Volunteer Tourism for Marine Conservation: a Force of Positive Change in Northern Belize

by

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ABSTRACT

VOLUNTEER TOURISM FOR MARINE CONSERVATION: A FORCE FOR POSITIVE CHANGE

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As one of the fastest growing sectors of alternative tourism, volunteer tourism projects advertising opportunities for potential travelers to ‘do their part’ with conservation and/or research elements are increasingly popular. This thesis evaluates how multiple stakeholder groups perceive volunteer tourism in Sarteneja, Belize within a MPA context as a mechanism of neoliberal conservation. Using data from semi-structured interviews, participant observation, and a single focus group, this thesis concludes that despite the enthusiastic debate around the questionable validity of neoliberal conservation as an approach to sustainable development, volunteer tourism in this case study can be considered an instrument for positive change at the community level as well as supporting national efforts for biodiversity conservation. However, in order to achieve these overarching benefits, critical attention must be heeded to how these volunteer experiences are produced through processes of commodifying nature, while simultaneously considering the desires of the involved stakeholder groups.
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1.0 INTRODUCTION

1.1 Practical context

Some consider tourism to be the world’s largest grouping of industries (Wearing, 2001), and within that, volunteer tourism is rapidly growing. Volunteer tourism is an attractive substitute to other sectors of more mass and packaged tourism because of its potential to avoid environmental degradation and socio-cultural disturbances, and therefore, it is often considered part of a broader shift towards alternative forms of tourism (e.g. ecotourism, community-based tourism, wildlife tourism) that permits the tourist a more meaningful set of experiences (Robinson & Novelli, 2005).

A recent study estimates that approximately 1.6 million people worldwide participate in the volunteer tourism sector annually and these volunteer tourists spend between $1.4-2.2 billion in their time abroad (Tourism Research and Marketing, 2008). Volunteer tourism projects have been established all over the world, in both rural and urban environments, with an emphasis on geographic locations with a low cost of living and high level of political and economic stability such as Central alternative America and the Caribbean, the Indo-Pacific, Southern and Eastern Africa, and the Andes and Amazon (Lorimer, 2010, p. 97). These volunteer projects range greatly in their mandates and the types of experiences they provide. Volunteer tourists can choose from a plethora of well-established sending organizations (such as the Earthwatch Institute, i-to-i, or Global Vision International) as well as newer organizations and companies and can select the type of volunteer trip they prefer as well as the length of time. Building a school, teaching English, or protecting endangered wildlife are only a few of the diverse options designed to cater to the desires of the travelling participants. These morally conscious participants tend to be middle-upper class, well-educated individuals between 20-30 years of age who sympathize with popular global justice agendas (Conran, 2011; Mostafanezhad, 2013).

The most commonly cited definition of volunteer tourism comes from Wearing (2001, p. 1), who describes it as an activity through which individuals “volunteer in an organized way to undertake holidays that might involve aiding or alleviating material
poverty of some groups in society, the restoration of certain environments, or research into aspects of society or environment.” This thesis focuses specifically on forms of volunteer tourism that have environmental conservation and research components. While various terms are used in the literature (e.g. volunteer ecotourism, science tourism, conservation tourism), this thesis uses the broader term ‘volunteer tourism.’

Oftentimes those seeking to understand, predict and regulate emerging trends in volunteer tourism do so strictly through the lens of tourism. As Wearing and McGehee (2013) review, previous scholarly attention has focused on who these emerging volunteer tourists are and what motivates them to participate (Galley & Clifton, 2004; Grimm & Needham, 2012; Wearing, 2001); how the industry should be defined (Brown, 2005; McGehee & Santos, 2005); and how volunteer tourism should be placed among the larger body of tourism research as an extension of ecotourism (Gray & Campbell, 2007), new moral tourism (Standish, 2005), or niche tourism (Novelli, 2005).

However, less attention has been paid to the potential contributions that volunteer tourism could make to nature conservation. Although the tourism characteristics of volunteer tourism are quite easily identified, in that an individual is clearly traveling to a foreign destination in order to ‘do good’, more clarification is needed to help illuminate how volunteer tourism is understood not only as a tourism product but also as a purveyor of conservation. Initial work in this regard has begun. For example, Brightsmith, Stronza, and Holle (2008) show that the incorporation of volunteer tourists can provide crucial labour and financial assistance for the conservation research initiatives of host organizations. Cousins, Evans, and Sadler (2009b) draw on interviews with UK volunteer tour operators to explore the production of conservation tourism experiences and examine how the commodification of natural environments is legitimized through the rhetoric of conservation science. This thesis builds on such initial work, to further understand how volunteer tourism functions as a form of conservation. The main findings are presented in two separate manuscripts: Manuscript A in Chapter 3 and Manuscript B in Chapter 4.

In Manuscript A, I explore volunteer tourism as a mechanism of neoliberal conservation. Using the case study of the Blue Ventures Belize volunteer tourism program, I
consider the perceptions of multiple stakeholder groups and relate these to the concept of commodification. The consideration of this particular volunteer tourism project as commodified and/or decommodified will help future researchers and volunteer tourism operators to reconsider the ways in which they approach and construct future operations. In Manuscript B, the focus is narrowed further to investigate the role that volunteer tourism can play in supporting conservation, by examining the function of volunteer-collected data. This topic has been explored in depth in the literature concerning citizen science, a related approach to biological data collection by ‘non-experts’, yet adequate information is lacking regarding the contributions of volunteer tourism.

Although volunteer tourism has the potential to contribute to conservation, and is often focused on marine species and ecosystems (Campbell & Smith, 2006; Ellis, 2003; Lorimer, 2010), its role in marine conservation has not been studied. Increased global attention and action is being called for by academics and activists alike to specifically address the steadily escalating ‘oceans crisis’ that is threatening the overall health of the world’s oceans. This crisis is being driven forcefully by a variety of anthropogenic activities and processes, including fishing, pollution, nutrient run-off, shipping, and ocean acidification, among others (Carpenter et al., 2008). Recent research has determined that no stretch of ocean has been left untouched by human impacts, and 41% of the ocean has been ‘strongly affected’ (Halpern et al., 2008). Not only is this large scale change affecting ecological processes, but there is also a significant social-economic impact on the well-being of the approximately one billion people living in primarily developing coastal areas who rely on fish as their principal source of protein (Mascia, Claus, & Naidoo, 2010).

One of the most commonly implemented strategies to improve the health of marine ecosystems on an international scale is the creation of marine protected areas (MPAs). Although there are competing definitions about what constitutes a MPA, the most widely accepted definition of a protected area, which includes both terrestrial and

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1 According to Ellis (2003) the most popular volunteer trip subject was marine mammals representing 29% of all trips
marine areas, originates from the International Union of Conservation and Nature (IUCN). According to the IUCN a protected area is “A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (Dudley, 2008).

Currently, MPAs are regarded as one of the most prominent tools for marine conservation with the potential to: restore food webs, protect key habitats, and sustain ecosystem services (Agardy, di Sciara, & Christie, 2011; Fox, Mascia, et al., 2012). Additionally, MPAs have documented socio-economic benefits such as poverty alleviation through increased opportunities of employment in coastal communities (Fox, Soltanoff, et al., 2012). MPAs cover 12% of the world’s coastlines (Spalding, Fish, & Wood, 2008), 25% of mangroves (Spalding, Spalding, Kainuma, & Collins, 2010), and 27% of coral reefs (Burke et al., 2011). A large number of parks are not effective (McClanahan, 1999) and represent “paper parks”, which are designated in principle but not in practice, therefore failing to achieve their conservation goals (Beger, Harborne, Dacles, Solandt, & Ledesma, 2004). MPAs face a number of challenges, including: poor management; insufficient enforcement; poaching (Chuenpagdee et al., 2013; Jameson, Tupper, & Ridley, 2002; Mora et al., 2006); lack of funding (de Groot & Bush, 2010; Kelleher, 1999; Thur, 2010); and a need for more data to inform management (Jones, 2006). Volunteer tourism has the potential to help address the latter two of these challenges.

First, the financial support available for MPAs is extremely limited in most countries and MPAs are therefore unable to function to their full capacity (Jameson et al., 2002). Significant cutbacks in government funding and the overall rolling back/hollowing out of the state are not limited to marine conservation programming, but are part of a broader neoliberalization of environmental management activities (McCarthy & Prudham, 2004). Government agencies and other actors involved in MPA management are increasingly looking beyond government funding for other means of achieving biodiversity conservation, including market-based activities (Caissie & Halpenny, 2003).
By promoting the incorporation of market-based incentives the aim is to “save nature” by infusing acts of “nature saving” with profit potential (Büscher & Dressler, 2012).

Volunteer tourism projects with conservation connotations aim to simultaneously achieve biodiversity conservation, community prosperity and economic growth. Such lofty objectives of sustainable development are widely appealing, especially to developing countries struggling to build their own competitive advantage (Moreno, 2005). Further research into volunteer tourism within MPAs from a multi-stakeholder perspective will help shed light on the perceived limitations and advantages of this neoliberal conservation strategy

Second, the lack of scientific information in coastal and marine areas can partially be attributed to the financial and logistical limitations of marine research and the historical lag of marine sciences behind studies of terrestrial environments (Gerhardinger, Godoy, & Jones, 2009; Jones, 2006). In multiple case studies, local and indigenous ecological knowledge of coastal zones (i.e. another form of ‘non-expert’ data, which is meant to construe not being a ‘professional’ scientist, rather than an indication of unfamiliarity with the subject matter) have been researched as a supplementary source of data where scientific methods are not as accessible or advanced (Aswani & Lauer, 2006; Gerhardinger et al., 2009; Scholz et al., 2004). For example, research by Gerhardinger et al. (2009) examined the ways in Brazilian fishers’ local ecological knowledge (LEK) was integrated, represented and validated within MPA management and design. Incorporation of LEK in this case was viewed as particularly helpful because of the remote location, far from research centers where detailed scientific knowledge on local human use and ecological processes were not readily available. Like local and indigenous knowledge, data collected by volunteer tourists has the potential to supplement and contribute to the findings of marine scientists.

This thesis will also address the role that volunteer-collected data play in broader marine conservation initiatives. Relying on volunteers to collect biological data can serve to provide necessary labor, often aiding in the collection of large-scale and long-term data sets, as well as funding for conservation or research projects that may not be available otherwise. To hire ‘professional’ scientists in place of these volunteers would be
extremely costly and would make the comprehensive monitoring of major ecological shifts practically unattainable (Brightsmith et al., 2008; Cohn, 2008; Ellis, 2003; Miller-Rushing, Primack, & Bonney, 2012; Mumby, Harborne, Raines, & Ridley, 1995). As a result, the facilitative role that volunteer tourism plays in providing environmental organizations with the human capital they require to fulfill their conservation objectives is something that merits further investigation.

1.2 Scholarly context

The scholarly discussions surrounding neoliberal conservation are diverse and multi-faceted and include diverging academic opinions and warnings. Proponents of neoliberal conservation advocate use of free-market principles and relationships to seek the simultaneous achievement of successful biodiversity conservation, economic growth, and community prosperity (Daily, 1997; Hunter, 1997; Leal & Anderson, 2001). Here, efficient resource management and allocation is said to be possible within a free-market that will assign high prices to scarce resources and encourage the sustainable management of renewable resources (Liverman, 2004). Alarmist fear for the future of the environment has given capitalism another avenue of expansion, whereby neoliberal conservation may become the saving grace of generations to come thus legitimizing itself (Brockington & Duffy, 2010; Büscher, Sullivan, Neves, Igoe, & Brockington, 2012). Buscher et al., (2012, p. 13) criticize:

“No more are the days when land is set aside strictly based on its natural beauty, now in order for nature to be “saved”, acts of “nature saving” must be instilled with profit potential, otherwise there’s little incentive for rational actors to pursue it” (Büscher et al., 2012, p. 13).

Like Buscher et al., opponents discard these neoliberal developments as “green washing” of the appropriation of resources and the environmental commons for private profit, which will in turn lead to further socio-economic inequities (Bakker, 2010, p. 715). The words from Ehrenfeld (2008) echo the distaste and wariness of skeptics:
“The reduction of all conservation problems to economic terms is counter-productive and dangerous. Trusting to market forces and the laws of supply and demand to correct inequities and restore healthy equilibria does not work in economics and certainly does not work in conservation.” (p.1092)

Several authors (e.g. Mansfield, 2007 and McCarthy, 2005) have noted that neoliberal approaches to environmental management may be simultaneously problematic and beneficial, and may encompass both neoliberal ideals as well as alternative approaches. Mansfield (2007) investigates the simultaneous promotion of private property and social justice through the redistribution of fishing quota in Alaska, finding that the complex social relations of property should not be discounted but rather recognized for their role in informing versatile neoliberal practices. McCarthy (2005) explored the formation of a hybridized style of governance within community-forestry in the United States and the simultaneous promotion of government downsizing/devolution and community empowerment. Alongside Mansfield’s (2007) research, McCarthy (2005) also sought to illustrate alternative ways in comprehending the realization of neoliberalism on the ground. Building on such work, this thesis does not seek to evaluate neoliberal conservation as either positive or negative, but to consider how it intersects with other ideals in practice. Through this research I intend to consider whether and how volunteer tourism represents an extension of neoliberal conservation as well as a progressive approach to improving marine conservation and community well being. Furthermore, by implementing a geographically grounded approach I seek to gain insight into the intricacies surrounding market-oriented conservation and governance by avoiding viewing markets simply as abstract processes but instead as a complex set of place-specific relationships (Himley, 2008; Roth & Dressler, 2012). As a result, choosing a case study approach to neoliberal conservation as it unfolds in the form of volunteer tourism based in Belize is a logical and appropriate methodology, as detailed in Chapter 2.

Neoliberal conservation more generally, and volunteer tourism specifically, have brought together actors that have traditionally remained quite distinct from each other because of their intrinsic differences in association with biodiversity conservation. However, now for-profit enterprises and non-governmental organizations are partnering
with each other, along with national and local governments, to bring together business and biodiversity and together fill the gap left by a decrease in public funding for conservation (MacDonald, 2010). Brockington and Duffy (2010) emphasize that it is often “the[se] most sincere and caring groups” that attempt to realize positive impacts and that “the volunteers and employees of the conservation movement are primarily motivated by their desire to make the world a better place” (Brockington & Duffy, 2010, p. 481). The roles played by these seemingly ‘caring groups’ such as private businesses and non-governmental organizations (NGOs) to instigate positive changes in conservation practices via market-based initiatives can be considered primary drivers of the ‘business of biodiversity’ (Arsel & Büscher, 2012). Neoliberal governance processes, including state de-regulation and re-regulation, the privatization and commodification of communal natural resources, cuts in government expenditures, and a more general reliance on market interactions to solve environmental problems, have all opened up spaces for non-governmental and private sector actors to fill governance gaps (Heynen, McCarthy, Prudham, & Robbins, 2007; McCarthy & Prudham, 2004).

The role of non-governmental organizations (NGOs) is particularly relevant to this project. It is important to probe whether/ how NGO-run volunteer conservation projects may offer a viable alternative to mass tourism or whether they simply offer a different form of exploitative capitalism. This research project aims to add to this dialogue through examining the case study of the Blue Ventures volunteer tourism project in Sarteneja, Belize.

1.3 The research question, aim and objectives

In light of the practical and scholarly contexts presented above, this thesis answers the overall question: As a form of neoliberal conservation, can volunteer tourism be considered as a market-based initiative with meaningful outcomes for biodiversity conservation and community well being? If so, how, and if not, why not?

Research was conducted with the aim of geographically grounding this question in a specific case study, in order to clarify and illuminate the complex set of place-based
relationships that inform market-oriented conservation and governance. To these ends, this thesis examines the case study of the Blue Ventures Belize volunteer tourism program in order to meet these objectives:

(1) To evaluate volunteer tourism as a form of neoliberal conservation, by examining perceptions of its commodification and impacts; and
(2) to explore and compare stakeholders’ perceptions of the role of volunteer-collected data

1.4 Outline of thesis

This thesis proceeds in five chapters. Following this introduction, chapter two describes the methodological approach and research methods selected to meet the research aims and objectives presented above, while the research context provides the reader with the necessary background information on the case study. Chapter three and four present the major findings of this thesis in two separate manuscripts. The first of these, Chapter three (Manuscript A), explores local events and experiences with volunteer tourism and its position as a market-based initiative for marine conservation contextualized within the larger discussion and debate around neoliberal conservation. Chapter four (Manuscript B) focuses more specifically on the contribution that a volunteer tourism project can make to marine conservation through the incorporation of volunteer tourists as ‘non-expert’ collectors of biological data. The fifth and final chapter summarizes the findings of this research and details the contributions, limitations, and areas of future research moving forward.
2.0 METHODOLOGICAL APPROACH AND RESEARCH CONTEXT

2.1 Methodological Approach: Case Study

The research conducted for this project takes the form of a single case study, defined by Yin (2003, p. 23) as “an empirical enquiry that: investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple source of evidence are used”. The case study approach is appropriate for a number of reasons. First, it is an ideal approach for answering questions that are concerned with the “how” or “why” explanations of a particular social phenomenon (Baxter & Jack, 2008; Yin, 1988). Secondly, case studies offer the unique opportunity to capture “the holistic and meaningful characteristics of real-life events” (Yin, 2003, p. 14). Finally, the case study approach permits and even encourages flexibility in research methods selection in order to gather a wide variety of information.

Applying a variety of methods has the potential to boost the validity of the data collected, by permitting “an investigator to address a broader range of historical, attitudinal, and observational issues” (Yin, 2003, p. 97). Ethnographic and geographically grounded case studies have also been recognized as important for deconstructing theoretically complex concepts such as environmental governance and neoliberal conservation (Himley, 2008; Roth & Dressler, 2012). Through this approach it is possible to gain insight into the intricacies surrounding market-oriented conservation and governance, therefore avoiding viewing markets simply as abstract processes but instead as a complex set of place-specific relationships (Roth & Dressler, 2012).

The case study approach is also prevalent as a means of investigating volunteer tourism in the context of conservation (Brightsmith et al., 2008; Broad & Jenkins, 2008; Coren & Gray, 2012; Cousins, Evans, & Sadler, 2009a; Gray & Campbell, 2007). As Grimm and Needham (2012, p. 491) point out, the results from their case study on volunteer tourism in Ecuador “cannot be generalized to all situations, but they can
provide a general understanding of similar groups or phenomena because human behavior is rarely unique to a single group”. The volunteer tourism operations run by Blue Ventures in Sarteneja, Belize and the Bacalar Chico National Park and Marine Reserve (BCNPMR) offer an ideal case study for investigating the intersection of marine conservation and volunteer tourism. This chapter outlines the importance of both tourism and marine conservation in Belize, describes the specific case study of the Blue Ventures volunteer program, and provides a detailed description of the methods used as part of the case study approach.

