al., 2006) are irrelevant to small communities just beginning ecotourism enterprises. The following proposed set of sustainability indicators is meant to fill this gap and be flexible so that it can be applied to a wider range of ecotourism ventures and help start the process of assessing sustainability at a more accessible point.

Based off the three sets of sustainability indicators from Choi (2006), Thomas et al. (2014), and Tsaur et al. (2006), that are representative of other lists of sustainability indicators in the literature, and 8 case studies of ecotourism projects in Costa Rica (see Table 2 for summary), I have created a simplified list of sustainability assessment criteria. This is meant for use as the first step in getting an assessment started, providing access for communities to be able to begin the on-going assessment process with a simple assessment that covers the most important aspects of sustainability in ecotourism. Other, more extensive assessment measures are still important for furthering assessments.

The following list has been synthesized from common indicators in Choi (2006), Thomas et al. (2014), and Tsaur et al. (2006) as well as key findings in the 8 case studies. I propose the use of the following simplified assessment measures in Table 1.

Table 1: Proposed assessment criteria

Economic	Diversity in economic enterprises
	Local employment and revenues kept in local community
Social	Community communication and cohesion
	Training and educational opportunities for locals
Environmental	Long-term growth plan for waste and carrying capacity
	Environmental appreciation and consciousness in locals and visitors

4. Research Design

The literature shows a gap in tools for beginning the sustainability assessment process. This paper proposes a set of indicators based off analysis of those in research from Choi (2006), Thomas et al. (2014), and Tsaur et al. (2006) to serve as a large-scale framework for sustainability assessment that can be used as an entry point for evaluation of ecotourism projects. Costa Rica has a broad array of case studies featured in the literature on ecotourism and is a prime example to study the use of indicators as an assessment tool for ecotourism in Costa Rica as a whole country. It has been understood through studies by Choi (2006), Thomas et al. (2014), and Tsaur et al. (2006) that indicators are important to sustainability, so assessing the ecotourism in Costa Rica to see which indicators are being used and which are relevant in assessments is important in the process of creating a new framework of indicators that is standardized and easy to implement.

This paper specifically looks at 8 case studies in the literature on ecotourism in Costa Rica (Cusack & Dixon, 2008; Driscoll, Hunt, Honey & Durham, 2011; Gary & Campbell, 2009; Howitt & Mason, 2018; Matarrita-Cascante, Brennan, & Luloff, 2010; Sanchez, 2018; Stem et al., 2003 & Stem, Lassoie, Lee, & Deshler, 2003; Weinberg, Bellows & Ekster, 2002) and examines the types of assessments being used in each study. The 8 case studies were selected through key word searches on Google Scholar and Academic Search Complete (EBSCO). Key words used were 'ecotourism', 'sustainability', 'assessment', and 'Costa Rica'.

The 8 were selected because they each have a significant assessment of an ecotourism enterprise, though not all of the case studies represent the entire research paper.

Important assessment criteria were synthesized from these 8 case studies with consideration of the indicators proposed by Choi (2006), Thomas et al. (2014), and Tsaur et al. (2006) to create a large-scale assessment framework. The case studies were important to the understanding of how ecotourism in Costa Rica as a whole has been assessed and were used in this research in order to perform a meta-analysis of ecotourism assessment in Costa Rica. Using the information gained from this analysis as well as the current literature available on indicators of sustainability in ecotourism, a new set of assessment criteria is proposed to be used as an entry point into the assessment process by way of being user-friendly and applicable to a wide range of ecotourism enterprises.

The 8 case studies were examined for their use of the proposed assessment criteria (Table 1). Depending on the extent to which each proposed indicator was assessed, they were marked in three categories: sufficiently mentions assessment of sustainability indicator, mentions to some extent, and does not mention. The category for sufficiently mentioning the assessment of an indicator was determined by whether a case study gave information directly about the proposed indicator. When a case study mentioned something similar to the indicator but not quite the same, a description of the similar assessment was given. When a case study did not mention anything similar to the proposed indicator, that was noted. After each proposed indicator was assessed for each case study, the case studies were divided into three categories: high, medium, and low congruence with the proposed assessment indicators. 'High congruence' means that all the indicators were mentioned at least to some extent with at least three sufficiently mentioning the indicator. 'Medium congruence' has fewer than three sufficiently mentioned or two or fewer that are not mentioned at all. 'Low congruence' has more than two indicators that are not mentioned at all in the assessment.