2.2 (Eco)tourism in Belize

In Belize, ecotourism is one of the largest drivers of economic activity (Lindberg, Enriquez, & Sproule, 1996), providing 34.2% of the country’s GDP in 2012 and 31% of total employment (WTTC Economic Impact Report, 2013). The relatively low population density and consequently low destruction rate of marine and terrestrial resources have been identified as a significant comparative advantage providing Belize with a strong market for ecotourism (Diedrich, 2007). Ecotourism is most commonly defined as “environmentally responsible travel to relatively undisturbed natural areas that promotes conservation, has low visitor impacts, and provides beneficially active socioeconomic activity for local populations” (Ceballos-Lascurain, 1996). It has also been identified as a form of neoliberal conservation (Fletcher, 2010; Igoe & Brockington, 2007). The incorporation of ecotourism into national economic development strategies was a common theme in the 1980s all throughout Central America and was made possible by foreign investment and restructuring by large international players such as the World Bank, and the European Union (Moreno, 2005). By 1998, Belize and its Central American neighbors reported that they had invested more than $21 billion in ecotourism initiatives as a strategy of achieving sustainable development (Honey, 1999).

Locations endowed with substantial deposits of lucrative marine resources such as coral reefs and sea grass beds attract thousands of scuba divers, snorkelers, and sport fishers every year. Belize and other nations along the Caribbean coast of Central America, including Mexico, Guatemala and Honduras, are particularly fortunate to share
the presence of the Mesoamerican Barrier reef, the second largest barrier reef in the world and a designated a World Heritage Site by the United Nations Education, Scientific, and Cultural Organization. In order to capitalize on this resource, the Belizean government issued a tourism policy and strategy statement as part of the National Development Plan in the 1980s (Moreno, 2005). The subsequent growth in tourism has led to a broader socio-economic shift from fishing dependent livelihoods to dependence on tourism among most coastal communities (Diedrich, 2007). Sarteneja, the case study community for this thesis, provides a notable exception; tourism in the village is minimal in comparison to other coastal communities in Belize. Residents of Sarteneja still rely heavily on fishing for their livelihoods, although there is strong interest in further developing the tourism industry (Sarteneja Tourism Development Plan, 2009).

2.3 Marine conservation in Belize

Marine ecosystems in the Caribbean region are under stress, with an average loss of 40% absolute coral cover since the 1970s (Gardner, Côté, Gill, Grant, & Watkinson, 2003). There are some authors that assert these losses have been caused by decades/centuries of overfishing, coupled with the disease-induced, regional mortality of ecologically-significant echinoid species of *Diadema* leading to the loss of resilience of the reef to recover from natural or anthropogenic perturbations (Aronson & Precht, 2006). Further climate-change threats such as ocean acidification and increasing water temperatures; land-based threats such as nutrient overloading, sediments, industrial waste, and urbanization; and other marine-based threats such as invasive species (*Pterois volitans*), marine debris, oil pollutions and drilling are all identified as environmental threats to the Mesoamerican Barrier reef (Healthy Reefs Initiative, 2012). This barrier reef is the second largest in the world and possesses a diverse assortment of unique marine ecosystems and habitats such as shallow inshore reefs and numerous sandy cayes and mangroves, and runs not far off the coast of Belize and its Central American neighbors (Cho, 2005). With such a rich marine natural resource base and the acknowledged, yet still escalating, threats degrading their quality and quantity,
conservation efforts in the form of MPAs have been developed to mitigate these negative impacts.

There are 13 MPAs in Belize, including designations such as marine reserves, wildlife sanctuaries, and national parks (Cho 2005). All but two of these MPAs were designated in the 20-year time span between 1980-2000, overlapping with significant growth in the country’s tourism industry (Diedrich, 2007). In 2007, approximately 115,000 visitors were recorded visiting the various parks within the country’s marine protected areas system, and one park alone, Glover’s Reef Marine Reserve, contributed US $4.9-7.3 million per year to the national economy (Cooper et al., 2008).

2.4 Research Site and Major Actors
2.4.1 Research sites: Sarteneja, Belize and Bacalar Chico National Park and Marine Reserve

I spent a total of twelve weeks in Belize between May and August 2013. The majority of my time was spent in the northern fishing community of Sarteneja, Belize, where Blue Ventures has its headquarters. Two of twelve weeks were spent at the dive camp of Blue Ventures within the Bacalar Chico National Park and Marine Reserve (see Figure 1).
Figure 1: A map of Belize and Meeker’s research sites

Sarteneja, a small fishing village with an estimated population of 1800 people, is located in the northern state of Corozal and is within sight of Chetumal, Mexico, situated
across the Corozal Bay. Sarteneja is a Spanish-speaking village, unlike the majority of other regions in Belize. Sarteneja is approximately 100km north of Belize City, the nation’s capital and most populous city centre. After the destruction of Hurricane Janet in 1955, Sarteneja was forced to transition away from an agricultural based society due to the salt-water incursion that drastically reduced the fertility of the land (Sarteneja Tourism Development Plan, 2009). In its place the community turned towards the boat building and fishing industries the village is so widely recognized for today. Conch, finfish and lobster are the primary stocks that support the traditional harvesting efforts in the country. However, it has been widely recognized throughout Belize that there are too many fishermen competing for the same, declining resources (Huitric, 2005). As a result of this reality, there has been a strong desire identified in the region to develop alternative sources of livelihood, particularly tourism (Diedrich, 2007).

The Bacalar Chico National Park and Marine Reserve (BCNPMR) was established in 1996 and covers an area of 11,303 hectares (Cho, 2005). The marine reserve is managed by the Belize Fisheries Department, who operates one ranger station within the reserve. The biological significance of the marine reserve is very high as Bacalar Chico is recognized as a crucial spawning site for commercially significant species, as well as an important nesting ground for sea turtles and nursing areas for other marine organisms like the manatee (Harborne, Mumby, Raines, & Ridley, 1995).

2.4.2 Blue Ventures: a social enterprise

Blue Ventures markets itself internationally as a global market leader in marine conservation tourism which moves “beyond conservation”, providing meaningful and lasting benefits for their partner communities by diversifying and strengthening local economies and empowering the local people to protect the environment. Blue Ventures’ marine conservation activities began in 2003, when it was established as a registered charity in the UK. Later that year, the first marine conservation expedition for volunteers was conducted in southwest Madagascar. Madagascar remained the organization’s primary focus for multiple years; for their work there, Blue Ventures won multiple international awards and recognitions. New marine expeditions were launched in Fiji and Malaysia in 2008, which were not sustained, and finally Blue Ventures
Belize’s first expedition was offered in 2010 in the village of Sarteneja. In their first ten years of operation, Blue Ventures has hosted a total of 1700 volunteers.

2.4.3 Blue Ventures’ Organizational model

Blue Ventures (BV) categorizes itself as a “science-led social enterprise that works with coastal communities to develop transformative approaches for nurturing and sustaining locally led marine conservation” (BV webpage, 2014). Their model is unique in the sense that it allows BV to insulate itself from the fluctuations and vulnerabilities of donor funding that NGOs typically rely on for their project funding. The ‘social enterprise’ of Blue Ventures consists of two separate entities: BV Expeditions and BV Conservation. BV Expeditions is a registered company in Scotland and it is through this company that the volunteer expeditions are organized, and consequently through which the revenues from expedition fees are managed. Instead of generating funding for shareholders, the profits are reinvested into the second part of BV’s social enterprise, BV Conservation. BV Conservation is a non-profit entity that is able to withdraw from this pool of consistent funding that is available as long as BV Expeditions continues to be profitable. This unique model affords BV more flexibility when it comes to programming and timing of project implementation.

2.4.4 Blue Ventures Belize

Blue Ventures’ volunteer tourism project in Sarteneja, Belize will be the focus of the two manuscripts presented in Chapters 3 and 4. Like the other conservation tourism projects implemented by BV, the expeditions in Belize follow a six-week rotation model. Volunteers arrive and spend the first week of the project attending training lectures while living with a family in the community. There are 13 Belizean families in the Sarteneja Homestay Group, which has been providing Blue Ventures volunteers with room and board since the establishment of the project in 2010. Interested families had to apply in order to be part of the Homestay group and were expected to meet certain

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2 See Blue Ventures’ timeline infographic for more information at [http://www.blueventures.org/](http://www.blueventures.org/)
accommodations standards and undergo certain training sessions and workshops (e.g. food handling) set out by the Belize Tourism Board.

During the middle four weeks of the expedition, volunteers are based at the Blue Ventures dive camp in the Bacalar Chico National Park Marine Reserve, where they undergo further in-water training and testing and participate in biological data collection. This training and testing regime is one of the characteristics that sets Blue Ventures apart and will be discussed in greater detail in Chapter 4. Volunteers spend the final week of the expedition back in Sarteneja, participating in various community outreach programs, while staying with the same Homestay family that hosted them during their first week.

Blue Ventures is an excellent case study for fulfilling the objectives of this research because of its unique position as an environmental NGO with market-based strategies for supporting marine conservation through its implementation of volunteer tourism. By allowing volunteer tourists to take part in hands-on scientific and data-collection expeditions, Blue Ventures seeks to enable further contributions to national biodiversity conservation efforts and community development. An evaluation of this contribution will remain the focus of chapters three and four.

2.5 RESEARCH METHODS

In order to address the research question and objectives, I examined the overlap of marine conservation and volunteer tourism using the case study of the Blue Ventures volunteer program in Sarteneja, Belize. The findings presented in this thesis are drawn from three data collection methods: semi-structured interviews, participant observation, and a single focus group.

2.5.1 Semi-structured Interviews

Interviews enable the researcher to gain insight into the opinions, understandings and perspectives of the key informants that may be otherwise elusive strictly by observing the physical world (Goodwin, 1998) and are considered to be “one of the most
important sources of case study information” (Yin, 2003, p. 88). In order to effectively identify interviewees, I relied on purposeful sampling. Purposeful sampling indicates that the researcher selects participants based on certain characteristics that group or individual may hold in order to satisfy the aims of the research (Coyne, 1997). For example, I intentionally sought the participation of volunteer tourists, Blue Ventures staff, and members of the Homestay Group because of their key role in the volunteer tourism project. In addition, I also adopted the technique of snowball sampling. This method functions as a way to yield a sample through referrals made among people who share or know of others who possess some characteristics that are of research interest (Biernacki & Waldorf, 1981). My gatekeeper while I was in Sarteneja (a Blue Ventures staff person) guided me in making connections with those within her personal and professional network in the community in addition to the connections I made on my own.

There is no agreed upon way to determine an acceptable sample size in qualitative research (Beitin, 2012). However, there is discussion regarding the achievement of theoretical saturation as a way of determining an appropriate sample size amongst respondents. This is accomplished when new categories, themes, or explanations stop emerging from the interview data (Marshall, 1996). In addition, the number of interviews conducted with certain stakeholder groups was limited by the number of participants in that group (e.g. there were only 10 volunteers over the age of 18 who were willing to participate).

A total of 38 semi-structured interviews were conducted in order to gain insight into how different stakeholders perceived the BV volunteer program and its associated benefits and challenges. The interviews were conducted with multiple stakeholder groups including: ten BV volunteers, six BV staff, nine members of the Sarteneja Homestay group, four staff members from other local NGOs, three government representatives (from the Belize Department of Fisheries and the Tourism Department), and six other community members from Sarteneja. It is important to note that although I had the chance to speak with almost the entire group of eligible volunteers, Blue Ventures staff, and the women that were members of the Sarteneja Homestay Group, I did not have enough time to adequately investigate the perceptions of many local people outside of
Blue Ventures’ sphere of influence. Additionally, it is valuable to acknowledge that I had the chance to observe and interview only one of the volunteer teams and it is possible that different expedition teams may hold different opinions. However, I tried to control for this by talking to the expedition staff to gain their more long-term perspectives on volunteer groups and tourism more generally. Furthermore, the particular volunteer group involved in this study was not atypical of other groups in terms of composition of number of participants, gender, age, or nationality.

Interviews were digitally recorded, transcribed in full, and then transferred to NVivo (qualitative data analysis software), where the data were compiled and analyzed. For the interviews that were conducted in Spanish, I transcribed them first in Spanish and then translated them later to English. I reviewed the transcript content for common themes, and then assigned each theme to a separate node. The collection and organization of the information in this way helped to highlight significant themes (Cope, 2010). Significant themes were identified and incorporated as part of an iterative process as commonalities began to arise between the respondents. First, the coding process was undertaken for each stakeholder group separately, making it easier to identify similarities as similar questions were directed to each group. An example of this is the theme of ‘community impacts’, which surfaced frequently in response to the question “Do you believe that Blue Ventures is making a positive or negative impact in the community?” Responses to this question were sorted into codes such as financial impacts and improvement in the level of English within the Homestay household.

2.5.2 Focus groups

A single focus group was performed with seven BV volunteers and one new BV staff member at the very end of their expedition. This was used as a way to encourage conversation within the group to help people open up and clarify their views and uncover topics or themes that were not adequately addressed during individual interviews. This research method allowed me to explore not only what people think but also how they
think and why they think that way, which Kitzinger (1995) emphasizes is one of the major strengths of the focus group method.

2.5.3 Participant Observation

I conducted participant observation as a Blue Ventures volunteer for the first half of a typical volunteer expedition (a period of three weeks) as a way to observe and appreciate the volunteer experience, interactions between actors, and how conservation was practiced. Participant observation can be defined as “a method in which a researcher takes part in the daily activities, rituals, interactions and events of a group of people as one of the means of learning the explicit and tacit aspects of their life routines and their culture” (DeWalt & DeWalt, 2010, p. 1). The inside perspective this methodology offers creates the opportunity not only to observe a social phenomenon but also offers the chance to become involved in it, as documented by multiple authors in the field of volunteer tourism (Alcala, 1998; Coren & Gray, 2012; Cousins et al., 2009a; Grimm, 2013; Mostafanezhad, 2013; Nolan & Rotherham, 2012).

I lived, ate and spent free time with the other volunteers, and chatted informally and completed daily tasks alongside BV staff and volunteers as well. I chose an overt approach to participant observation, making my research intentions and objectives known to the staff and fellow volunteers from the very beginning as a strategy to promote trust and transparency (Grimm & Needham, 2012). This was achieved by giving a presentation to all of the staff and volunteers on the first full day of the expedition, to explain my research objectives and methods. At this point in time the participants were given the opportunity to ask questions and to agree or decline to participate in the research project. None of the volunteers or staff members refused to participate in the participant observation portion, however, two of the volunteers were under the age of 18 and did not have parental consent, and therefore no observations were recorded regarding their participation in the study. The research received approval from the Research Ethics Board at the University of Guelph and all research participants gave their informed consent (see Appendices A-C).
Volunteer tourism in Northern Belize: a neoliberal approach to marine conservation

Abstract

Volunteer tourism is a rapidly growing subsector of the ecotourism industry and is often presented as a desirable alternative to mass tourism, which has many negative environmental and socio-cultural impacts. However, despite its comparatively positive reception as an instrument for sustainable development in academic literature, volunteer tourism with conservation and research elements has also been heavily criticized for its seemingly hypocritical ties to the ever-expanding free-market, the main driver of the demand for these volunteer projects as well as the environmental degradation these volunteer projects seek to address. Using data from semi-structured interviews, participant observation and a single focus group, and aided by the evaluative frameworks of Wearing (2001) and Callanan and Thomas (2005), this research aims to identify the commodified and decommodified elements of the Blue Ventures volunteer tourism project in Sarteneja, Belize. Results draw on the perceptions of multiple local stakeholder groups regarding the impacts of the project on the community, the volunteers, and conservation. The paper concludes that despite the combined presence of both commodified and decommodified elements, the commodified elements are perceived as beneficial alongside the existing decommodified factors, therefore indicating that the overall positive perceptions of the case study do not seem to be directly correlated to the decommodification of the project.
1. INTRODUCTION

Imagine yourself as a 20-30 something-year-old flipping through the pages of a glossy magazine or browsing the Internet in search of a life-altering experience, attempting to plot your next move. Whether you are taking a gap-year or a career break to figure out what it is you really want to do, the vibrant photos of exotic locations and wildlife and eye-catching phrases like “make a difference”, “get involved”, “explore new horizons” are intriguing and enticing. Advertisements such as these are among the 59.1 million hits when one inputs the term “volunteer tourism” into Google (April 08, 2014). The most commonly used academic definition of this steadily increasing industry describes it as a phenomenon where individuals “volunteer in an organized way to undertake holidays that might involve aiding or alleviating material poverty of some groups in society, the restoration of certain environments, or research into aspects of society or environment” (Wearing, 2001, p. 1). As this broad definition indicates, there are a wide variety of activities that are encompassed under the heading of volunteer tourism.

Arguably the fastest growing subsector of this industry is volunteer ecotourism, which includes projects that allow volunteer tourists the opportunity to gain hands-on environmental conservation and scientific research experience (Cousins et al., 2009b; Ellis, 2003; Galley & Clifton, 2004; Tisdell & Wilson, 2012). Volunteers offer an influx of labor and financial support to research projects, and thus, represent a growing international constituency with the potential to contribute to global conservation objectives. Volunteer projects focus on a range of species and ecosystems, although marine species (e.g. sea turtles, cetaceans) and ecosystems (coral reefs) are particularly popular (Lorimer 2009). Given the poor health of the world’s oceans (Halpern et al 2008, 2012), including coral reefs (Burke et al., 2011), the potential for volunteer tourism to contribute to marine conservation efforts warrants attention.
There are many tensions that circulate around volunteer tourism in the academic literature. Proponents of volunteer tourism contend that it can provide an avenue for resistance to capitalist exploitation by providing both consumers and local people with a meaningful alternative to the often-criticized industry of mass tourism (McGehee & Santos, 2005; Tisdell & Wilson, 2012; Wearing & Ponting, 2009). In contrast, other authors argue that it does not provide the intended benefits to either the host community or the local environment (Clifton & Benson, 2006; Guttentag, 2009; Lorimer, 2010; Zahra & McGehee, 2013). Rather than attempting to determine whether volunteer tourism should be labeled decisively as either problematic or beneficial, I argue that volunteer tourism is both; in spite of problematic elements, volunteer tourism can still make contributions to the host community and environment.

In order to critically analyze volunteer tourism, I consider it in relation to the literature on neoliberal conservation. Like payments for ecosystem services and bioprospecting, volunteer tourism is an example of a contemporary environmental conservation strategy that promises to simultaneously support economic growth, community prosperity and biodiversity conservation. No longer are ecosystems such as wetlands, forests and coral reefs valued for their natural beauty, but rather for the dollar sign attached to the services they provide, such as filtering water, removing carbon from the atmosphere, or attracting paying tourists.

The ‘commodification of nature’ is the primary instrument used to render nature marketable in this way. Proponents of these strategies argue that they can provide win-win solutions to very complex issues and promote sustainable development as well as distributing benefits among local people and conservation, although it is unlikely that they will fully replace other conservation instruments (Klein et al., 2008; Lange & Jiddawi, 2009; Wunder, 2007). However, others critique these practices of ‘neoliberal conservation’, arguing that they drastically alter human-environment relationships and ultimately fail to achieve the economic and environmental contributions they promise. Critiques of neoliberal conservation can help to understand the problems associated with volunteer tourism, while the benefits of volunteer tourism suggest that neoliberal conservation can offer possibilities, in spite of its limitations.
By drawing on the results of a case study of volunteer tourism in Belize, I contribute to a broader understanding of both the problems and possibilities of neoliberal conservation more generally. In the existing literature concerning volunteer tourism, similar debates have focused on the industry’s advantages and limitations. It is crucial to recognize that although volunteer tourism is perceived generally as a preferred alternative to mass tourism, its superiority cannot be assumed; volunteer projects may cause equally as much cultural, socioeconomic, or ecological damage as other forms of tourism. However, despite this recognition of volunteer tourism’s shortcomings, the industry can also serve in some cases as a meaningful substitute to mass tourism. Investigation into and contextualization of both the benefits and limitations of volunteer tourism is essential, especially as volunteering abroad continues to expand at a substantial rate (Wearing & McGehee, 2013). Without research of this kind, consumers, volunteer tourism operators, and host communities would not have the information they need to make informed and appropriate choices regarding their participation in, and development of such projects.

The paper will begin by introducing the concept of the commodification of nature, an idea that underpins volunteer tourism specifically and neoliberal conservation more generally (Cousins et al., 2009b; Gray & Campbell, 2007). In Section 2, the paper explores the divergent academic perspectives regarding both neoliberal conservation and volunteer tourism. The presentation of the two phenomena in this manner aims to consider their similarities and complexities, focusing on the concept and process of commodification. In order to achieve this, I will draw on the work of Wearing (2001) and Callanan and Thomas (2005) to develop a conceptual framework for evaluating the commodification of volunteer tourism. Section 3 describes the case study of Blue Ventures in Sarteneja, Belize, where volunteer tourists collect data to contribute to marine conservation efforts, and details the specific methods used. Section 4 presents the results of the case study, organized in terms of impacts on the community, volunteers, and conservation. Finally, Sections 5 and 6 offer conclusions regarding volunteer tourism as a form of neoliberal conservation.
New and innovative strategies to rally interest and support for the conservation of the planet’s dwindling biophysical resources and fragile ecosystems are continually being forged on the international stage. In recent years, strategies such as payment for ecosystem services, carbon trading, and ecotourism have joined traditional strategies such as protected areas. Contemporary conservation is characterized by the increasing popularity of market-based initiatives and neoliberal ideas more generally (Brockington, Duffy, & Igoe, 2008; Büscher et al., 2012). Not only has the spectrum of market-based conservation projects expanded, but the range of actors that are taking part in such initiatives has also expanded to include large international organizations (e.g. IUCN), NGOs, academic unions (e.g. the Circumpolar Conservation Union), governmental departments, local community-based resource management institutions, and commercial ventures (Büscher et al., 2012).

In this paper, the term ‘neoliberal’ (and its related extensions, ‘neoliberalism’ and ‘neoliberalization’) refers to the hegemonic global political shift that “emphasizes efficient economic markets, privatization of public services, massive governmental deregulation and limiting the role of the state” (Brondo & Bown, 2011, p. 92). Many researchers have raised questions about how neoliberal, market-oriented conservation mechanisms could possibly deliver the socioeconomic and ecological benefits they are heralded to produce if they rely on the very capitalist system that has caused the problems in the first place (Brockington & Duffy, 2010).

Liverman (2004, p. 734) provides a thorough list of contemporary neoliberal mechanisms of conservation, including: bioprospecting; ecotourism, along with park entrance fees; debt for nature swaps (where debt is forgiven in return for the investment of local funds in environmental protection); carbon sequestration (companies pay for reforestation or forest protection to offset their carbon dioxide emissions); watershed protection (downstream users pay upstream land owners to protect forests); and fair trade/green labeling (higher prices for products produced sustainably). Liverman (2004 p.734) further comments, “This move to commodify nature and market its services is a massive
transformation of the human-environment relationship and of the political economy of regions and landscapes.”

An improved understanding of what it means to commodify something will aid in grasping the processes behind neoliberal conservation, as commodification is the primary mechanism that transforms the natural world into ‘bite-sized’ pieces for consumption on the free market. According to Leys (2003), commodification refers to the transformation of a whole class of goods or services rather than the one-off sale of a single item. This means that “the commodity status of a thing, object, idea, creature, person, or what-have-you is not intrinsic to it, but rather, assigned” and demands a deeper understanding of what qualities these things take on once they become commodities (Castree, 2003, p. 277). There are multiple ways in which nature can be commodified (see Castree, 2003 for a review). Generally, the commodification of nature has been defined as:

“the penetration of neoliberalism into the non-human world, whereby markets are created to enclose elements of the environment in order to bring them into the sphere of market exchange.” (Cousins et al., 2009b, p. 3)

In volunteer tourism, nature is commodified when private tour operators and non-governmental organizations (NGOs) offer paying volunteers the opportunity to pay to participate in conservation programs, thus marketizing the experience of nature conservation (Cousins et al., 2009b).

2.1 Potential benefits of Neoliberal Conservation

The fundamental premise of the concept of neoliberal conservation is that one or perhaps collections of natural characteristics become acknowledged as financially valuable and consequently “nature is protected through its investment and consumption” (Igoe & Brockington, 2007, p. 434). As a result, in some academic arenas neoliberal conservation has been configured as a panacea to concurrently alleviate socioeconomic and environmental problems, by simultaneously distributing widely economic benefits among communities and making positive contributions to biodiversity conservation, particularly in the developing world. Examples such as the implementation of sustainable
bioprospecting in Costa Rica (Hunter, 1997); or non-consumptive whale watching in Australia (Wilson & Tisdell, 2003) are examples where market-based initiatives to support these goals. This sentiment is reflected in the words of Grandia (2007, p. 480) emphasizing that neoliberal conservation makes it effectively possible to “eat one’s conservation cake and have development dessert too.”

When evaluated more closely, there are those that reference a collection of more specific benefits associated with neoliberal conservation. To begin, it encourages increased democracy as the responsibility of environmental governance usually held by the state is transferred to the hands of communities and local institutions (Lemos & Agrawal, 2006). It also promises to promote environmentally responsible business practices by proving that green business is good business (Forsyth, 1997). Finally, market based-initiatives are promoted as tools to further environmental concern and stewardship among the public, which has typically been associated with the eco and nature based industry (Lee & Moscardo, 2005; Tisdell & Wilson, 2012).

These neoliberal practices aim to pull resource users into new modes of active intensification that use fewer, higher value goods hoping that economic reliance on healthy ecosystems, coupled with higher incomes, will reduce livelihood pressure on protected areas and other environmental systems (Dressler & Roth, 2011). A direct quote from the Blue Ventures website contains evident support for a neoliberal approach to conservation citing explicit market-based initiatives discussed in the literature (Blue Ventures, 2014).

“We are a social enterprise at our core, acting as an incubator for innovative approaches to incentivizing, financing and sustaining marine conservation from the grassroots. We recognize that marine conservation efforts often fail when short-term costs are perceived to outweigh future uncertain and intangible benefits. We overcome this by anchoring our work in market-based approaches that demonstrate the economic value of marine conservation to coastal communities. Our award-winning model includes ecotourism, sustainable fisheries management, aquaculture businesses, blue carbon and community-based health service delivery.”

2.2 Potential challenges of neoliberal conservation
While some support neoliberal conservation as a managerial and governing strategy, others argue that the commodification of nature and neoliberal conservation are intrinsically negative. Here, the central concern is that this approach to conservation works to expand the reach of the market, which changes landscapes and individuals on a large scale (Büscher et al., 2012). The following provides a brief overview of some of the common critiques of neoliberal conservation.

To begin, there is unease around operations that are reliant on the natural world, such as ecotourism and volunteer tourism, as they have the potential to alter traditional relationships between humans and the environment so that behaviors are increasingly influenced by and based on market transactions (Büscher, 2008; Dressler & Roth, 2011; King & Stewart, 1996; Liverman, 2004). Hutchins (2007) whose research was based in the Upper Amazon of Ecuador demonstrates an example of this sociocultural phenomenon. Through his research, he observed the alteration of intercultural relationships between different indigenous communities and the visiting ecotourists and the surrounding environment. The rainforest, a traditionally a sacred spiritual stronghold and a source of identity for the Kichwa Amazonian people, was transformed into a means of acquiring foreign capital and thus became a cultural and natural object of the ‘tourist gaze’. Grappling with this change in the meaning of significant places in the rainforest resulted from the growing demand of ecotourism. In another example of a shift in the interaction and valuation of natural resources, Ricketts, Daily, Ehrlich, and Michener (2004) determined that the pollination services by local pollinators for coffee plants were worth $60,000 USD. However, as shown by McCauley (2006), the region was affected by severe dips in coffee prices and thus the coffee plants were destroyed and replaced with pineapple plants, which do not rely on pollinators. Here we see that relying solely on neoliberal strategies like payment for ecosystem services and using monetary value as the indication of overall value did not insulate the natural area from harmful anthropogenic impacts. Moreover, a shift of focus and relationships between humans and the environment towards the dollar-worth of a resource can ultimately work against the environmental objectives of neoliberal conservation.
Second, neoliberal conservation processes are also criticized for being an overall unequal undertaking, disproportionately benefitting elite participants in the market system while disenfranchising the rural poor (Brondo & Bown, 2011; Lorimer, 2010; Roth & Dressler, 2012). A case study from Brondo and Bown (2011) underscored the inequity in the participation and consideration of the local indigenous population throughout the creation and management of a Honduran marine protected area that was intended to provide economic benefits and development to the small coastal community. With partnerships being increasingly forged between states, NGOs, businesses, and communities to promote conservation, this hybridized form of environmental governance carries elements of risk that come with incorporating so many voices and values (Igoe & Brockington, 2007).

Although it is important to understand these strengths and weaknesses of neoliberal conservation, there may be a danger in labeling it as either inherently positive or negative as there are many factors to consider. Mansfield (2007) and McCarthy (2005) both acknowledge that neoliberal policies and programs can be simultaneously beneficial and problematic, in terms of social justice and environmental outcomes. In order to gain insight into the intricacies surrounding market-oriented conservation and governance, it is important to avoid viewing markets simply as abstract processes but instead as a complex set of place-specific relationships (Roth & Dressler, 2012). This paper therefore takes a case study approach to examine neoliberal conservation as it unfolds in the form of volunteer tourism focused on marine conservation in Belize.

### 2.3 Benefits and challenges of volunteer tourism

Not unlike neoliberal conservation more generally, volunteer tourism has been promoted as a win-win scenario. This section begins with a review of the concept of commodification as it relates to volunteer tourism, focusing on Wearing’s (2001) spectrum of (de)commodification of volunteer tourism and Callanan and Thomas’ (2005) conceptual framework for volunteer tourists and volunteer tourism projects. These two conceptual frameworks will be synthesized in order to provide a lens through which to
evaluate the case study. Next, the impacts of the volunteer tourism industry will be reviewed in relation to three areas: volunteer tourists worldwide, the host communities and the ecosystems that are impacted by the conservation activities associated with volunteer tourism operations (Cousins, Evans, & Sadler, 2009a; Guttentag, 2009). Although the two analytical tools do not include these three corresponding sections specifically (e.g. volunteer, community, and conservation-oriented impacts), these sections will aid in organizing the results and discussion so that is easier to evaluate the impacts by general stakeholder groups.

2.3.1 Determining the (de)commodification of volunteer tourism

Wearing and Wearing (1999) evaluated the interactions with host communities and ecotourism operators in Australia and was the original analytical tool adapted for this research. Building upon his previous analytical framework, Wearing’s (2001, p. 150) subsequent publication provided a similar evaluation using ethical, ecological and decommodified criteria, this time evaluating the volunteer tourism industry. Callanan and Thomas (2005) on the other hand seek to offer specific insight into the categorization of volunteer tourists and volunteer organizations by presenting a set of criteria and label them as shallow, intermediate, or deep. Their classification as a ‘Shallow volunteer tourist or organization’ would indicate a level of superficiality that focuses predominantly on the self-development of the volunteer and appeasing their demands over a short period of time. A classification as a ‘deep volunteer tourist or organization’ would indicate that self-interest motives are secondary to altruistic ones and the organization seeks highly qualified and skilled volunteers to fulfill their specific objectives over a longer time period. The classification as an ‘intermediate volunteer tourist or organization’ indicates a middle ground between the two diverging categories.

I chose to combine both Wearing (2001) and Callanan and Thomas’ (2005) framework in an effort to create a more inclusive instrument to evaluate the merits and disadvantages of a volunteer tourism operation. Wearing (2001) touches on criteria involving the community, and the environmental/conservation commitments of the volunteer tourism operator, while Callanan and Thomas (2005) specifically lay out ways
to assess the volunteers, which is largely lacking from Wearing’s (2001) framework. It should be noted that neither of these tools label their criteria specifically as either ‘commodified’ or ‘decommodified’; that is a step that I take on my own to extend the analytical qualities of the framework. It is also important to note that the rubric is not inclusive of all issues included in each of the frameworks. Themes such as: ‘type of tour’ and ‘marketing’ from Wearing (2001) and ‘importance of destination’ from Callanan and Thomas (2005) were not incorporated because of their limited relevance to the data collected in this project. The combination of the two conceptual frameworks can be found in Table 1. This table will be used to summarize the literature and the results for each of the three sections (Community-oriented impacts, Volunteer-oriented impacts, and Conservation-oriented impacts), and will also be used to inform the discussion.

The authors that have directly engaged with the themes of volunteer tourism, conservation and Wearing’s spectrum of (de)commodification primarily are Gray and Campbell (2007) and Coren and Gray (2012). These authors have critically deconstructed the seemingly inherent ‘win-win’ perception of a decommodified volunteer project from a multi-stakeholder perspective (Gray & Campbell, 2007) and positioned two separate case studies along Wearing’s spectrum (Coren & Gray, 2012). My research does not aim to definitively label the selected case study as either commodified or decommodified, as done by Coren and Gray (2012), but rather seeks to explore the perceptions held by multiple stakeholders regarding the impacts of the volunteer tourism project at hand, to determine whether these impacts are perceived as positive or negative, and to relate these perceptions to the status of the impacts as ‘commodified’ or ‘decommodified’. A commodified form of volunteer tourism, which closely resembles mass tourism, allows economic gains to leave the community entirely meanwhile disconnecting volunteers from the ethical ramifications of their actions. A decommodified volunteer tourism is able to retain financial benefits locally and provide volunteers with meaningful connections to both local people and local environments (Gray & Campbell, 2007). The following sections elaborate on the ways in which various impacts can be considered commodified or decommodified.
<table>
<thead>
<tr>
<th>ISSUES</th>
<th>COMMODIFIED FACTORS</th>
<th>DECOMMODIFIED FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural/heritage</td>
<td>Staged authenticity (MacCannell, 1976) using traditional costumes; subservice of local communities, use of inappropriate gender and racial images</td>
<td>Respectful and spends time to avoid a fleeting gaze; live with the community</td>
</tr>
<tr>
<td>Contribution to local community</td>
<td>Direct financial benefits captured by relatively small group of community members;</td>
<td>Extensive (financial, cultural, environmental education and awareness); Work with the local community on projects they establish</td>
</tr>
<tr>
<td>Operations</td>
<td>Tends not to use any local staff and resources; all packaged</td>
<td>Employs local resources and some staff</td>
</tr>
<tr>
<td>Accommodations</td>
<td>Guarantees all needs are met and stay at places like the Holiday Inn</td>
<td>Local with communities, always in community homes</td>
</tr>
<tr>
<td>VOLUNTEERS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus of Experience: altruistic v. self-interest</td>
<td>Self-interest motives are more important than altruistic ones</td>
<td>Altruistic motives are more important than self-interest ones</td>
</tr>
<tr>
<td>Prior Skills/Qualifications of participants</td>
<td>No/limited skills required</td>
<td>Focus on skills, experience, qualifications or time</td>
</tr>
<tr>
<td>Flexibility in duration of participants</td>
<td>High degree of flexibility and choice for volunteers</td>
<td>Time periods typically determined by organization rather than volunteer</td>
</tr>
<tr>
<td>CONSERVATION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Experience</td>
<td>Consumption of the environment.</td>
<td>Ensures interaction with the environment</td>
</tr>
<tr>
<td>Conservation Ethic</td>
<td>Non-apparent in any literature or operational model</td>
<td>Underlies all operations and is guaranteed.</td>
</tr>
</tbody>
</table>

Table 1: Meeker’s combined interpretation of Wearing (2001) and Callanan and Thomas’s (2005) conceptual framework assessing the (de) commodified nature of a volunteer tourism project
2.3.2 Communities Impacts

One of the most accentuated benefits of volunteer tourism is its ability to provide local communities with economic development and alternative forms of employment, which may be less harmful to the environment (Dressler & Roth, 2011; Duffy, 2013; Gray & Campbell, 2007; Grimm & Needham, 2012; Wearing & McGehee, 2013). External to economic benefits, volunteer tourism also brings together the producer (the host community) and the consumer (the volunteer) in a unique fashion therefore exposing the production process of the tourism experience and (hopefully) creating more compassionate citizen consumers (Mostafanezhad, 2013; Wearing & Ponting, 2009).