5. Area Context

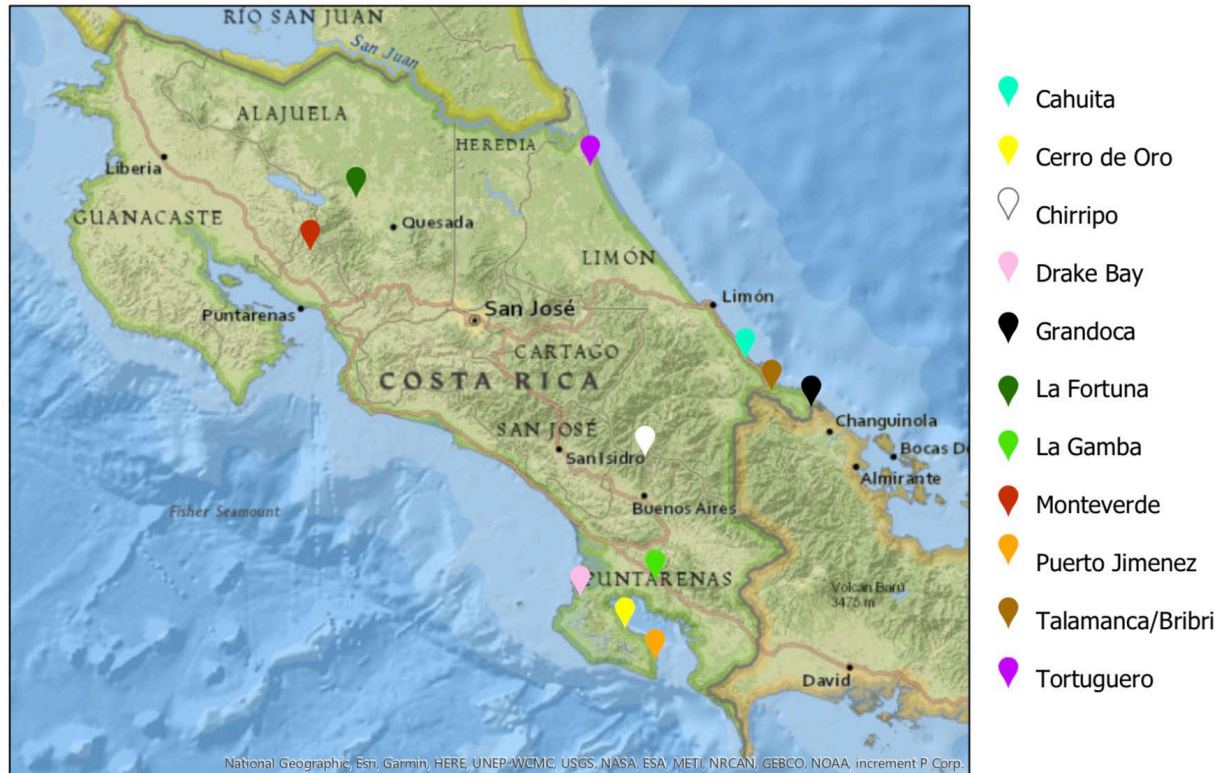
5.1 Costa Rica

Costa Rica is a hotspot for ecotourism and has been a leading force in the movement to protect the environment through tourism (Rodriguez, 2016). In 1992, Costa Rica was named “the number one ecotourism destination in the world” by the U.S. Travel Society and was receiving more than 1 million tourists by 2000, a significant number of visitors to a country of only 4 million people (Sanchez, 2018). Currently, Costa Rica receives more than 2 million tourists annually, and the number is constantly growing (ICT, n.d.) Costa Rica has the most stable government and the highest standard of living in Latin America, contributing to the appeal to tourists (Van Tassell & Daniel, 2006). In this biologically diverse country, there are lots of opportunities for nature-based tourism. Costa Rica makes up only 0.5 percent of the world’s land area, roughly the size of West Virginia, but boasts more than 5 percent of the world’s biodiversity, making it the area with the highest concentration of biodiversity on the planet (Rodriguez, 2016; Van Tassell & Daniel, 2006). There are a wide range of ecosystems throughout the country with temperatures ranging from 30 degrees Celsius in tropical forests to places in the Talamanca mountain range that are freezing (Sanchez, 2018).

Recent in Costa Rica’s history, there was a significant loss of forested area because of unfortunate rural development policies, but due to innovative strategies, the country was able to stop deforestation and increase forest cover again (Rodriguez, 2016). Now, Costa Rica’s US \$2.5-billion ecotourism industry relies on the biodiversity and protected areas all around the country (Rodriguez, 2016). With the increase of tourism, there has been an increase in consciousness around protecting the environment (Mok, 2005). It was not a quick process to convert the economy to what it is now, but over more than 25 years of hard work, Costa Rica has tripled its GDP while also doubling the size of its forests (Rodriguez, 2012; Rodriguez, 2016). Some of the strategies that have been used in Costa Rica for conservation have been “public protected areas management, designation of private conservation areas, reforestation

programs, watershed protection, scientific research, and standards of environmental sustainable performance applied to the hotel industry” (Mok, 2005; quote from Sanchez, 2018). One of the successful programs for reforestation and conservation on private land is the financial incentive from the Payment for Environmental Services (PES) program established in 1996 (Howitt & Mason, 2018). The natural wonders of Costa Rica have become essential to the economy, bringing in more money since the early 1990s through ecotourism than through the top crop exports (bananas, pineapple, and coffee) (Rodriguez, 2016; Sanchez, 2018; Van Tassell & Daniel, 2006). Sixty percent of tourists visiting Costa Rica were driven to go there because of the protected areas, ecotourism, and nature-based attractions (Sanchez, 2018). Because of Costa Rica’s prominence and success in the ecotourism industry it is a valuable country to use to assess different case studies of how indicators of sustainability in ecotourism have been utilized in the assessment of ecotourism ventures.

Figure 1. Map of Costa Rica with ecotourism case study locations



5.2 Benefits and Drawbacks of Ecotourism in Costa Rica

Ecotourism provides the opportunity for communities to offer traditional handicrafts and cultural tradition demonstrations to outsiders which can be beneficial for both the tourists cultural understanding and for the local peoples' social bond (Sanchez, 2018). In Sanchez's study (2018) on the Caribbean coast, it was found that ecotourism has helped revive social bonds and culture in the indigenous Bribri populations because more community members are able to make a living locally rather than having to emigrate to find work elsewhere like has happened in the past.

One criticism of ecotourism as a sustainable community development tool is the process that occurs of commodification of nature and local culture for the consumption of tourists (Gary & Campbell, 2009). Communities usually have the ability to enter into the ecotourism business if they wish, but they are not forced into it. It could be considered economic force if it is the only

available option for an income, but they are choosing to incorporate ecotourism into their livelihood, so this criticism is more relevant to foreign enterprises that develop tourism outside of their own community. In a study done by Stem et al. (2003), most respondents did not view ecotourism on the Osa Peninsula as the most important factor in environmental conservation. Rather than being an almost instant influence like new legal restrictions, changes in conservation practices stemming from ecotourism take longer to emerge in society because they are based off shifts in values and attitudes (Stem et al., 2003).

Nevertheless, in Matarrita-Cascante, Brennan, and Luloff's study (2010), they found that respondents in La Fortuna claimed to have had positive changes in their environmental attitudes since the rise of tourism, driven by the visitors' interest in their home environment and by learning from them about the uniqueness of the area. A result of this enhanced appreciation for the environment is an increase in protection for the natural beauty, which in turn propels the economic benefits of tourism by creating an environment that even more ecotourists want to visit (Matarrita-Cascante, Brennan, & Luloff, 2010). Similar results are mentioned in other case studies in Cost Rica (Cusack & Dixon, 2008; Howitt & Mason, 2018; Stem et al., 2003).