However, these economic and cultural benefits are not necessarily distributed equally throughout the community and can be captured by the elite residents or siphoned off internationally (Duffy, 2013; Zahra & McGehee, 2013). The presence of free volunteer labour may also disrupt local economies in a broader sense by promoting a cycle of dependency (Guttentag, 2009). Wearing (2001, p. 51) recognized this dilemma early on when he stated that a principle threat of volunteer tourism “is that volunteers can reiterate the ethos of the ‘expert’, thus promoting deference in the local community to outside knowledge, therefore contributing to the curtailment of self-sufficiency”. Further disruption to the local economy may present itself in the form of volunteer or free labor, undermining the very contribution that the volunteer projects are aiming to make in the first place. Guttentag (2009) highlights that using foreign volunteers to fill low-skill positions may take jobs away from local people. Furthermore, volunteers may also complete unsatisfactory work, and leave more work to fix their blunders than if a local individual had been hired in the first place.

Within the academic literature on volunteer tourism, there has been far greater attention on volunteers than on host community involvement, perceptions, and concerns (Wearing & McGehee, 2013). According to Zahra and McGehee (2013) this negligence is often a result of issues of uneven power relations stemming from neocolonialism and globalization, preventing the full participation and inclusion of these marginalized
groups. However, this deficiency in the literature will be addressed in this paper through the incorporation of multiple local perspectives.

2.3.3 Volunteer tourist Impacts

As mentioned above, most research on volunteer tourism has sought to understand the role, motivations, values, and experiences of the volunteers. One of the most prevalent academic foci has been the motivating factors that drive volunteers to take part in these international programs that often require substantial financial and temporal commitments. The major reasons that people travel with a purpose and volunteer include: self-interested or egoistic reasons (e.g. career development, camaraderie, gain experience; to become immersed in a foreign culture Broad & Jenkins, 2008; Brown, 2005; Campbell & Smith, 2006; Wearing, 2001); the altruistic desire to ‘give something back’, which is hotly contested itself as to whether it is truly a sincere or ‘selfless’ motivation or not (Broad & Jenkins, 2008; Brown, 2005; Sin, 2009); the perceived safety of the location (Lorimer, 2010); and the reputation and type (e.g. NGO) of the host organization (Campbell & Smith, 2005; Söderman & Snead, 2008). Although it is important from an advertising, managerial and financial perspective to understand the factors that influence volunteers to choose their specific ‘volunteer vacations,’ especially when attempting to determine how to attract more volunteer tourists to their operations, this research projects aims to consider volunteer motivations and experiences in relation to other actors’ perspectives and incorporate a more diverse collection of voices.

Volunteer tourism has been acknowledged in the literature as holding both benefits and challenges for the volunteers. One of the most common benefits discussed is the capacity for volunteer tourism to impact volunteers post-departure. Their participation in volunteer projects has the potential to increase individual awareness and involvement in global issues and activism (Conran, 2011; McGehee & Santos, 2005; Rattan, Eagles, & Mair, 2012). Furthermore, by involving volunteers in scientific tasks such as data collection and analysis, their familiarity with and appreciation of scientific processes as well as environmental concerns will increase along with their personal skill sets and experiences (Bell et al., 2008; Cohn, 2008; Foster-Smith & Evans). Finally, the
inclusion of volunteers can result in a shift in the balance of power from political and technical elites to ordinary people (Goodwin, 1998).

However, volunteer tourism can also be characterized by negative impacts where volunteers are concerned. The altruistic motivation to ‘give something back’ or ‘make a difference’ that draws so many people to volunteer tourism has come under a great deal of scrutiny from the academic community. Authors have called this desire to contribute no more than ‘ego-tourism’ (Munt, 1994) or ‘green greed’ (Duffy 2002). These terms question ‘selfless’ contributions to local communities and environments– and explore how volunteer tourism may be more about creating opportunities for privileged and self-indulgent volunteers to build their own social and cultural capital (Gray & Campbell, 2007; Lorimer, 2010). In addition, considering the majority of volunteer tourists tend to be well-educated and globally conscious individuals from the middle to upper class (Conran, 2011; Wearing, 2001), critics such as Lorimer (2010) argue that conservation and volunteer tourism might also be considered a luxury that is only available to a certain class of people and is not an equal bi-directional process but instead has distinct political-economic barriers.

Finally, forms of neoliberal conservation such as ecotourism and volunteer tourism have been criticized for acting as another vehicle for neocolonialism (Coren & Gray, 2012; Harvey, 2005; McGehee, 2012; Wearing & Ponting, 2009). McGehee (2012) highlights that the images used toadvertize these packages often contain subtle demonstrations of power relations between the volunteers and the ‘voluntoured’ with depictions of the young Anglo-European volunteers in positions of authority as the giver of material or intellectual gifts and rarely with the members of the host community portrayed in the same authoritative or even neutral positions, thus perpetuating colonial relations. This observation builds on the idea that volunteers are portrayed as ‘foreign experts’, but instead of being the altruistic helpers they set out to be, they are in fact the ones truly benefitting from the interaction developing their sense of self.

2.3.4 Conservation Impacts

There are a variety of benefits that volunteer tourism can have within a
conservation context. One of the major advantages is the provision of labour and funding for conservation and research projects that may not be feasible otherwise (Brightsmith et al., 2008; Wearing, 2001). As an example, in the Peruvian Amazon, Brightsmith et al. (2008) determined that without the financial and labour contributions of the paying volunteers to the research objectives, the Tambopata Macaw Project situated there would not be functional. In addition to providing finances and labour, volunteer tourism also aims to create rewarding educational experiences for tourists. While this is a benefit for the tourists, it also enables conservationists to communicate their environmental messages and to help build a global conservation constituency (Brightsmith et al., 2008; Campbell & Smith, 2006). Although the research of McGehee and Santos (2005) was not strictly focusing on conservation volunteering, they found that support for activism and social-movement activities were among the post-trip effects on volunteers.

Although it is clear that programs such as the Tambopata Macaw project aim to make meaningful contributions to the species and habitats they are targeting, the selection of the projects offered to consumers hinges on a number of potentially negative variables that may not be initially evident. Lorimer (2010) discusses the realities of ‘uneven geographies’ when it comes to volunteer tourism, noting that there is a certain species and geographic bias regarding the projects being promoted. Volunteer projects are concentrated in relatively safe, politically stable countries where operational costs are low enough, as illustrated in Figure 2 below. In addition, volunteer projects must appeal to consumers. Volunteer projects are thus often focused on charismatic megafauna and tropical locations, to speak to the demands of volunteer tourists, rather than a broad range of conservation and research needs (Lorimer, 2010). A conservation scientist interviewed by Cousins et al. (2009b) emphasizes this point, offering a hypothetical example of dung beetles in the Democratic Republic of the Congo; although research might be needed, this site and topic would not attract enough volunteer interest and therefore would not be viable.
Table 2 summarizes the literature review and illustrates the overlap between the major thematic concepts of this paper, volunteer tourism and neoliberal conservation, and communicates the ideal or problematic outcomes that may result when they are brought together. Briefly, neoliberal conservation relies on the commodification of natural components in order to render them useful and therefore marketable within an entrepreneurial setting (Igoe & Brockington, 2007). Volunteer tourism is an example of this process, further perpetuating the commodification of nature in hopes of achieving effective marine conservation and meaningful development at the community level via the repackaging and selling of nature (Cousins et al., 2009b). This research will serve to operate as an informative glimpse into the implementation of conservation-oriented projects by laying out what strategies are being implemented to reach these development-
environmental goals; to what degree they are being successfully attained; and at what expense.

One can glean by looking at table 2 below that there is a great deal of overlap between neoliberal conservation and volunteer tourism both in their benefits and challenges. More people are being ushered into the realm of the market to take part in the ‘growing pie’ of capitalism as nature is distilled to marketable pieces (e.g., a consumable volunteer tourism experience). Equally, the emphasis on capitalist ideals (e.g., ensuring financially profitable endeavours), has exposed host communities at the local scale to the invasive fundamentals of the international market as rich countries use their own markets and foreign aid as leverage to induce developing countries to adopt these neoliberal policies (Wearing & Ponting, 2009). Despite this growing participation and its intended democracy, these benefits are not being shared or spread equally among community members and environments as the volunteer industry surrenders to the powerful free-market laws of supply and demand that dictate the placement of these programs and projects.

2.4 Research Gaps

Although the literature discusses the impact of market influences on conservation in general (Brockington & Duffy, 2010; Cousins et al., 2009b; Igoe & Brockington, 2007; Liverman, 2004) and terrestrial protected areas specifically (Arbel & Büscher, 2012; Duffy, 2013; Grimm, 2013), there is a deficit of research focused on the impacts of market-based instruments like volunteer tourism in relation to marine protected areas and marine conservation efforts. Work by Levine (2007), Halpenny (2003), and Brondo and Bown (2011) examines the creation of marine protected areas and the role/conflict that ecotourism plays in providing sustainable funding for these areas, however the focus is not regarding volunteer tourism specifically. Given that marine ecosystems and species are an important focus for volunteer tourism projects (Lorimer, 2010), it is important to understand whether and how volunteer tourism differs from ecotourism in relation to marine conservation efforts.
Academic research focused on volunteer tourism has tended to emphasize the role and/or motivations of the volunteer, focusing on post-departure impacts (McGehee & Santos, 2005; Rattan et al., 2012) and which factors determine the enjoyment and overall experience for the volunteers (Conran, 2011; Cousins et al., 2009a; Douglas & Rollins, 2007; Mostafanezhad, 2013). More recently, there has been a call for the inclusion of the host-community perspective within volunteer tourism research (Wearing & McGehee, 2013; Zahra & McGehee, 2013). This paper therefore aims to incorporate the voices of multiple stakeholder groups rather than focusing strictly on the perspective of the volunteers. Finally, research on volunteer tourism has tended to be atheoretical, failing to interpret particular cases within a theoretical context or to connect to broader social trends (Wearing and McGehee 2013). While this thesis examines a particular case of volunteer tourism and marine conservation, it also aims to interpret this case in relation to the idea of (de)commodification and to address the role that volunteer tourism may play as a neoliberal strategy for advancing marine-oriented conservation.

The case study of the Blue Ventures volunteer tourism program in Sarteneja, Belize and the nearby Bacalar Chico National Park and Marine Reserve (BCNP-MR) will geographically ground the research in order to examine processes of (de)commodification in practice. Results of the case study will be presented in terms of perceptions of: 1) community impacts, 2) volunteer impacts and 3) conservation impacts. The discussion will then focus on these three types of impacts, in order to determine how Blue Venture’s program should be conceptualized according to the combined framework therefore informing a contextualized understanding of neoliberal conservation projects on the ground. Gray and Campbell (2007) and Coren and Gray (2012) have also applied the concept of (de)commodification in order to interpret volunteer tourism on the ground; this paper builds on their work by connecting the idea of decommodification to critiques of neoliberal conservation.

In light of the gaps presented above, this manuscript answers the question: How do perceptions of a volunteer tourism project’s commodification relate to perceptions of its impacts? This research is designed to achieve the following objective:
To evaluate volunteer tourism as a form of neoliberal conservation, by examining perceptions of its commodification and impacts
<table>
<thead>
<tr>
<th>COMMUNITY BENEFITS</th>
<th>NEOLIBERAL CONSERVATION</th>
<th>VOLUNTEER TOURISM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Increased democracy</td>
<td>- Increase in the number of people involved in the process</td>
</tr>
<tr>
<td></td>
<td>- Pulls resource users into new modes of active intensification to decrease the pressure on the environment</td>
<td>- Cultural exchange</td>
</tr>
<tr>
<td></td>
<td>- Achievement of the “development dessert” that is supposed to accompany the “conservation cake”</td>
<td>- Provision of new employment opportunities that are less dependent on natural resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Produces direct and indirect economic benefits for the host community</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMUNITY CHALLENGES</th>
<th>NEOLIBERAL CONSERVATION</th>
<th>VOLUNTEER TOURISM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Unequal distribution of benefits among stakeholders</td>
<td>- Benefits (especially economic) can be captured by a small group of elite</td>
</tr>
<tr>
<td></td>
<td>- Can promote neocolonialism within host community (especially in the developing world)</td>
<td>- Can promote dependency of locals on external aid and disrupt local economies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VOLUNTEER BENEFITS</th>
<th>NEOLIBERAL CONSERVATION</th>
<th>VOLUNTEER TOURISM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Further environmental concern and stewardship</td>
<td>- Increase environmental awareness, activism</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Increase scientific capacity</td>
</tr>
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<thead>
<tr>
<th>VOLUNTEER CHALLENGES</th>
<th>NEOLIBERAL CONSERVATION</th>
<th>VOLUNTEER TOURISM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Literature does not speak specifically about volunteers</td>
<td>- Humanitarian nomads are rethought of as privileged, narcissistic and self-indulgent voyeurs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONSERVATION BENEFITS</th>
<th>NEOLIBERAL CONSERVATION</th>
<th>VOLUNTEER TOURISM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- New sources of funding/investment for conservation</td>
<td>- Volunteers provide labour and funding for projects that may not otherwise be possible without that external support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Through volunteer participation, environmental messages can be disseminated and therefore extend the global conservation constituency</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONSERVATION CHALLENGES</th>
<th>NEOLIBERAL CONSERVATION</th>
<th>VOLUNTEER TOURISM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Alter relationships between humans and the environment.</td>
<td>- Geographic and species bias regarding the volunteer projects offered is present</td>
</tr>
<tr>
<td></td>
<td>- Markets will distribute resources based on supply and demand and not based on their conservation merits</td>
<td>- Can exploit the very resource that creates the income and employment VT sets out to provide</td>
</tr>
</tbody>
</table>

Table 2: A summary of the noted benefits and challenges of neoliberal conservation and volunteer tourism
3. RESEARCH CONTEXT AND METHODS

To address the research question and objectives, I set out to examine the (de)commodification of volunteer tourism in a marine conservation context using the qualitative case study of the Blue Ventures volunteer program in Sarteneja, Belize. Qualitative research can provide greater insight into the meanings, interactions, and interpretations and behaviour the research participants associate with a particular phenomena, while a case study approach enables the researcher to explore the phenomena within its context using a variety of data sources (Baxter & Jack, 2008; Riley & Love, 2000). Belize was an excellent selection for the case study site because of the dual presence of a well-established ecotourism industry and marine protected area network.

I split my time between two research sites over the period of twelve weeks in the field. The majority of my time was spent in the small Spanish-speaking fishing community of Sarteneja in the North of the country, where Blue Ventures’ headquarters are located. As traditional fishing stocks continue to dwindle rapidly throughout the Caribbean region and along the Mesoamerican Barrier Reef affecting small coastal communities like Sarteneja, tourism has become increasingly targeted as an alternative strategy for generating income (see the Sarteneja Tourism Development Plan, 2009). When not in Sarteneja, I spent two weeks at the Blue Ventures dive camp in the Bacalar Chico National Park and Marine Reserve (BCNPMR). The BCNPMR is a relatively isolated marine reserve managed by the government.

A total of 38 semi-structured interviews were conducted in order to gain insight into how different stakeholders perceived the BV volunteer program and its associated benefits and challenges. The interviews were conducted with multiple stakeholder groups including: ten BV volunteers, six BV staff, nine members of the Sarteneja Homestay group, four staff members from other local NGOs, three government representatives (from the Belize Department of Fisheries and the Tourism Department), and six other community members from Sarteneja. It is important to note that I did not have enough time to adequately investigate the perceptions of many local people outside of Blue Ventures’ sphere of influence. Interviews ranged from 20 minutes to two and
half hours. An interview guide specific to each stakeholder group was used to guide the discussion (see Appendix D). All interviews were conducted in English or Spanish and were digitally recorded and later transcribed.

For interviewing, purposeful sampling was used to identify individuals with desired characteristics or experiences that would satisfy the aims of the research project (Coyne, 1997). In addition, I adopted the technique of snowball sampling. Interviews enable the researcher to gain insight into the opinions, understandings and perspectives of the key informants that may be otherwise elusive strictly by observing the physical world (Goodwin, 1998) and are considered to be “one of the most important sources of case study information” (Yin, 2003, p. 88).

Data from the transcribed interviews were supplemented by information derived from a single focus group and participant observation. The focus group was used as a way to encourage conversation within the group to help people open up and clarify their views and uncover topics or themes that were not adequately addressed during individual interviews. Participant observation was used as a way to observe and appreciate the volunteer experience, interactions between actors, and how conservation was practiced. In order to achieve this I participated as a Blue Ventures volunteer for the first three weeks of a typical volunteer expedition. I lived, ate and spent free time with the other volunteers, as well as chatted informally and completed daily tasks alongside BV staff and volunteers. I chose an overt approach to participant observation, making my research intentions and objectives known to the staff and fellow volunteers from the very beginning as a strategy to promote trust and transparency (Grimm & Needham, 2012). None of the volunteers or staff members refused to participate in the participant observation portion. However, two of the volunteers were under the age of 18 and did not have parental consent; therefore, no observations were recorded regarding their participation in the study.

The transcribed information from all three data collection methods was uploaded to a qualitative data analysis software package called NVivo. Using NVivo, I reviewed the transcript content for common themes, and then assigned each theme to a separate node. Significant themes were identified and incorporated as part of an iterative process.
as commonalities began to arise between the respondents. In order to ensure the confidentiality of the participants, I identify interviewees by a code that refers to their stakeholder group (i.e. ‘H’ for Homestay, ‘V’ for volunteer, ‘S’ for BV staff, ‘G’ for government official, ‘C’ for community member).

4. RESULTS

Results will be presented in four sections. The first three sections focus on perceptions of community, volunteer and conservation-oriented impacts as they pertain to the presence of Blue Ventures on a local scale in Sarteneja, and at a national level in Belize. The final section will summarize the perspectives of a small portion of respondents specifically on the role of neoliberal conservation in the country.