Because tourism is seasonal, with many people coming during summer vacation or other holidays, there is the potential for problems to arise from the inconsistencies in revenue during the entire year (Mok, 2005). A similar concern also appears in Cusack and Dixon's study (2008) where they noted the potential of economic dependence on ecotourism in small rural communities, compromising economic sustainability because of the fluctuating nature of tourism. With the increasing number of tourists visiting Costa Rica, there is concern for the environmental sustainability of ecotourism ventures because of lacking carrying capacity regulation (Sanchez, 2018; Van Tassell & Daniel, 2006). When there is potential profit from more visitors, carrying capacity is often overlooked (Van Tassell & Daniel, 2006).

6. Results: Assessing Ecotourism

6.1 Analysis of Ecotourism in Costa Rica

Many different indicators of sustainability are used in the 8 Costa Rican case studies analyzed here. Most address economics, local employment, and environmental impact, the three pillars of ecotourism, but there is little use of indicator frameworks as proposed by Choi (2006), Thomas et al. (2014), or Tsaur et al. (2006). This section will give a summary of the 8 case studies used in analysis (Table 2) and further explain the selection of three as examples that use the proposed assessment criteria in Table 1.

Table 2. Summary of the 8 case studies analyzed in this paper

	Location	Authors of Case Study Report	Assessment Methods and Categories
1	Talamanca – indigenous Bribri community	Cusack & Dixon, 2008	Interviews and observations. Sustainability indicators in three categories: community organization, community & environment, and political.
2	Osa Peninsula – Drake Bay and Puerto Jiménez	Driscoll, Hunt, Honey & Durham, 2011	Interviews with ecolodge employees and owners, tourists, and residents. Key findings in interviewee perceptions presented in 7 categories.
3	Grandoca	Gary & Campbell, 2009	Interviews with NGO staff, local hosts, and ecotourist volunteers. Comparison of aesthetic, economic, and ethical values between interviewees.

4	Pérez Zeledón, Chirripó	Howitt & Mason, 2018	Surveys, interviews, and observation. Perspectives of sustainability, ecotourism, and agricultural production.
5	La Fortuna	Matarrita-Cascante, Brennan, & Luloff, 2010	Interviews with key informants in the community and observations. Table of sustainable practices achieved in three categories: economic, social, and environmental.
6	3 Caribbean locations – Tortuguero, Cahuita, Yorkin (Bribri community)	Sanchez, 2018	Interviews with 3 individuals, one from each location. Assessment of pros and cons in each location with no specific categories.
7	3 Osa Peninsula locations – La Gamba, Drake Bay, Cerro de Oro	Stem et al., 2003 & Stem, Lassoie, Lee, & Deshler, 2003	Interviews and surveys with residents and direct observation. Effects on conservation and community development.
8	Monteverde	Weinberg, Bellows & Ekster, 2002	Interviews with owners/managers, workers, government officials, property owners, and community members. Ecological, economic, and social criteria for successful ecotourism.

Different types of ecotourism assessments in Costa Rica (see Table 2) include, providing a list of sustainable practices, using sustainability indicators, analyzing the perceptions

of residents via interviews, discussing the pros and cons, and comparing sites to similar rural areas without ecotourism. All of the 8 case studies used interviews as a form of collecting data, some with a wide variety of respondents including visiting tourists and locals who were not working in the ecotourism business, and some with just a select few interviewees.

From the La Fortuna case study (Matarrita-Cascante et al., 2010) it is evident that fostering community agency is a notable method of building the foundation for successful community communication and action. Environmental sustainability came after the initial economic development of the area and was able to progress out of the economic success of La Fortuna. This shows that sustainability is not always a linear process and that goals should be worked towards even if other steps are needed before focus can be placed on conservation.

All interviewees in Grandoca recognized that tourists bring economic benefits to the area, but some respondents perceived the entire motivation behind the ecotourism enterprise to be based on the revenue generated by the project, not on the desire for environmental preservation (Gary & Campbell, 2009). Similarly, in other places tourism is linked to conservation only because of the economic benefits. In Pérez Zeledón, many men who transitioned from working in agriculture to being mountain guides saw the tourism work as a better option because they could earn significantly more money, not because they were interested in environmental preservation (Howitt & Mason, 2018).