4.1 Community-oriented impacts

The vast majority of respondents (n=35) among all stakeholder groups were asked to share their opinions regarding the positive or negative impacts that Blue Ventures was having on the community of Sarteneja. Twenty-seven of those respondents indicated that BV’s presence was providing a form of economic contribution to the community. All 35 respondents indicated that the women and families that are part of the Sarteneja Homestay group are benefiting economically as a result of hosting the BV volunteers in their households. Benefits were described locally in the form of having additional capital to expand and renovate homes, to pay educational fees, and alleviate financial stress on the males of the households. “There was a time 5-6 months ago for [my husband] when there was no work to be found so for this reason we depended on this group. This group [Homestay] helps us to bring money to the house to help our husbands because fishing does not bring money.” (H02)

On several occasions (n=6), respondents stated that economic benefits were also felt by the broader community, in addition to those gained by the Homestay group members. These benefits were described as increased tourist traffic and business for local restaurants, shops and vendors, even in the tourist off-season months, as BV
volunteers arrive all year round. One of the women in the Homestay group reflected on the dispersal of economic benefits in the community. “I think that it is a big help for the community because there are shops, those that sell fruits in the street because they like fruit very much and there are people that sell vegetables, there are people that make arts and crafts. If the people are leaving and they want something to bring home with them, it helps us.” (H01)

I briefly probed the concept of gender roles in relation to the women in the Homestay group in hopes of gaining an improved understanding of how BV may be altering gender norms by providing a consistent employment alternative for a small group of women in Sarteneja. All eight of the Homestay interviewees were asked how they felt as a woman making financial contributions to their households, as this is typically not a readily available option. Two of the Homestay members emphasized this reality of employment for most women in the community with lower levels of education:

“… here in Sarteneja almost all of the women left school in primary and few have studied, very, very few…” (H03)

“… as a woman here in the village, there is not work, there is no place for you and work to help your family.” (H04)

Three themes arose among the Homestay members with regard to gender roles and perceptions: their increased ability to support their families, with specific references being made to relieving financial pressure on their husbands (n=6); the acknowledgement that BV is filling an employment gap for women who may would not have the chance to make substantial financial contributions otherwise (n=5); and finally that this opportunity to make this contribution made the women experience a variety of positive feelings (n=6). As eloquently stated by one of the women: “[a] woman feels good because you are supporting your family and children and you are helping your husband. It is something useful, and you feel useful.” (H04)

In addition, there were considerable contributions indicated by respondents regarding intercultural exchanges between the volunteers and the host-families. Each of the Homestay members interviewed shared their perspectives about the cultural impact that hosting international volunteers in their households was having on them and their
families. Half of the members indicated that there was a bi-directional impact flowing between the Homestay families to the volunteers and from the volunteers back to the Homestay families as this quote from one of the members highlights:

“Like with the last group, we went to the Hog Head dance. So that’s sharing our culture with them and sometimes we ask them what do they do, what’s their house like, what do they eat, and… that’s what we try to do and they share with us and we share with them. I think yes, we share our cultures with each other.” (H05)

Contrastingly, 3 of 9 Homestay members indicated that the flow of the intercultural exchange was only in the direction from volunteers to the Homestay families. Some of these benefits included the opportunity to experience and understand other cultures they may not otherwise get the chance to encounter.

Another cultural advantage of hosting BV volunteers as part of the Homestay group that surfaced was increased language proficiency. The majority of these responses referred to the improvement of English within the Homestay households, as denoted by another Homestay member:

“When I began I did not speak much English because I attended school until primary and in the schools they speak to you in English but when you come to your house, all day you speak Spanish and you forget, but when you have people in your house to attend to that is not possible. They teach us.” (H01)

A third distinct benefit of BV’s presence in Sarteneja recognized among the different stakeholder groups was the increase in environmental education and awareness throughout the community. The target population of the environmental initiatives conducted by BV was identified chiefly as the local children and youth, especially because of the educational programming undertaken in the schools. These positive changes in the community were expressed as a shift in the way that individuals interacted with the environment as they gained more knowledge and therefore increased interest and respect through the classes, activities and workshops organized by BV. One staff member from Blue Ventures expressed her opinions on the positive impact of BV in Sarteneja:

“I believe that I’ve seen a change in children’s attitudes. Specifically I’m talking about children because all of our outreach work happens in the schools... and I’m always talking to kids asking them “what’s your favourite animal in the ocean,
have you ever seen this?” And we show them pictures of the coral reef and I think that there is a greater appreciation.” (S01)

A BV volunteer also clearly articulated the influence that BV was having on a more individual level within her Homestay family.

“It seems like they’ve made inroads to changing behaviour in the sea and I was struck by the fact that my homestay sister, the girl who I stay in the family with, she did marine conservation or something similar… and it seems like her whole class was taken out by BV on a snorkeling trip and they seem to make positive differences. If they can get the young people to care, that’s a big investment for the future.” (V04)

Not only BV volunteers and staff felt this way; Homestay members also agreed that BV was having a positive impact in terms of environmental awareness.

“What they are doing with the sea and everything they’re doing with lionfish… through them we learn, they educate us. My children now they know that when they eat a bag of chips or something, they’re not going to throw the garbage in the street or in the sea, they will put it in their pants or when they come home they will put it in the garbage, lots of things they are teaching our children. The volunteers teach in the schools and it is a large help.” (H01)

Overall, the community’s perception of the presence of Blue Ventures was a positive one, referencing concrete economic advantages. The community also expressed less tangible benefits such as cultural exchanges between the volunteers and the host families as well as the local growth in environmental education and awareness. Not one of the community respondents spoke explicitly of any negative consequences of the presence of Blue Ventures in Sarteneja.

Table 3 summarizes these results in terms of the framework outlined in Section 2.3.1.

<table>
<thead>
<tr>
<th>ISSUES</th>
<th>COMMODIFIED FACTORS</th>
<th>DECOMMODIFIED FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural/heritage</td>
<td>Not present</td>
<td>Respectful and spends time to ensure not only a fleeting gaze; live with the community</td>
</tr>
<tr>
<td>Contribution to local community</td>
<td>Direct financial benefits captured by relatively small group of community</td>
<td>Extensive (financial, cultural, environmental education and awareness);</td>
</tr>
</tbody>
</table>
Table 3: Commodified and decommomdiied factors noted within the community-oriented impacts found within the case study

<table>
<thead>
<tr>
<th></th>
<th>members</th>
<th>Work with the local community on projects they establish</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operations</strong></td>
<td>Not present</td>
<td>Employs local resources and some staff</td>
</tr>
<tr>
<td><strong>Accommodations</strong></td>
<td>Not present</td>
<td>Local with communities, always in community homes</td>
</tr>
</tbody>
</table>

4.2 Volunteer-oriented impacts

Even though the initial emphasis of this project was not to target the volunteers specifically, a portion of the interview questions explored the various reasons why individuals had chosen to volunteer with BV and what lasting impressions their involvement may have on their lifestyles upon returning to their country of origin. By evaluating volunteers’ motivations for choosing to volunteer with BV, their treatment and behaviour while staying with BV, and the potential lifestyle impact upon their return, further light might be shed on the sort of clientele Blue Ventures attracts and thus the kind of program and experience that the NGO aims to promote.

Although the opportunity to scuba dive in Belize is certainly not unique to BV, volunteers selected the BV program because it combined diving with the chance to volunteer their time for what they perceived to be a more meaningful cause (in comparison to mass tourism activities) and the opportunity to improve their personal skill set. The following quote from one of the BV volunteers encapsulates all three of these motivations concisely. “[It is] the fact that we wouldn’t be just diving, we’d be diving and doing something good while you’re diving. You’re not just looking at a reef, you’re studying it and getting to know it better.” (V08)

The table below summarizes the responses from the BV volunteers regarding the interview questions “What were your motivations to participate in a volunteer tourism project like BV?” and “What ultimately attracted you to BV?” Staff members were also asked about what their perceived the motivations of the overall volunteer motivations were concerning their selection of Blue Ventures.
### Table 4: The breakdown of interviewee responses concerning their motivations for choosing Blue Ventures.

<table>
<thead>
<tr>
<th>Motivation</th>
<th># Of respondents</th>
<th>Number of Staff</th>
<th>Number of Volunteers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a meaningful contribution</td>
<td>13</td>
<td>4/6</td>
<td>9/10</td>
</tr>
<tr>
<td>Diving</td>
<td>12</td>
<td>3/6</td>
<td>9/10</td>
</tr>
<tr>
<td>Gaining new skills/ experience</td>
<td>10</td>
<td>3/6</td>
<td>7/10</td>
</tr>
</tbody>
</table>

4.2.1 *Making a meaningful contribution*

It was clear from the results that the staff and the volunteers that facilitate and partake in the Belize expeditions were motivated by the principle of making an impactful and legitimate contribution towards improving both the reef and local communities. For most of the volunteer respondents (n=9), their role in creating a meaningful contribution was discussed in relation to the collection of biological data and their desire for this information to play a larger role in marine conservation more generally.

“I’m not just here to write down fishes, I’m here to write down fishes and know that it’s going to go somewhere, otherwise I’m just writing down fishes and that’s useless. I think the most important part is not just the volunteers writing stuff down, it’s the people in between the volunteers and government who are handling the data and treating the data and turning it into something concrete and they can show and say this is how the reef is doing, this is how the fish are doing.” (V08)

The mechanism through which this contribution is made is orchestrated via the stringent testing and data collection protocols that both the BV staff and the volunteers must adhere to in order for their information to be deemed satisfactory. The intricacies surrounding this process will be discussed in further detail in Manuscript B.

4.2.2 *Diving*

In response to the question “What were your motivations to participate in a volunteer tourism project like BV?” and “What ultimately attracted you to BV?”, seven of the ten volunteers described scuba diving as an important factor as illustrated by the following quote: “I wanted to learn to scuba dive and there were lots of other marine projects [being advertised] where you did scuba diving and helped but you had to already have your certification, which I did not have so that’s why I like Blue Ventures” (V03).
When asked about their general observations about volunteer motivations, several staff members indicated without hesitation that the opportunity to dive was the most significant driving factor for volunteer participation in BV’s expedition program. Half of the staff members continued to state that the volunteers’ motivation to dive was strong enough that it could outweigh the lack of volunteer interest in the community aspect of itinerary. This notion is clearly illustrated by a BV staff member:

“I think the majority of volunteers come out here thinking they want to do the diving, they want to do the Bacalar Chico side of things and they’re going to put up with the Sarteneja side of things at the end, probably 80% of our volunteers come with that in mind, they don’t really have much interest in Sarteneja.” (S03)

This concept overlaps with another theme that surfaced among other BV staff interviews and overlaid with the researcher’s own observations, where it was not uncommon for volunteers to choose to leave the expedition altogether upon their return to the community from the dive camp for the last week of the expedition. Volunteers chose to leave a week early typically to experience diving the Blue Hole or travelling to the Mayan ruins of Tikal of Guatemala without having to alter their return flights home.

4.2.3 Gaining new skills and experience

The opportunity to gain relevant hands-on field experience and research skills was the third most discussed factor for selecting BV. Five of the volunteers mentioned that they were studying in a field related to marine or environmental studies and that their participation in the biological data collection (i.e. survey diving) would provide them with a desirable skill set. This practical research experience, which is valued highly by potential future employers, would enable them to further their studies or careers upon their return home. One of the volunteers expressed this notion of increasing their human capital concisely.

“[The Blue Ventures expedition] is putting into practice the theory that I’ve learned in uni… and my degree is just one of the those degrees where it’s all well and good having a degree but if you don’t have any practical experience putting these practices into use then it’s no use having your degree… The primary reason for me doing anything like this was to bulk up my CV, that was my primary goal to get that practical knowledge.” (V03)
BV staff members also remarked on this motivation. As one staff member noted, “They want to get that experience because they’re studying marine biology and they need to get that experience. It’s not just holidays, it’s also gaining experience, field experience.” (S04)

More specifically, improved fish and benthic species identification was a skill that was highlighted as a positive by product of the volunteers’ training and data collection process. The ability to classify species taxonomy while in the water added another layer of enjoyment and fulfillment to the dives. Not only did the volunteers find it more interesting to be conscious of the biodiversity surrounding them, it also instilled within them a sense of pride to be capable of distinguishing the creatures at a family and species level.

4.2.4 Potential lifestyle impacts

All of the volunteers were asked to predict what sort of impacts their participation in the BV Belize expedition would have on their lifestyle upon their return home and what that change would look like. The responses gathered fell under two categories: a) predicted changes in behaviour; and b) predicted changes in perspective.

The most commonly mentioned changes in behaviour pertained to a desired shift in resource consumption practices. A portion of the volunteers noted that they would focus on reducing their intake of fish and seafood in response to their exposure to the realities of dwindling commercial populations. Some volunteers also expressed their desire to spread the word upon their homecoming about alternative, more sustainable fish markets such as the Lionfish project currently being promoted by BV. “I will tell people to start asking for lionfish in restaurants, maybe start creating demand because that’s the best way to get a market going, so just telling people that it’s the tastiest thing I’ve ever eaten.” (V08)

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3 The Lionfish project is one of the conservation initiatives being promoted by Blue Ventures Conservation. Their objective is to stimulate market demand for this invasive species, which would not only help to mitigate its ecological impact on local ecosystems but also provide fishermen with an alternative fish stock in to pursue.
Multiple volunteers indicated that their involvement with the project altered the perceptions of their lifestyles. Themes that were emphasized revolved around their increased appreciation for the amenities and privileges that they had access to in their lives such as running water. The combination of spending four weeks at a modest research station and experiencing two weeks of village life within a developing country provided a stark contrast to their everyday lives in the Western world, thus increasing their awareness of unequal global economic distribution.

“It’s been a life-changing experience for me and to appreciate other things. It was amazing to see how people lived in Sarteneja because I’ve never done a Homestay before and it was really fabulous. I think I won’t take certain things for granted and maybe look at how I live differently.” (V04)

In addition, several of the volunteers referred to their participation as providing them with useful insight into future potential career paths in marine conservation.

To review, the three most commonly cited motivations by volunteers for choosing to be part of a Blue Ventures expedition included: the desire to make a meaningful contribution to a reputable project; the opportunity to dive; and the chance to gain important skills and hands on experience that could help to advance their own employment prospects. These motivating factors did not appear to be mutually exclusive, but rather the combination of the three is what made BV so attractive. Again, these results are organized according to the commodification framework outlined in Section 2.3.1.

<table>
<thead>
<tr>
<th>ISSUES</th>
<th>COMMODOIFIED FACTORS</th>
<th>DECOMMODIFIED FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volunteer Priorities</td>
<td>Volunteers seek to gain professional experience and improve their own skills</td>
<td>Volunteers desire to make a ‘meaningful’ contribution to conservation efforts</td>
</tr>
<tr>
<td>Prior Skills/Qualifications of participants</td>
<td>No/limited skills required</td>
<td>Not present</td>
</tr>
<tr>
<td>Flexibility in duration of participants</td>
<td>Not present</td>
<td>Time periods typically determined by organization rather than volunteer</td>
</tr>
</tbody>
</table>
4.3 Conservation-oriented impacts

When the participants were asked about whether they perceived BV as making a positive or negative contribution to marine conservation efforts in Belize, all of the interviewees across all stakeholder groups indicated that the impact was a positive one. The two major conservation contributions noted were: (1) the collection of biophysical data by the staff and volunteers of BV and (2) the Lionfish project being developed by BV in Belize. These responses are summarized in Table 5 below. However, it is necessary to distinguish between these two different mechanisms by which volunteer tourism supports conservation efforts within this case study. The collection of biophysical data is directly tied to the volunteers, because they are the ones that collect the information, whereas the conservation benefits of the Lionfish project are indirectly linked to the volunteers through the funding that their fees provide to Blue Ventures.

<table>
<thead>
<tr>
<th>Motivation</th>
<th># Of respondents</th>
<th>Number of Gov’t</th>
<th>Number of NGOs</th>
<th>Number of BV Staff</th>
<th>Number of vols</th>
<th>Number of Homestay</th>
<th>Number of Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data as a conservation contribution</td>
<td>16</td>
<td>2/3</td>
<td>3/4</td>
<td>3/6</td>
<td>8/10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lionfish as a conservation contribution</td>
<td>19</td>
<td>2/3</td>
<td>2/4</td>
<td>2/6</td>
<td>4/10</td>
<td>3/6</td>
<td>3/9</td>
</tr>
</tbody>
</table>

Table 6: Numerical breakdown of responses from each of the stakeholder groups

4.3.1 Contribution of data

The collection of biological data by volunteers within the Bacalar Chico National Park and Marine Reserve (BCNPMPR) allows BV to contribute useful data to larger organizations and networks, such as the Fisheries Department and the Healthy Reefs Initiative, an international effort that tracks the health of the Mesoamerican barrier reef. This service that BV is providing is perceived as beneficial by the various stakeholders (see table 5 above), in the sense that it is contributing a large data set for a remote region.
of the Mesoamerican Barrier Reef that is not is not rigorously monitored otherwise. BV staff analyzes this volunteer-collected data, summarizing it in reports in order to evaluate reef health changes. As a result, multiple stakeholders recognize that BV has contributed to the implementation of more appropriate conservation practices in the area through the provision of management effectiveness advice to the Fisheries Department concerning the BCNPMR as well as the contribution of their data to the Healthy Reefs Initiative. A staff member from one of BV’s NGO partners in Sarteneja stressed the importance of BV’s contribution to marine conservation.

“They [BV] have made huge strides in filling that information gap for Bacalar Chico and providing more understanding. They’ve made that information available, which doesn’t happen in all protected areas, which is very important and they’re getting the respect of the Fisheries Department and building some capacity in some areas.” (N01)

The Ecosystem Unit Management Coordinator for the national Fisheries Department reflected on the initial establishment of Blue Ventures.

“We sat down with Blue Ventures and we discussed what would be the best possible location for them and we thought that Bacalar Chico needed some information because information from there wasn’t enough, or sufficient for the work we were doing… We have looked at the data that Blue Ventures has been giving us and it’s very good, it’s comfortable data and we have a very good working relationship.” (S01)

4.3.2 Lionfish

Lionfish (*Pterois volitans*) are an invasive species; native to the Indian and Pacific Oceans, they are now wreaking ecological havoc throughout the Caribbean because of their combined ability to reproduce at a very high volume and frequency and their voracious appetite for invertebrates and juvenile fish (Hudson, 2013). During my fieldwork period, BV successfully developed a partnership with one of Belize’s fishermen cooperatives to establish an export supply chain with the United States, allowing and encouraging fishermen to actively hunt Lionfish and sell their catch at market value. This model aims to provide sustainable and much needed alternative sources of livelihood for those working within the dwindling traditional fisheries, while simultaneously targeting the unwelcome population of Lionfish at the source.
The Lionfish project developed by BV was mentioned broadly by 19 of the interviewees despite the fact that it was not included as a specific question, but rather surfaced as a socioecological factor that was contributing to Sarteneja in multiple capacities. In the interview responses, the Lionfish project was perceived as holding dual benefits, either as a substitute for other dwindling fish stocks and consequently an alternative source of livelihood (n=8) or as a major contribution to marine conservation in Belize (n=3).

“On the other hand, the stuff that the country director is doing in the community and particularly with the marketing efforts for lionfish, she’s having a real significant impact… There’s a chance [BV] can really have an impact on reef resource utilization and if fishermen construct a market on something besides conch, which are seriously overfished, and lobster, which are seriously overfished and even though there are seasons and most people observe the seasons and there are protected areas and most people observe the protected areas, having another resource that’s marketable could be really significant” (V10)

“So it is good the lionfish project that they are bringing in because it can help the families more in the homes, it is money that can help greatly.” (C01)

“What we’re famous for is the lionfish, that’s been the contribution to nation wide.” (S02)

Additionally, the Lionfish project was mentioned in passing with positive connotations by nine other interviewees. No matter the context of the response, the Lionfish project was consistently described in a positive fashion by all stakeholders as a positive impact that BV was having in Sarteneja and in Belize more generally.

To summarize this section, the presence of BV and thus volunteer tourism in Sarteneja was recognized as a positive contributing feature to conservation efforts in the community whether it is directly through volunteer-collected data or the financial support their fees to BV provide. The environmental experience could be considered commodified based on its aesthetic consumption by the volunteers. They are paying a fee that is meant to guarantee them participation within a particular marine conservation experience; however, it is the perception of making a contribution that shines through in the volunteers’ responses rather than a desire to know their participation is truly
meaningful. Despite this aesthetic consumption of the environment, the role that the
volunteers are playing enables with the opportunity to interact closely with the
environment while out at Blue Ventures’ dive camp in the BCNPMR, collecting
biological data on survey dives, partaking in early morning bird surveys, and snorkeling
in the mangroves searching for freshwater manatee holes, to name a few activities. The
presence of a strong conservation ethic is reflected within Blue Ventures’ mandate and
the extent to which their volunteer programs reflect such a strong emphasis on
meaningful conservation primarily through their rigorous process data collection and the
Lionfish project.

<table>
<thead>
<tr>
<th>ISSUES</th>
<th>COMMODIFIED FACTORS</th>
<th>DECOMMODIFIED FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Experience</td>
<td>Consumption of the environment.</td>
<td>Ensures interaction with the environment.</td>
</tr>
<tr>
<td>Conservation Ethic</td>
<td>Not present</td>
<td>Underlies all operations and is guaranteed.</td>
</tr>
</tbody>
</table>

Table 7: Commodified and decommodified factors noted within the conservation-oriented impacts found within the case study

4.3.3 What do stakeholders think about neoliberal conservation strategies as instruments to achieve conservation goals in Belize?

According to Sandbrook (2013), advocates of market-based initiatives (MBIs) designed to promote conservation characterize them as empowering, while critics deem such projects to be exploitative. It would appear unlikely that a consensus will be reached between these two positions. This section provides the perspectives of some interviewees on market-based mechanisms for conservation, including volunteer tourism specifically.

In Sarteneja, all stakeholder groups that were familiar with the conservation operations of Blue Ventures were asked to provide their opinions on the notion of using financial gains resulting from MBIs like ecotourism and volunteer tourism to stimulate interest in conservation. Throughout the responses there was a range of positive feedback on MBIs with an overall absence of criticism of neoliberal conservation projects. To begin, at an organizational level, a BV staff member indicated that specifically within the
context of BV, the fees paid to the NGO by participating volunteers provide them with the necessary funding to carry out their research and conservation programs.

“BV Belize wouldn’t exist without volunteers, you wouldn’t be able to do the things that we do without the money they provide, without the effort that they bring. It would be just a bunch of people sitting on the beach, occasionally saying “We have no money for fuel, no money for equipment, no money for this.”” (S02)

One of the staff members at another local NGO reflected on the crucial value of ecotourism to the viability of Belize’s marine protected area network at the national scale. The tourism revenue generated through the park entrance fees at several popular marine reserves (including the famous Blue Hole and another site with migrating whale sharks) are not insignificant. For the marine reserves that are managed by the government, the activity of charging entrance fees is not very neoliberal in the sense of environmental governance. However, for the marine reserves that are co-managed with NGOs, the entrance fees support non-government organizations to run the parks, therefore perpetuating and outsourcing managerial responsibilities to actors outside the state. Such funding mechanisms provide these organizations with alternative sources of long-term funding, particularly in light of the minimal financial contributions put forth by the government.

At an even broader scale, beyond Blue Ventures and Belize specifically, several interviewees (n=6) noted the substantial capital that can be accumulated through business ventures like volunteer tourism and considered this an effective motivating factor to stimulate further interest in conservation issues. This was often attributed to the fact that monetary value is a term of measurement that is relatable and easily understood globally, as highlighted by a BV staff member:

“Sure I believe that nature should be conserved and protected based on its beauty alone but we live in a monetary based economy and not a resource based economy. If we lived in a resource based economy then every one would value the trees, the reef, the fish, everything, but we don’t, we live in a monetary based economy so what we value is money and when you value money at the end of the day you’ve got to turn it into a profit so until you change that, nature has to pay for itself, because nobody else is going to pay for it…” (S02)
Consequently it would appear that these viewpoints reflect the perceived necessity to usher these ecosystems into the market as a way of ensuring their ongoing protection, at least on a pragmatic level.

5. DISCUSSION

The results presented above will serve to illustrate the relationship between commodification and volunteer tourism impacts and ultimately consider what the findings represent for volunteer tourism and neoliberal conservation more generally. The discussion will be organized around three types of impacts discussed above: community-oriented impacts, volunteer-oriented impacts, and conservation-oriented impacts.

5.1 Community-oriented impacts

The above findings highlight concepts discussed in the literature regarding the recognition that volunteer tourism needs to be profitable directly or indirectly for the local communities that engage with these operations in order to be sustainable in the long run (Grimm, 2013; McGehee & Andereck, 2009). Respondents in all stakeholder groups identified economic, cultural, educational and social benefits for the community of Sarteneja.

According to Wearing’s (2001) spectrum, the retention of economic benefits within the community is one of the factors indicating that Blue Ventures is facilitating a decommodified volunteer tourism project. At the same time, because these same benefits are experienced most intensely by a handful of local families that are part of the Homestay program (n=13), this could be an indicating characteristic of a commodified model of volunteer tourism because the benefits of the project are being captured by a small number of elite and therefore not distributed equally.

Another distinguishing feature of a decommodified volunteer tourism project as determined by Wearing (2001) that was present among the responses pertaining to community impacts, was that the presence of BV was providing the opportunity for volunteers and community members (in this case primarily members of the Homestay
group) to interact ‘ethically’ and construct a ‘meaningful’ experience together. Volunteers had the privilege of boarding with a Belizean family and experiencing their culture first hand for two weeks, while simultaneously sharing their own culture with the families. According to Butler and Hinch (2007), cross-cultural experiences such as homestays can be a rich source of narrative, learning, appreciation, inspiration, cultural respect, solidarity and equality.

One of the major factors that undoubtedly helped facilitate this positive cultural exchange were the presentations given by the BV staff on the first day of the group’s arrival in Sarteneja. This presentation clearly outlined the expectations and rules that the volunteers needed to be aware of and adhere to while staying with their Homestay family. Conditions such as no smoking in the household, no staying out past 12am, and the intolerance of having guests stay the night were implemented in order to facilitate the respect of the family’s personal space and cultural expectations. This information was meant to build upon the pre-departure material made available to volunteers prior to their arrival in Sarteneja.

Except for a few responses from members of the Homestay group that indicated that they were sometimes overwhelmed by the amount of work associated with hosting volunteers, I found it surprising that the responses from local community members were overwhelmingly positive because of the negative impacts of volunteer tourism commonly depicted in the literature.

There are a number of factors that could have influenced the responses to reflect this positive result. To begin, the group of respondents that the researcher had access to may be one explanation of the positive bias. The number of community members that were interviewed who were not directly associated with Blue Ventures was small compared to the number of people who were interviewed that were related to the NGO. Members of the Homestay group directly benefit from the presence of BV and may have felt that it would not be wise to speak out against the organization in fear of losing those privileges. Time constraints and networking limitations prevented me from fully exploring the views of other stakeholder groups, such as the local fishermen.
Another factor that may have contributed to the positive perception of BV in Sarteneja among local residents is the fact that in 2009 the Sarteneja Tourism Development Plan was researched and published by the Sarteneja Tour Guide Association (STGA), Wild Tracks (a local NGO), and the Sarteneja Association for Conservation and Development (SACD). This investigative report set out to provide a strategic framework for future tourism activities and development within the community, and highlighted recommended strategies for responsible tourism development, priority funding requirements, and investment opportunities through a tourism assessment process. This plan was crafted with the intention of providing the community with a blueprint for change, helping to guide a shift away from a fishing-dependent economy that was (and is) on the decline and towards a tourism-based economy through the identification of specific steps and strategic actions (Wildtracks, 2009). The report was informed by four stakeholder workshops that were conducted by the hosting organizations in order to give ownership of the plan to the community. It is possible that because this model of tourism implemented by BV in 2010 shortly following the publication of the report in 2009, it fell in line with the desired form of a tourism venture outlined in the report. This may explain the reason why BV had such a positive response among the community as it fulfilled their self-identified needs.

An alternative possible explanation for the positive perception of the BV program held by the local community comes from a study by Diedrich and García-Buades (2009). Their study explored the role of residents’ perceptions of impacts as indicators of tourism destination decline in five coastal communities in Belize, noting that communities with older and larger tourism markets generally held more negative views of tourism. If local perceptions simply reflect the state of tourism development, it is possible that because of the recent establishment of BV in Sarteneja and the novelty of increasing tourism in the area that the community is in its “honeymoon” or “exploration” stages within the tourism area life cycle, thus explaining why people are still generally in favour of this new volunteer tourism operation.

The impact of the BV program on women in the Homestay group is another contributor to positive perceptions of volunteer tourism in the community. The findings
presented above strongly reflect the research carried out by Gentry (2007) examining the employment of Belizean women within the tourism industry. Gentry indicated that opportunities arise particularly within the alternative tourism sector allowing women to use gender stereotypes regarding their work (i.e. cooking and cleaning) in their favour, leading them to open guest houses and restaurants. In this case, the women within the Homestay group capitalized on those skills to join the group in the first place and some have expanded their operations and opened their own ice cream shop, create and sell souvenirs to the volunteers, or constructed additional rooms to their homes in order to attract more business. Gentry’s (2007) research also reflected on further benefits such as increased economic decision making within the household, social interaction, business ownership, levels of autonomy and empowerment, where otherwise they may have had little or no other employment alternatives. Although there are no references to gender equality specifically within Wearing’s (2001) spectrum, there is a section that makes room to determine the contributions to the community. By distributing financial resources to a group that does not otherwise have much access to them this denies the commodified characteristic of VT that would privilege only the elite groups in the community.

5.2 Volunteer-oriented impacts

The observations and results regarding volunteer motivations proved to support an overall commodified status for the BV volunteer program. Although the most commonly referenced motivation was to make a ‘meaningful contribution,’ primarily through the collection of biological data, this well-intended desire did not fully resonate with the observed and reported actions of the volunteers. As presented in the results section, according to the staff at Blue Ventures, it was not an uncommon occurrence for volunteers to cut their time short in the last week of the expedition when the volunteers had returned to the community. This early departure was often in order to continue their travels in the region instead of completing the community service and outreach portion, reflecting a ‘vacation-minded’ instead of a ‘volunteer-minded’ individual (Brown, 2005)
therefore emphasizing the expedition as a travel product to be consumed versus a ‘giving back’ experience that would be indicative of a more decommodified project. However, it should be noted that only one of the ten volunteers chose to leave during my time in the community, and the majority of this information stems from staff members’ past recollections of previous expeditions.

Although it is making valuable contributions to conservation outcomes in Belize, as will be discussed in the following section, volunteer data collection should ultimately be understood as a commodified characteristic. This opportunity to make a positive environmental impact is something that is being marketed and thus guaranteed in exchange for money and without this altruistic prospect the volunteers would not be as interested or satisfied. As a result, the volunteer program is playing into the market demand for ‘meaningful conservation’. The desire to make a meaningful contribution can certainly be considered an altruistic motivation, whereby one’s behaviour is motivated mainly out of consideration for others’ needs rather than one’s own. However, volunteer tourism is not strictly constructed of volunteering but also tourism, which is a form of consumption (Mustonen, 2007). Making a meaningful contribution (through data collection) can thus be considered both decommodified (‘giving back’) and commodified (‘buying the experience of contributing’).

The attraction of diving as part of the volunteer experience could also be considered a commodified characteristic of the Blue Ventures expedition. From the perspective of the staff members, the stakeholder group that has the highest exposure to the volunteers outside of the volunteers themselves, diving and related conservation elements are considered to be the highest contributing factors drawing volunteers to the program. Several volunteers expressed during the focus group that if they were able to stay in Bacalar Chico for the last week they would have enjoyed themselves more because they would have had more time to dive and as one of the volunteers expressed “people come primarily for the diving”.

Through the diving activities, volunteers are experiencing and visually consuming the environment around them. This form of aesthetic consumption of landscapes has more often been referenced in connection with ecotourism (see Meletis and Campbell
2007), but still applies to this case study because of the related nature-based connotations of the project. Ecotourism has been criticized for favouring Western environmental values and science, forcing tourist destinations to indulge tourist expectations of Edenic or pristine nature so that it is consumable (Gray & Campbell, 2007). The natural environment in this case study, the Mesoamerican Barrier Reef, is not presented entirely as pristine; a part of the attraction of the project is that the reef needs to be protected because of anthropogenic impacts and BV needs the assistance of volunteers in achieving these goals. However, the implicit notion of an Eden (albeit an Eden that has been damaged and needs to be saved) remains.

Finally, the volunteers’ desire to develop their own skill set and improve their social capital through gaining diving and data-collection experience are more evident as commodified characteristics. The promise to partake in these activities is secured through monetary transactions, therefore nature is being packaged or commodified in such a way that it can be marketed and consumed by ‘skill builders’. It is noted that training and skills development are necessary steps that precede the ability of volunteers to collect biological data and ultimately make contributions to larger conservation efforts.

Further along the subject of training, Callanan and Thomas (2005) classify volunteer tourism projects as shallow, intermediate, or deep. One of the factors that were indicative of a shallow program was the degree to which the organization sought volunteers with specific qualifications prior to their arrival. In the case of Blue Ventures, there are no specific requirements for volunteers. On several occasions this theme of SCUBA training prerequisites surfaced among staff members and volunteers. Respondents (n=3) speculated that if BV only accepted applicants that were already advanced open water certified they would have more time for data collection. However, BV is able to charge more money per volunteer if they offer to train them as well. This is an indication of commodification, as revenue generation (by bringing untrained, higher paying volunteers) is prioritized over volunteer skill.

5.3 Conservation-oriented impacts
Overall, stakeholder groups identified the collection of biological data and the establishment of the local Lionfish program as the two major conservation impacts resulting from the presence of BV in the community of Sarteneja.

The first conservation impact of data collection could be considered as both a decommodified and commodified factor along Wearing’s spectrum. To begin, the training process that shapes the volunteers’ ability to collect the targeted biophysical data is a significant undertaking; the first 2.5 weeks of the expedition are dedicated to lectures and testing. This temporal commitment requires a great deal of focus and commitment from both the staff and volunteers, with very few other tourist activities planned in that same time frame. This reality highlights the importance of the conservation objectives to BV, rather than an emphasis on the satisfaction of the volunteers in a typical tourist sense.

Volunteers are not pampered as privileged tourists but instead are held accountable to and reminded of their commitment to help Blue Ventures in their pursuit of useful biological data. This data then goes on to inform effective management practices of the Bacalar Chico Marine Reserve, which is governed by the Fisheries Department. The Ecosystems Unit Management Coordinator from the Fisheries Department stated that although he was initially skeptical about the data provided by Blue Ventures, because of negative encounters with similar organizations in the past (see Duffy, 2002) he was very pleased with the overall quality of data provided by BV. It should also be noted that BV and their volunteers are also involved in the frequent monitoring of aquatic bird species in the wetland areas on the Western side of Ambergris Caye and are providing migration and nesting information to private-developers who intend to develop the area for ecotourism. An emphasis on the quality of data generated (and not just the experience of data collection as a tourist activity) is indicative of a decommodified project.

The acceptance and implementation of volunteer-collected data in this way contrasts with major concerns in the academic literature regarding volunteer-collected data sets as they are often criticized for being unreliable because of inadequate training or supervision of volunteers (Darwall & Dulvy, 1996; Foster-Smith & Evans; Goffredo et
al., 2010). This tension will be explored thoroughly in the second manuscript of this thesis.

Where the collection of biological data is an outcome that is directly facilitated by the participation of the Blue Ventures volunteers, the Lionfish project is more of an indirect result of their presence. As mentioned previously, the profits from the BV Expeditions arm, which the volunteers pay into through their fees to partake in the six-week expedition, are transferred to the BV Conservation arm. These funds are used to support the conservation projects implemented by the BV Country Coordinator, including the Lionfish project. The goals of the Lionfish project are two-fold: (1) to provide alternative livelihoods for the national population of fishermen as traditional commercial stocks continuously decline; and (2) to reduce the ecological stress on the reef through removing the invasive Lionfish, which is devastating the coral reef ecosystem with its insatiable appetite for juvenile fish. Through a partnership with the Placencia Producers’ Cooperative Society (a fishers’ cooperative based in southern Belize), the Lionfish project itself can be considered an innovative win/win market-based solution aimed at providing both developmental and ecological benefits to Belize.

With the leadership of Blue Ventures, the establishment of an export-market with the United States was successfully achieved while I was in Belize. With the creation of a stable and reliable recipient for Belize’s supply of Lionfish at a comparable price to traditional yet dwindling commercial fish (e.g. snapper or grouper), fishermen can then transition to Lionfish more or less with confidence. As the popularity of Lionfish as a local delicacy continues to flourish nationally with ongoing support and promotion by Blue Ventures, local fishermen are encouraged and motivated to catch this environmentally-destructive species via the steady economic returns that they are able to earn as a result of their participation.