All of the case studies mentioned the employment of locals in the analysis. In Grandoca, most of the staff and hosts are from the local community while park guides are from other villages in Costa Rica (Gary & Campbell, 2009). On the Osa Peninsula there is a higher rate of employment of locals in the tourism industry in comparison to non-tourism jobs (Driscoll et al., 2011). Locals own the majority of ecotourism businesses in La Fortuna as well (Matarrita-Cascante et al., 2010). In Talamanca, an organization called ANAI is largely responsible for helping to promote sustainability in the ecotourism businesses in the region (Cusack & Dixon, 2008). This organization is able to facilitate connections between other local NGOs and

community members as well as developing training and educational programs for locals involved in ecotourism projects (Cusack & Dixon, 2008). This case in Talamanca shows a connection between a larger regional NGO and the local communities working together for sustainability promotion through ecotourism.

Environmental appreciation and conservation grew in most of the case study communities, but the extent of conservation varied. In Pérez Zeledón it was noted that environmental practices such as recycling, composting, and greywater management were taking place in hotels and restaurants, but not in the near-by villages (Howitt & Mason, 2018). Many of the case study locations have experienced a shift from agriculture to ecotourism. With this shift in income, more and more natural areas were able to reforest when not being cleared for agricultural purposes and when the incentive of providing areas of natural beauty for tourists was present.

When reviewing the case studies that did not implement detailed sustainability indicators in their assessment, there is not always a specific mention of each sustainability area: economic, social, environmental. In these cases, it is hard to be sure if the aspects not mentioned in the report were indeed assessed and not found to be significant or if they were not part of the assessment. Three case studies (La Fortuna, Pérez Zeledón, Chirripó, and Talamanca – indigenous Bribri community) displayed the highest congruency between their assessment and the indicators in the proposed assessment criteria (Table 1). They are further discussed in in the next section (6.2) as examples of how to apply the proposed assessment criteria.

6.2 Applying Proposed Assessment Criteria

The proposed set of assessment criteria (Table 1) is intended for initial evaluation work to give sustainability access to all ecotourism operators. Extensive lists of indicators already exist, but those lists are not easily applicable to a wide range of ecotourism enterprises and assessment ability levels. This assessment plan can be used as the first tool to get a process of

assessing sustainability practices started. The proposed assessment criteria (Table 1) is more approachable and practical due to it being simplified from the sustainability indicators previously discussed from Choi (2006), Thomas et al. (2014), and Tsaour et al. (2006). Because of its user-friendliness, it can be more wide-spread and have a greater impact on global progress towards sustainability in the ecotourism industry.

The proposed set of sustainability indicators are not able to be quantified in numbers, but rather need a qualitative approach. Multicriteria analysis using indicators in economics, opinions from locals and tourists, and ecosystem analysis are all options that could be used for the assessment of each criteria. Similar to the Delphi technique used in Tsaour et al.'s (2006) selection of sustainability indicators, a consensus of multiple people could be used in a similar fashion where community members are the experts on their enterprise. "The Delphi technique is a unique method of eliciting and refining group judgment based on the rationale that a group of experts is better than (one) expert when exact knowledge is not available" (Tsaour et al., 2006). This is a subjective form of measurement, but by using the input from many people, the outcome should be less biased. The World Tourism Organization stated that subjective sustainability indicators that are not quantifiable should not be overlooked and still hold significant information in the assessment of sustainability in tourism (Tsaour et al., 2006).

After reviewing the 8 case studies in the development of assessment criteria for an entry point into the on-going assessment process, it is evident that three show assessment (to some degree) of all of the proposed assessment criteria from Table 1. Through these three 'high congruence' case studies (see Table 3), examples of the assessment of the proposed criteria can be examined. Table 3 displays the three case studies and gives a brief explanation for the indicators that are only partially assessed using ideas similar to the proposed criteria. The checks indicate the criteria for which the case studies mention assessment sufficiently similar to the proposed criteria. Table 4 shows the rest of the case studies (yellow for 'medium

congruence' and red for 'low congruence'), using an X to show when the proposed assessment criteria was not mentioned at all.

In all the case studies, social factors and long-term growth plans were not assessed as frequently as environmental appreciation and economic aspects. Six of the 8 case studies mentioned assessment of environmental appreciation and consciousness in locals and visitors sufficiently and the other two mentioned similar themes. None of the case studies assessed both of the social sustainability indicators, and only half assessed just one. This trend shows that there is a lack in social sustainability assessment, one of the three pillars of sustainability in ecotourism. Without assessment in all three areas (economic, social, and environmental), there is not a complete picture of the sustainability of an enterprise.

Table 3. Proposed assessment criteria in case studies – High congruence

✓ = Mentions assessment of sustainability indicator sufficiently ✗ = does not mention [Color indicates the level to which the Case Study addresses proposed assessment criteria]		Diversity in economic enterprises		Local employment and revenues kept in local community		Community communication and cohesion		Training and educational opportunities for locals		Long-term growth plan for waste and carrying capacity		Environmental appreciation and consciousness in locals and visitors	
		ECONOMIC				SOCIAL				ENVIRONMENTAL			
1	Talamanca – indigenous Bribri community (Cusack & Dixon, 2008)	✓	✓	✓		Mentions an organization working in the region to help with training and educational programs for locals		Carrying capacity not yet established, but mentioned		Community commitment to conservation and environmental education to visitors			
2	Pérez Zeledón, Chirripó (Howitt & Mason, 2018)	✓ Not all within the ecotourism realm i.e. agriculture	✓		Community work on recycling project	Learned environmental practices from tourists; NGOs and gov. depts. associated with Chirripó National Park have done environmental education		Waste management improvements, but no future plan		✓			Many ecotourism ventures in Perez Zeledon, not just analysis of one business
3	La Fortuna (Matarrita-Cascante, Brennan, & Luloff, 2010)	✓	✓	✓		Mentions multiple school programs but nothing for adults		Construction of sewage and water treatment plant; Establishment of recycling programs; Establishment of zero carbon emission goals in hotels; But no plan for future mentioned		✓			

Table 4. Proposed assessment criteria in case studies – Medium and low congruence

[Color indicates the level to which the Case Study addresses proposed assessment criteria]		ECONOMIC		SOCIAL		ENVIRONMENTAL		Notes
		Diversity in economic enterprises	Local employment and revenues kept in local community	Community communication and cohesion	Training and educational opportunities for locals	Long-term growth plan for waste and carrying capacity	Environmental appreciation and consciousness in locals and visitors	
4	3 Caribbean locations – Tortuguero, Cahuita, Yorkin (Bribri community) (Sanchez, 2018)	✓	✓	✗	✗	Mentions lack of both waste water treatment plan and carrying capacity regulations	✓	Multiple locations. Pros and cons but no true assessment. Unclear if Yorkin is the same as the other Bribri community ecotourism
5	Grandoca (Gary & Campbell, 2009)	✗	A majority, but not 100%	✗	Stated benefits to the community; Environmental education	Mentions opinions on development, but no plan	✓	
6	Monteverde (Weinberg, Bellows & Ekster, 2002)	Mentions unemployment in low season	More people came in to work because there was demand; Non-local businesses also came in when it was shown to be a successful location	Ecotourism has brought less of a small community feel; District board was prohibited	✓	Mentions environmental problems from waste/pollution as well as problems of carrying capacity	✓	Talks a lot about the history of Monteverde, then has a bit about current conditions
7	3 Osa Peninsula locations – La Gamba, Drake Bay, Cerro de Oro (Stem et al., 2003 & Stem, Lassoie, Lee, & Deshler, 2003)	Mentions how economy in Drake Bay is almost entirely dependent on tourism and small portion in other two	✗	Regret for lost unity in Drake Bay	✓	Mentions problems of solid waste disposal	✓	Multiple locations, so some of the assessment findings are specifically for only one
8	Osa Peninsula – Drake Bay and Puerto Jiménez (Driscoll, Hunt, Honey & Durham, 2011)	✗	✓	✗	In region increase	✗	Increase worth of nature in region	Not a report on one specific enterprise, more comparison between life and opinion of people working in tourism vs. not

7. Conclusion

It is important to have a useful set of criteria as a framework for assessments. This framework can be used to systematically assess the ecotourism industry in a given region or as an entry point into the on-going assessment process, both tools that have not been widely accessible. Because ecotourism is a rapidly expanding development strategy for many communities, making sure sustainability is achieved in the economic, social, and environmental spheres throughout the industry is important. Critics might say that there are already more extensive lists of sustainability indicators available for wide-spread use, but those lists are not easily applicable. With a beginning to the on-going assessment process that is user-friendly and simpler, it will make the industry as a whole more aware of certain key elements that contribute to economic, social, and environmental sustainability.