It is clear that Blue Ventures and their Belize-based staff are seriously invested in making the most effective use of their funding in order to create substantial and comprehensive contributions to the health of the local marine ecosystem, rather than simply generating a profit or focusing solely on selling a tourism product, therefore producing a strong decommodified result based on the presence of volunteer tourism.
6. CONCLUSION

Neoliberal conservation and volunteer tourism both seek to achieve the lofty goal of being able to “eat one’s conservation cake and have development dessert too” (Grandia, 2007, p. 480). Both of these phenomena depend on commodification as an essential process, as nature and experiences of it are transformed into marketable products. Critics of neoliberal conservation question whether the commodification of nature can achieve positive social and environmental outcomes, while those who focus on volunteer tourism suggest that it can only be evaluated positively when it can be characterized as decommodified. In contrast, I argue that volunteer tourism presents an excellent example of a form of neoliberal conservation that can achieve positive outcomes, in spite of containing commodified elements. Drawing on the perceptions of multiple stakeholder groups, my results suggest that both decommodified and commodified elements are simultaneously present in the case study of the Blue Ventures volunteer program in Belize and that both decommodified and commodified elements are perceived as valuable. Rather than decisively conclude whether Blue Ventures falls at one end of Wearing’s framework or the other, it is helpful to unpack how this case of volunteer tourism has brought together the seemingly opposed characteristics of conservation and the market, to consider the broader significance of this case for neoliberal conservation, and to investigate how volunteer tourism could and should be considered as a conservation strategy.

To begin, as discussed in the literature review, both neoliberal conservation generally and volunteer tourism specifically are promoted on the principle that environmental activities infused with profit-producing potential have a higher likelihood of attracting the interest of investors and as a result will be more successful. Certainly the presence of Blue Ventures has attracted the desired and necessary volunteer labour and financing for conservation projects that would not have been possible otherwise. Perhaps this notion of “selling nature to save it”, a core axiom of neoliberal conservation, can be viewed as a necessary evil, or the lesser evil when the alternative is worse altogether (i.e.
mass tourism or complete resource extraction). Duffy (2013) similarly reflects that this deepening and extension of neoliberal logics is not necessarily always entirely negative. This statement is in reference to her work with elephant tourism in Botswana, drawing on the important alternative fate tourism offers captive elephants that would be maladapted to life in the wild. However, if we were to fully accept such a positive contribution to conservation wholeheartedly and without criticism then we would be falling into the same trap of past authors who purely observed the positive rhetoric of volunteer tourism. Surely caution must be heeded to the ideological dangers of expanding the reach of the market into the natural world as these same dominant market forces and the desire for ever-expanding development are what has cornered the health of the natural world in the first place (Brockington & Duffy, 2010; Büscher et al., 2012).

The designation of elements of Blue Ventures as either commodified or decommodified was intended to bring to focus to these theoretical struggles. Volunteer tourism in this case appears concurrently as a form of the social and environmental exploitation promoting the wrong motives for biodiversity conservation, emphasizing dollar value rather than the intrinsic value of nature, (McCauley, 2006), while also being portrayed as a form of protection from this same market exploitation. It is important to acknowledge that volunteer tourism and neoliberal conservation contain both of these problematic and beneficial components and understanding the social and political intricacies that surround the case study sheds light on the notion that “productive conservation-development can and do occur, but they are rare and never straightforward or one dimensional” (Büscher, 2008, p. 5).

In this Belizean case study, nature is being sold in the sense that it is being compartmentalized and commodified so that tourists have the option to consume these expedition packages that provide them with close encounters with nature and valuable skills and experiences. However, the commodification of nature in this way enables Blue Ventures to contribute to the national conservation efforts discussed above. Further perceptions of volunteer and community-oriented impacts held by various local stakeholders are largely positive, contributing to an overall encouraging opinion of the volunteer project. Based on the results and discussion above it would appear these
positive perceptions do not seem to be directly correlated to the projects status of (de)commodification. Instead it is important to emphasize that the commodified factors of economic benefits for local families and skills for the volunteers are perceived as beneficial and essential alongside the existing decommodified factors. As a result, when developing a volunteer project ensuring that it is entirely decommodified should not be the ultimate goal. Instead, attention should be paid to guaranteeing that all stakeholders’ desired objectives are present, whether they are ‘decommodified’ or not.

As discussed throughout the manuscript, commodification of nature is the instrument that transforms natural goods and services into the consumable products that characterize neoliberal conservation (e.g. attractively packaging experiences in the environment to appeal to tourists). Table 7 illustrates the connections between broader debates concerning the benefits and challenges of neoliberal conservation and volunteer tourism, while comparing them to the results of the case study. Several themes apparent in Table 7 merit further discussion.

To begin, Blue Ventures’ operations have undoubtedly infused new types of resources (i.e. additional funding from fee-paying participants) into biodiversity conservation through their approach to volunteer tourism. As Igoe and Brockington (2007) highlight in their research, this technique is especially prevalent in developing countries (e.g. Belize) where the state may lack adequate resources to carry out conservation programs of their own.
<table>
<thead>
<tr>
<th>Community Benefits</th>
<th>Neoliberal Conservation</th>
<th>Volunteer Tourism</th>
<th>Case Study</th>
</tr>
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<tbody>
<tr>
<td>- Increased democracy</td>
<td>- Increase in the number of people involved in the process</td>
<td>- Provides direct and indirect financial benefits to the community</td>
<td></td>
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<tr>
<td>- Pulls resource users into new modes of active intensification to decrease the pressure on the environment</td>
<td>- Cultural exchange</td>
<td>- Increase in English proficiency in the Homestay households</td>
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<tr>
<td>- Achievement of the “development dessert” that is supposed to accompany the “conservation cake”</td>
<td>- Provision of new employment opportunities that are less dependent on natural resources</td>
<td>- Increase in environmental education and awareness (primarily among the youth of the community)</td>
<td></td>
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<tr>
<td>- Produces direct and indirect economic benefits for the host community</td>
<td>- Increase in the number of people involved in the process</td>
<td>- Increased employment opportunities for the women of Sarteneja that may not be available otherwise</td>
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<tr>
<th>Community Challenges</th>
<th>Neoliberal Conservation</th>
<th>Volunteer Tourism</th>
<th>Case Study</th>
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<tbody>
<tr>
<td>- Unequal distribution of benefits among stakeholders</td>
<td>- Benefits (especially economic) can be captured by a small group of elite</td>
<td>- Direct financial benefits captured by relatively small group of community members</td>
<td></td>
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<tr>
<td>- Can promote neocolonialism within host community (especially in the developing world)</td>
<td>- Can promote dependency of locals on external aid and disrupt local economies</td>
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<th>Volunteer benefits</th>
<th>Neoliberal Conservation</th>
<th>Volunteer Tourism</th>
<th>Case Study</th>
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<tr>
<td>- Further environmental concern and stewardship</td>
<td>- Increase environmental awareness, activism</td>
<td>- Volunteers desire to make a ‘meaningful’ contribution to conservation efforts</td>
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<tr>
<td>- Increase scientific capacity</td>
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<th>Volunteer Challenges</th>
<th>Neoliberal Conservation</th>
<th>Volunteer Tourism</th>
<th>Case Study</th>
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</thead>
<tbody>
<tr>
<td>- Literature on neoliberal conservation does not speak specifically about volunteers</td>
<td>- Humanitarian nomads are rethought of as privileged, narcissistic and self-indulgent voyeurs</td>
<td>- Volunteers seek to gain professional experience and improve their own skills</td>
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<tr>
<td>- No/limited skills required</td>
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Table continued from page 72

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<tr>
<th></th>
<th>Neoliberal Conservation</th>
<th>Volunteer Tourism</th>
<th>Case Study</th>
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</table>
| **Conservation Benefits**    | - New sources of funding/investment for conservation                                    | - Volunteers provide labour and funding for projects that may not otherwise be possible without that external support  
                              |                                                                                       | - Through volunteer participation, environmental messages can be disseminated and therefore extend the global conservation constituency | - Volunteers collect biological data on an understudied region  
                              |                                                                                       |                                                                                                     | - Their volunteer fees go towards supporting other conservation projects e.g. Lionfish Project |
|                              |                                                                                       | - Volunteers collect biological data on an understudied region  
                              |                                                                                       |                                                                                                     | - Their volunteer fees go towards supporting other conservation projects e.g. Lionfish Project |
| **Conservation Challenges**  | - Alter relationships between humans and the environment.  
                              | - Geographic and species bias regarding the volunteer projects offered is present  
                              | - Data collection could be considered a tourism product intended to attract more tourists rather than a genuine project |
                              | - Markets will distribute resources based on supply and demand and not based on their conservation merits | - Can exploit the very resource that creates the income and employment VT sets out to provide |

Table 8: A summary of the noted benefits and challenges of neoliberal conservation and volunteer tourism
Furthermore, neoliberal conservation, as noted above, can increase the democracy and participation by transferring increased responsibility for environmental governance to the hands of the local community (Brondo & Bown, 2011; Dressler & Roth, 2011). In this example, because of the smaller-scale and collaborative bottom-up approach to the development of their volunteer project, Blue Ventures has enabled the increased involvement of the local stakeholders (e.g. the development of the Sarteneja Homestay Group and partnerships with other local NGOs). Finally, Igoe and Brockington (2007) also highlight that through ecotourism (and by association, volunteer tourism as well), neoliberal conservation promises to promote environmental awareness for Western consumers by encouraging them to fall in love with the natural world through their direct interaction with it. This same phenomenon was discussed in relation to volunteer impacts as one of the benefits their participation would provide them as well as a way of extending the greater conservation constituency.

With regard to the challenges of neoliberal conservation as they materialized in the case study, few appeared. The interviewees did not mention explicitly concerns about the unequal distribution of economic benefits throughout the community, but I observed this based on the small number of local households (n=13) that were part of the Homestay group, however, other concerns highlighted in the literature did not surface. The altered relationship between the local people and the environment in a negative context was not directly observed. Instead, environmental outreach and education programs executed by the BV staff and volunteers have helped to shape environmental consciousness in the village, especially among the children and youth. Additionally, the perpetuation of neocolonialism through dependency on foreign aid was also not registered, but rather positive host-volunteer interactions and intercultural exchange were facilitated through the Homestay program. Overall, the volunteer tourism program being implemented by Blue Ventures appears to be achieving a certain degree of economic growth and community prosperity in Sarteneja, and biodiversity conservation in the BCNPMPR and beyond, through the Lionfish project. Despite the acknowledged presence of both commodified and decommodified factors, I conclude that with thoughtful
consideration of stakeholder objectives, volunteer tourism is a form of neoliberal conservation that can have overall positive environmental and socioeconomic impacts.

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Healthy Reefs Initiative (2012). Report Card for Mesoamerican Reef


The volunteer data collection experience: a tourism product for marine conservation?

Abstract

Despite previous and extensive academic inquiry into the capacity of citizen science to support conservation efforts, comparatively little research has explored the prospective contributions that volunteer tourism could make to improving environmental monitoring, even though both fields rely on ‘non-expert’ volunteers to collect biological data. This paper investigates the potential of volunteer tourism to support marine conservation efforts by examining Blue Ventures, a volunteer tourism operator in Sarteneja, Belize, and their approach to volunteer-collected data. The analysis is based on results from 38 semi-structured interviews, participant observation and a single focus group, and considers the perceptions of multiple stakeholder groups that had direct interaction with the Blue Venture’s volunteer conservation program. Research was conducted with the aim of identifying the advantages and limitations of this volunteer data collection program, with special emphasis on their training and testing procedures. Results from this case study suggest that NGO-run volunteer tourism projects can provide meaningful volunteer experiences and simultaneously support marine conservation if both the advantages and limitations of their approach to data collection are given critical consideration.
1. INTRODUCTION

The planet’s vibrant marine ecosystems offer a natural tourism attraction that calls to millions of people every year. Deep-sea fishing, snorkeling, sailing, and scuba diving are only a handful of popular marine tourism activities. In fact, the bulk of tourist industry growth worldwide is currently concentrated in coastal areas (Agardy, 1993; Cater, 2003). Ecotourism attracts high-spending tourists and estimates suggest the industry to be worth between US$10 and US$17.5 billion worldwide (Fennell, 2004). Beyond the noted economic returns, marine ecotourism offers a substantial range of benefits, including: generating funds for research on marine species and habitats (Goffredo et al., 2010; Mumby et al., 1995; Theberge & Dearden, 2006); helping to fund conservation programs (e.g. through entrance admission fees to marine protected areas (Halpenny, 2003); raising the profile of marine resources in the planning process (Agardy, 1993); providing an economic rationale for environmental stewardship (Clifton & Benson, 2006; Moreno, 2005); and providing a focus for the social and cultural regeneration of coastal communities (Diedrich, 2007). As Agardy (1993) notes, the relationship between tourism and marine conservation is bi-directional, indicating that while tourism provides incentives for protection, well-managed protected areas provide further incentives for visitation. As a result, tourism revenues provide further incentive for governments, tourists and local people to protect marine resources because of their value as product for tourist consumption.

Despite these advantages of marine ecotourism, the increased abundance of tourism development in coastal areas has also resulted in drawbacks for marine conservation. Authors such as Cater (2003) indicate that at the level of ecotourism development, not everyone operates on an ‘equal playing field’, indicating that there are those that have ‘hijacked’ the prefix ‘eco’ and misleadingly operate under the guise of being ecologically sound. Ecotourism operators may not be uniformly aware or stringent in their guidelines for relatively innocuous recreational activities that may result in human trampling or extraction of coral reefs and sediment suspension (de Groot & Bush,
In order to support the spike in tourism demand for marine-based activities, the rise in coastal infrastructure development (e.g. marinas and jetties, hotels, and roads) has resulted in habitat fragmentation, sedimentation, chemical pollution and the overall loss of marine biodiversity (Davenport & Davenport, 2006).

This paper considers volunteer tourism as a form of tourism that could better support a beneficial bi-directional relationship between tourism and marine conservation, in addition to providing economic and sociocultural benefits (see Manuscript A). Volunteer tourism is an umbrella term that encompasses a large variety of ‘altruistic’ activities undertaken while traveling. This paper focuses specifically on volunteer tourism projects with scientific and conservation elements, variously called ‘conservation tourism’ (Cousins et al., 2009b) ‘volunteer ecotourism’ (Gray & Campbell, 2007), or ‘research ecotourism’ (Clifton & Benson, 2006). The general term volunteer tourism is used here.

Ultimately, individuals participating in the volunteer tourism industry are presented with the opportunity to purchase or consume a ‘guilt-free’ experience with nature that has been purposely configured to conform to and satisfy the demands of a demographic seeking to make a “meaningful contribution” to the host communities and environment, to accrue further human and social capital, and to pursue their interests in conservation and passions for certain animals, all while traveling to and experiencing new destinations and cultures (Caissie & Halpenny, 2003; Cousins et al., 2009b; Douglas & Rollins, 2007; Galley & Clifton, 2004; Lorimer, 2010). In addition to satisfying the demands of specialization within the tourism industry, as well as providing paying volunteers with potential benefits stemming from their participation, volunteer tourism can also provide direct support for scientific research and conservation operations by contributing to data collection. In this way volunteer tourism is similar to citizen science, which has been shown to play an important role in enabling volunteers to contribute to scientific research and monitoring.

This paper argues that volunteer tourism has the potential to support marine conservation efforts, including through the collection of biological data, however, the
advantages and limitations of using volunteer tourism to support conservation must be critically assessed. Whereas other authors have explored the relationship between volunteer tourism and conservation practice by focusing on the funding provided by volunteer tourism (e.g. Brightsmith et al., 2008) or the validity of volunteer-collected data (e.g. Foster-smith and Evans, 2003), this paper draws on the case study of Blue Ventures Belize in order to explore the broader contribution to conservation efforts of volunteer-collected data.

The paper will begin by comparing the concept of volunteer-collected data as it is divergently presented in the literature concerning citizen science and volunteer tourism, in section two. A review of the similarities and distinctions between the two approaches to volunteer-collected data will demonstrate the gap in the literature that I am attempting to address when considering volunteer tourism as a promising force for conservation practices. Section 3.0 briefly describes the geographical location of the case study sites in Sarteneja, Belize, and the Bacalar Chico National Park and Marine Reserve, offers a brief synopsis of the training/testing regime of BV’s volunteer program, describes the host organization, Blue Ventures, and the nature of their volunteer tourism operations in Belize, and details the methods used. Section 4.0 presents the results of the case study, describing both advantages and limitations to the use of volunteer-collected data in this case. Finally, sections 5.0 and 6.0 offer conclusions regarding volunteer tourism as a possible champion for increased marine conservation and environmental management through the provision of volunteer-collected data.

2. VOLUNTEER TOURISM AND CITIZEN SCIENCE

Widespread ecological monitoring is considered a fundamental tool for effective environmental protection and conservation, informing responsible resource utilization and extraction practices. The rising demand for this ecological monitoring comes at a time when scientists are working to comprehend the ongoing, large-scale anthropogenic impacts as humans alter the Earth’s landscapes and seascapes (Bell et al., 2008; Douglas & Rollins, 2007). In order for ecological monitoring to be the effective tool it can be in
informing environmental management, large-scale data sets amassed over a long period of time are required to ensure understanding of current conditions and ecological trends. Unfortunately, the mounting pressure to produce time/ cost effective inventory methods for assessing the abundance, distribution and conservation status of species and habitat types outstrips the capacity of scientists to supply this data (Bell et al., 2008). Both citizen science and volunteer tourism have the potential to overcome this obstacle, by supplementing and contributing to scientist’s efforts to collect adequate data for efficient environmental monitoring.

2.1 Defining terms: Citizen Science versus Volunteer Tourism

According to the website Citizen Science Central, which is run by Cornell University’s well known Ornithology Laboratory, a reliable working definition of citizen science is a “project in which volunteers partner with scientists to answer real-world questions” (Riesch & Potter, 2014, p. 109). This definition could be used to describe a variety of volunteer-based projects, including volunteer tourism. The most common definition of volunteer tourism describes it as “volunteer[ing] in an organized way to undertake holidays that might involve aiding or alleviating material poverty of some groups in society, the restoration of certain environments or research into aspects of society or environment” (Wearing, 2001, p. 1). Thus, those forms of volunteer tourism that focus specifically on research (or data collection to inform environmental conservation and monitoring efforts) could be thought of as a type of citizen science.