Not considered in this assessment are policies, laws, and regulations that govern states' tourism industries and sustainability practices. There are other factors that affect the sustainability of ecotourism besides just using an assessment system but being able to assess an enterprise independently from other factors could lead to more conscious efforts in social, economic, and environmental sustainability. The easy-to-understand assessment criteria proposed in this paper could also help small, emerging ecotourism businesses assess their own program right from the start rather than an outside entity doing so well into the life of the enterprise.

If a community is involved in ecotourism, it does not mean it is successful or even that it has potential to be. It seems that many of the rural ecotourism enterprises in Costa Rica most likely lack the infrastructure and technological specialties needed for an abundance of tourists. Communicating with prospective visitors and answering questions they might have is important to making a specific rural location the destination someone chooses when there are so many options. Internet appearance, accessibility, price, available options, and the quality of service are all factors in a location being recommended to future visitors. Where there is little impact

from tourism positively, often because of very few tourists in general, there is little negative impact as well, but if there are not enough tourists to make an enterprise successful economically, it will be hard for the community to focus on sustainability in other areas related to environmental conservation. When communities are dependent on natural resources for their livelihood, such as with ecotourism, there is more incentive to conserve the environment. Howitt and Mason (2018) wrote that under these circumstances, “one can afford the luxury of looking at nature in a different way”. However, there is not always a linear approach to sustainability, sometimes lacking fully sustainable efforts from the start of an enterprise as seen in La Fortuna, but the goal of sustainability must be kept in sight. With the rise of ecotourism, a user-friendly tool for assessment is needed so that the industry is more aware of key elements that contribute to economic, social, and environmental sustainability.

Without using sustainability assessments to stay focused on the goal of ecotourism, precious ecosystems could be damaged by mismanaged tourist enterprises. It is more difficult to revert damaged ecosystems to their natural state than protect them from being damaged in the first place.

8. Further Research

More research into the effects of assessments on ecotourism and whether they prove to be successful when done by outsiders is necessary in understanding the complete picture. It is unclear what happens to ecotourism assessments after they are conducted. More research is needed to see how improvements can be made after an assessment has shown the areas of need, and whether assessments are useful in affecting any governmental policy surrounding sustainability. Another area for continued investigation is exploring whether it is beneficial or functional for communities to assess their own enterprises using these provided indicators or if an assessment needs to be conducted by an outside party in order to be more critical. This paper has provided a new set of entryway sustainability assessment criteria, but more research

is needed to see whether, if used, it will actually have an effect on the increase in sustainable practices in ecotourism worldwide.

References

- Buckley, R. (2009). *Evaluating the net effects of ecotourism on the environment: A framework, first assessment and future research* doi:10.1080/09669580902999188
- Buckley, R. (2012). *Sustainable tourism: Research and reality* doi:<https://doi.org/10.1016/j.annals.2012.02.003>
- Choi, H. C., & Sirakaya, E. (2006). Sustainability indicators for managing community tourism. *Tourism Management*, (27), 1274–1289.
- Cox, R. S. (2006). Ecotourism: Does it help or hurt fragile lands and cultures? *CQ Researcher*, 16(37), 865-888. Retrieved from <http://search.ebscohost.com.proxy.seattleu.edu/login.aspx?direct=true&db=a9h&AN=120024180&site=ehost-live&scope=site>
- Cusack, D., & Dixon, L. (2006). Community-based ecotourism and sustainability: Cases in Bocas del Toro province, Panama and Talamanca, Costa Rica. *Journal of Sustainable Forestry*, 22(1), 157-182. doi:10.1300/J091v22n01_09
- Driscoll, L., Hunt, C., Honey, M., & Durham, W. (2011). La importancia del ecoturismo como una herramienta de conservación y desarrollo en la Península de Osa, Costa Rica [The importance of ecotourism as a conservation and development tool on the Osa Peninsula]. *Washington, DC: Center for Responsible Travel (CREST)*,
- Gray, N. J., & Campbell, L. M. (2007). *A decommodified experience? exploring aesthetic, economic and ethical values for volunteer ecotourism in Costa Rica* doi:10.2167/jost725.0
- Honey, M. (2003). *Giving a grade to Costa Rica's green tourism* Taylor & Francis Ltd. doi:10.1080/10714839.2003.11724546
- Howitt, J., & Mason, C. W. (2018). *Ecotourism and sustainable rural development in Pérez Zeledón, Costa Rica* Brandon University, Rural Development Institute. Retrieved from <http://search.ebscohost.com.proxy.seattleu.edu/login.aspx?direct=true&db=a9h&AN=128438462&site=ehost-live&scope=site>

ICT - Instituto Costarricense de Turismo [Costa Rica Tourism Board]. Retrieved from

<https://www.ict.go.cr/es/>

Jones, S. (2005). *Community-based ecotourism: The significance of social*

capital doi:<https://doi.org/10.1016/j.annals.2004.06.007>

Kiss, A. (2004). *Is community-based ecotourism a good use of biodiversity conservation*

funds? doi:10.1016/j.tree.2004.03.010

Ko, T. G. (2005). *Development of a tourism sustainability assessment procedure: A conceptual*

approach doi:<https://doi.org/10.1016/j.tourman.2003.12.003>

Lee, T. H., & Jan, F. (2018). *Ecotourism behavior of nature-based tourists: An integrative*

framework doi:10.1177/0047287517717350

Matarrita-Cascante, D., Brennan, M., & Luloff, A. E. (2010). *Community agency and sustainable*

tourism development: The case of La Fortuna, Costa Rica

doi:10.1080/09669581003653526

Mok, S. C. (2005). Turismo y ambiente: un potencial para el desarrollo económico para Costa

Rica [Tourism and environment: a potential for the economic development of Costa

Rica]. *Reflexiones*, 84(2), 5.

Rodriguez, C. M. (2012). Costa Rica leading the way in incentivizing protection of nature.

Rodriguez, C. M. (2016). To protect nature and boost economy, Cambodia must follow Costa

Rica's lead.

Sanchez, R. V. (2018). *Conservation strategies, protected areas, and ecotourism in Costa*

Rica Sagamore Publishing. doi:10.18666/JPRA-2018-V36-I3-8355

Stem, C. J., Lassoie, J. P., Lee, D. R., Deshler, D. D., & Schelhas, J. W. (2003). *Community*

participation in ecotourism benefits: The link to conservation practices and

perspectives doi:10.1080/08941920309177

- Stem, C. J., Lassoie, J. P., Lee, D. R., & Deshler, D. J. (2003). How 'eco' is ecotourism? A comparative case study of ecotourism in Costa Rica. *Journal of Sustainable Tourism*, 11(4), 322. doi:10.1080/09669580308667210
- Thomas, K. D., Williams, N. B., & Trotz, M. A. (2014). *The sustainability of ecotourism activities: Development of an accessible, applicable, and efficient tool for assessment in the Caribbean region* University of the West Indies, Faculty of Engineering. Retrieved from <http://search.ebscohost.com.proxy.seattleu.edu/login.aspx?direct=true&db=a9h&AN=112143424&site=ehost-live&scope=site>
- Tsaur, S., Lin, Y., & Lin, J. (2006). *Evaluating ecotourism sustainability from the integrated perspective of resource, community and tourism* doi:<https://doi.org/10.1016/j.tourman.2005.02.006>
- Van Tassell, D. H., & Daniel, S. K. (2006). *The paradox of ecotourism in Costa Rica: Can economic development and environmental preservation co-exist?* University of Delaware, Newark, Department of Foreign Languages & Literatures. Retrieved from <http://search.ebscohost.com.proxy.seattleu.edu/login.aspx?direct=true&db=a9h&AN=127550041&site=ehost-live&scope=site>
- Weinberg, A., Bellows, S., & Ekster, D. (2002). *Sustaining ecotourism: Insights and implications from two successful case studies* doi:10.1080/089419202753570846