Blue Ventures, the organization examined in this case study, self-identifies specifically as a “conservation tourism” organization. Conservation tourism has been defined as the “fusion of ecotourism and volunteer tourism, whereby visitors pay to work as participants on conservation projects” (Cousins et al., 2009b, p. 1). However, the term “volunteer tourism” will be used throughout the rest of the paper to indicate the industry within which volunteer data collection takes place. Volunteer tourism is still an appropriate term to use because it includes volunteer operations that hold research and conservation elements, which is not dissimilar from the definition of conservation tourism.
2.2 Historical Context of Citizen Science and Volunteer Tourism

The reliance on ecological data collected by volunteers is by no means a new phenomenon (Miller-Rushing et al., 2012). Used most prolifically in fields such as astronomy and ornithology, citizens have been observing and interacting with their natural surroundings while simultaneously providing critical labour for scientific surveys in a structured fashion as early as the end of the nineteenth century with projects such as the annual Christmas Bird Count, initiated in 1900. This project is facilitated to this day by the National Audubon Society, and includes 60,000-80,000 volunteers from all over North America (Bonney et al., 2009; Cohn, 2008; Dickinson, Zuckerberg, & Bonter, 2010). The advances and proliferation in communications, transportation and computing, such as new cell phone technologies, has allowed participation in the field of citizen science to expand tremendously along with the number of studies that rely on citizen scientists. Today the Cornell Laboratory of Ornithology, one of the most prominent long-standing institutions for citizen science research, has over 600 current projects on the subject spanning globe (Dickinson et al., 2010).

In contrast to citizen science, although the act of volunteering abroad is not a new phenomenon, the industry of volunteer tourism has received a comparatively recent spike in interest both from an academic standpoint and commercial interest with an estimated 1.6 million people currently taking part in the industry worldwide every year (Guttentag, 2009; Wearing & McGehee, 2013). The rise of volunteer tourism can be considered as part of a broader shift towards market-based initiatives to support conservation (see Manuscript A), which is characterized in part by a roll back in the governing role of the state (Castree, 2003).

2.3 Similarities between Citizen Science and Volunteer Tourism

A) Provision of additional labour

The professional collection of ecological data on a large scale is extremely costly and time consuming. Traditionally, the state would be held accountable for financially supporting scientific programs related to monitoring environmental issues. However, the
role of the state has diminished as neoliberal policies have spread (Castree, 2003, 2008). As the role of the state has been reduced, there has been an increase in the role of private and non-government organizations to fill this gap in environmental governance. Previously unlikely partnerships between business, communities and NGOs have flourished, as their shared responsibility for conservation becomes apparent (Igoe & Brockington, 2007). Tourism with nature-based connotations, most popularly ecotourism, and increasingly volunteer and conservation tourism, is one example of an industry in which this type of partnership has become common.

Both volunteer tourism and citizen science projects provide individual ‘non-experts’ with the chance to engage in the collection of biological data. Not only is this opportunity to participate in the typically impenetrable realm of scientific research available, but also the role that volunteers play as data collectors is crucial in both settings. (Brightsmith et al., 2008; Cohn, 2008; Darwall & Dulvy, 1996; Ellis, 2003; Miller-Rushing et al., 2012; Mumby et al., 1995; Riesch & Potter, 2014). Without the physical contributions of volunteer data collectors, it would be difficult and oftentimes impossible to accurately capture large-scale ecological events, such as migration, population dynamics and seasonal nesting patterns (Bell et al., 2008; Dickinson et al., 2010; Douglas & Rollins, 2007; Ellis, 2003; Mumby et al., 1995).

However the quality of the data being collected by the volunteers in both a citizen science and volunteer tourism setting is a component of the process that has come under a great deal of scrutiny. The degree to which the volunteers’ efforts collecting data can be considered useful relies greatly on the quality and validity of the data being collected, and is considered one of the most significant logistical constraints within volunteer-collected data (Bertella, 2011; Bonney et al., 2009; Crall et al., 2010; Ellis, 2003). Ensuring that the public can collect adequate data relies on three factors: providing clear data collection protocols; providing simple and logical data forms; and providing support for participants to understand how to follow protocols and submit their information (Bonney et al., 2009). This task is much easier said than done as the volunteer tourists typically come from very different academic and professional backgrounds and may have no previous experience collecting biological data. In order to ensure more accurate results, the supervision and
accompaniment of professionals throughout the training and data collection process is essential and greatly impacts the performance of the volunteers (Dickinson et al., 2010). However, as Douglas and Rolling (2007) reflect, few papers discuss the amount and nature of the training being offered to the volunteers in these conservation projects.

**B) Increased environmental involvement and stewardship among participants**

The chance to be included as a constructive member of a larger project contributing to the progressive understanding of threatened species and environments has tremendous appeal, drawing volunteers to projects where they are ‘needed’ (Grimm & Needham, 2012). Some proponents of volunteer initiatives (both citizen science and volunteer tourism) would argue that these conservation projects provide a bi-directional flow of benefits. Not only do they aid with essential data collection or other labor, an obvious advantage for those hoping to make informed and responsible resource management and policy decisions, but the volunteers themselves are also receiving benefits.

Through their participation in the data collection process, volunteers are applying scientific knowledge and hands on skills, emulating situated learning, to achieve a level of interaction with the environment they may never have had before. Opening them up to new experiences can cultivate deeper understanding and appreciation for healthy ecosystems and awareness of the perils they are so often faced with (Bertella, 2011; Cornwell & Campbell, 2012; Darwall & Dulvy, 1996; Foster-Smith & Evans; Toogood & Everett, 2013). As Toogood and Everett (2013, p. 618) emphasize that “participation goes well beyond simply being enrolled into a scheme, for many it becomes a serious pursuit that lasts a lifetime”.

Volunteer-data collection programs provide educators with a captive audience for their environmental messages to help build the global conservation constituency (Brightsmith et al., 2008; Campbell & Smith, 2006). Specifically within a volunteer tourism framework, by nurturing a healthy curiosity and respect for the environment through engaging experiences, this can influence the attitudes, beliefs and behaviors of the volunteers upon their return home and translate into increased involvement and
activism (Conran, 2011; McGehee & Santos, 2005; Rattan et al., 2012). Locally based data collection experiences for volunteers has also been documented to improve the appreciation and awareness of participants in well-known projects such as the Open Air Laboratory in England (Stagg & Donkin, 2013); and the Cornell Lab of Ornithology in the United States (Cohn, 2008; Miller-Rushing et al., 2012).

The involvement of volunteers in the collection of biological data not only acts as a way to instill sustained environmental interest and stewardship, but also has altered the traditional, segmented relationship between professional ecologists and the public (Bell et al., 2008; Bertella, 2011; Cornwell & Campbell, 2012; Dickinson et al., 2010; Foster-Smith & Evans, 2003). ‘Non-specialists’ or amateur scientists; people who participate in research studies, and who vary in age, experience and training (Theberge & Dearden, 2006, p. 337), were the primary drivers of scientific research prior to the professionalization of science in the late nineteenth century (Miller-Rushing et al., 2012). During the past 150 years, professional scientists have held a very privileged place in society’s popular consciousness, as the ones almost exclusively forming the development of the scientific narrative that has “shape[d] the very matter of our world and our ways of understanding it”, while the amateurs have been marginalized to the periphery (Miller-Rushing et al., 2012, p. 601; West, 2008).

Large, international players have recognized this palpable partition between the professional and amateur stakeholders as a systemic flaw in the sphere of conservation and have sought to encourage the increased involvement of the public in environmental monitoring and management as highlighted by the UN Environmental program and Article 13 of the Convention on Biodiversity (Cousins et al., 2009b; Goffredo et al., 2010). In the words of Goodwin (1998, p. 482), an increase in scientific literacy and public “participation implies, to some degree, a shift in the balance of power between technical and political ‘elites’ and ordinary people”.

2.4 Differences between Citizen Science and Volunteer Tourism

A) Volunteer tourism: a mechanism for external funding
Despite the similar outcomes of citizen science and volunteer tourism such as their dualistic ability to nurture the inclusion of volunteer data collectors as an ‘untapped’ labour resource while promoting auxiliary environmental appreciation and scientific understanding among the public as discussed above, there are notable divergences between the two that set them apart. To begin, the benefit often referenced specifically in relation to volunteer tourism and the labour that these tourists provide is the additional funding the volunteers supply through the payment of their fees to the host organization. The opportunity to volunteer is the activity or ‘product’ that attracts the participants in the first place and as a result the funding to the project. For example, the chance to collect data is what people pay to do and the money they pay in exchange for their participation is then used to fund conservation activities more broadly.

Oftentimes it is the funding that is equally or even more important than the labour alone because these tourism projects often offer crucial alternative means of funding for environmental work that may not be accomplished otherwise (Brightsmith et al., 2008; Campbell & Smith, 2006; Ellis, 2003; Lorimer, 2010). Frustration with short-term grant and budget cycles is causing the hybrid non-profits that are increasingly bearing the brunt of conservation initiatives in developing countries to progressively turn towards tourism as an economic coping mechanism (Ellis, 2003). By incorporating a successful volunteer tourism element into their plans, these organizations may be able to secure a steadier flow of financial resources allowing them to avoid depending on unreliable and difficult to obtain external sources of funding.

B) Location of data collection: familiar and exotic settings

Second, it is necessary to acknowledge that local contributions to ecological monitoring programs ‘in their own backyards’ do not directly translate to the variety of volunteer data collected through the volunteer tourism experiences such as those examined in this study. A typical citizen science project conducted within a volunteer’s community could consist of collecting water samples from a nearby stream that runs on their property (Miller-Rushing et al., 2012); or rigging up motion-activated cameras to monitor the animal populations along the Appalachian Trail (Cohn, 2008). On the whole,
citizen science tends to engage people with ‘familiar’ things they know (e.g. birders who count birds), whereas volunteer tourism tends to attract people who want to experience ‘exotic’ ecosystems and charismatic species that are unfamiliar to them (Cousins et al., 2009a; Lorimer, 2010). The exercise of collecting important biological data is similar in practice between citizen science and volunteer tourism, however the location where the data collection takes place (i.e. in their neighborhood or on a different continent) is an important distinction.

The Reef Environmental Education Foundation (REEF) is one of the better-known marine-focused organizations that engage the public’s assistance in projects such as Fish Surveys, having conducted over 180,000 (reef.org April, 29, 2014). They enlist the aid of people diving recreationally around the world to submit relevant ecological data to their online database. REEF is a unique example where the lines between a standard citizen science and volunteer tourism model are blurred. They are requesting the help of those diving/snorkeling to identify and document species of interest while they are out on their own accord, similar to how one might submit observational data on bird species after being out on a walk in the forest to the Cornell Lab of Ornithology. They also offer packaged conservation holidays to those who are interested in a ‘dive vacation that counts’, therefore capitalizing on both the citizen science and volunteer tourism characteristics to strengthen their positive environmental influence (reef.org, 2012).

Outlined above are the general similarities and differences between two distinctive yet quite comparable modes of volunteer-collected data: citizen science, which takes place ‘in your own backyard’, while volunteer tourism occurs away from home for a price. Another divergence between the two data collection strategies materializes as the degree to which they both have been evaluated for their utility in supporting science and conservation. Research has amply demonstrated the contribution of citizen science for informing science and conservation through the collection of biological data (Cooper, Dickinson, Phillips, & Bonney, 2007; Cornwell & Campbell, 2012; Greenwood, 2012; Miller-Rushing et al., 2012; Wiggins & Crowston, 2011). Contrastingly, the role of volunteer tourism in this respect has not been adequately explored.
This claim regarding the scientific contributions of volunteer-collected data is not to be confused with research that has already been conducted regarding the quality and viability of volunteer-collected data. Authors addressing the literature on citizen science and volunteer tourism have addressed these debates separately determining that volunteers can learn how to use equipment, read results and collect data that is as accurate, reliable and usable as that collected by trained professionals, with sufficient training and supervision both within a citizen science and volunteer tourism setting (Cohn, 2008; Douglas & Rollins, 2007; Foster-Smith & Evans; Mumby et al., 1995; Wiggins & Crowston, 2011). In addition, through this research I wish to provide further insight into the nature of volunteer collection training processes, which is seen as lacking in the literature (Douglas & Rollins, 2007) as well increase the academic presence of data collecting volunteers or “research ecotourists” as established by Galley and Clifton (2004).

In this paper I seek to attend to the above academic gaps, and answer the research question: How can volunteer tourism support marine conservation efforts through the collection of biological data by volunteer tourists? This research is designed to achieve the following objective:

To explore and compare stakeholders’ perceptions of the role of volunteer-collected data.

3. RESEARCH CONTEXT AND METHODS

In order to adequately address the selected research questions and objectives, I chose a qualitative case study approach. Blue Ventures, an organization that offers volunteers the opportunity to collect biological data while scuba diving in Belize, is the focus of this study. Given the strong presence of a well-developed ecotourism industry, and a strong network of marine protected areas and environmental conservation organizations, Belize is an ideal location to further investigate volunteer tourism and its potential contributions to marine conservation through volunteer-collected data.
I spent a total of twelve weeks in the field in Belize between May and August 2013. The majority of my time was spent in the northern fishing community of Sarteneja, Belize, where Blue Ventures has its headquarters, while two of those twelve weeks were spent at the Blue Ventures dive camp within the Bacalar Chico National Park and Marine Reserve (see Figure 1). Sarteneja has an estimated resident population of 1,800 making it the largest fishing village in Belize. Conch, finfish and lobster are the primary stocks that support the traditional harvesting efforts in the country but it has become widely recognized throughout Belize that there are too many fishermen competing for the same, and declining resources (Huitric, 2005). As a result of this reality, there has been a strong desire identified in the region to develop alternative sources of livelihood, one of those highlighted being tourism, as seen in the Sarteneja Tourism Development Plan (2009).

The Bacalar Chico Marine Reserve and National Park (BCMNR) was established in 1996 and is located off the coast of Ambergris Caye. The marine reserve itself is managed by the Belizean Fisheries Department and they have one ranger station that is located within the reserve. Both of the research sites can be seen on the map of Belize in Figure 1.

A total of 29 semi-structured interviews were conducted in order to gain insight into how different stakeholders perceived the BV volunteer program and the benefits and challenges of its data collection activities. The interviews were conducted with multiple stakeholder groups including: ten BV volunteers, six BV staff, nine members of the Sarteneja Homestay group, four staff members from other local NGOS, three government representatives (from the Belize Department of Fisheries and the Tourism Department), and six other community members from Sarteneja. The number of interviews conducted with certain stakeholder groups was limited by number of participants in that group (e.g. there were only 10 volunteers over the age of 18 who were willing to participate). In order to effectively identify who it was I should interview I relied on purposeful and snowball sampling in order to identify and contact participants with the characteristics and experiences necessary to fulfill the designed research objectives (Coyne, 1997). Although the voices of those who are not directly connected to the conservation practices of BV contribute to the perception of the NGO’s operation within the community, their
voices are not included here.

The data collected from the interviews was supported by participant observation and a single focus group. The focus group was used as a way to encourage conversation within the volunteer group to help people open up and clarify their views and uncover topics or themes that were not adequately addressed during individual interviews. Participant observation was selected as a supplementary methodology because of the inside perspective it offered not only to observe as a passive researcher but to become directly involved in a Blue Ventures volunteer tourism expedition and its associated actors for the first three weeks of six (as implemented by (Alcala, 1998; Coren & Gray, 2012; Cousins et al., 2009a; Grimm, 2013; Mostafanezhad, 2013; Nolan & Rotherham, 2012). I lived, ate and spent free time with the other volunteers, as well as chatted informally and completed daily tasks alongside BV staff and volunteers as well. The research received approval from the Research Ethics Board at the University of Guelph and all research participants gave their informed consent.

Interviews were digitally recorded, transcribed in full, and then transferred to NVivo (qualitative data analysis software), where the data were compiled and analyzed. I reviewed the transcript content for common themes, and then assigned each theme to a separate node. The collection and organization of the information in this way helped to highlight significant themes (Cope, 2010). Significant themes were identified and incorporated as part of an iterative process as commonalities began to arise between the respondents.

As mentioned previously, Blue Ventures was the selected volunteer organization that this research was based upon. Blue Ventures markets itself internationally as a global market leader in marine conservation tourism which moves “beyond conservation”, providing meaningful and lasting benefits for their partner communities by diversifying and strengthening local economies and empowering the local people to protect the environment.

One of the characteristics that make Blue Ventures unique is their operational model, which consists of two separate arms. On one hand there is BV Expeditions, and on the other there is BV Conservation. BV Expeditions is a registered company in
Scotland and it is through this arm that the volunteer expeditions are organized, and consequently through which the expedition fees are managed. Instead of generating funding for shareholders, the profits are reinvested into the second arm of BV’s social enterprise, BV Conservation. BV Conservation then is able to withdraw from this pool of consistent funding that is available as long as BV Expeditions continues to be profitable. This unique model affords BV more flexibility when it comes to programming and timing of project implementation and enables them to insulate themselves from the fluctuations and vulnerabilities of the typical donor driven cycle that NGOs rely on for their project funding.

3.1 Training and testing timeline

a) Week 1

The entire volunteer expedition is carried out over a period of six weeks. The first and last weeks are spent in the community of Sarteneja, while the remaining four weeks are spent entirely at BV’s diving camp within the Bacalar Chico marine reserve. The first week is of particular importance and is meant to prepare the volunteers with the necessary knowledge that they will require in order fulfilling their roles as data collectors whilst stationed at the dive camp.

Week 1 is primarily composed of lectures specific to the ID group (either fish or benthic). The aim of these lectures is to prepare the volunteers for the two tests (on the computer and in-water) that they must pass in order to be deemed ready to collect viable data while out on the reef in Bacalar Chico.

b) Weeks 2&3

Upon arrival at the dive camp the volunteers undergo another phase of training to prepare them with the physical skills needed to accomplish the data collection requirements. These modules include: the demonstration of basic dive skills in a semi-controlled environment; peak performance buoyancy dive; an in-water sizing module; practice species identification point-outs; and finally, at least one practice survey dive,
which acts as a dress-rehearsal and gives the BV field scientists to correct the volunteers’ mistakes.

c) Testing

Prior to their ability to collect biological survey data, the volunteers must first pass a number of computer and in-water tests to demonstrate their ability to collect satisfactory and reliable information. According to one of the BV staff members, the testing standards that the organization adheres to are higher than those used by government officials, which rely upon the Atlantic and Gulf Rapid Reef Assessment (AGRRA). This method of assessing coral reef health is very common in the region, yet only requires its users to achieve a 75% pass rate compared to 95% pass rate upheld by BV.

4. RESULTS

4.1 Advantages of Volunteer-collected Data within the case study

A) Provision of external labor

Although there is a research station operated by the Belize Department of Fisheries located within the Bacalar Chico National Park and Marine Reserve, there were only four personnel trained in biological data collection working there full time, and with an area of over 11,000 hectares to monitor, the quantity of data collection provided initially was not sufficient to support the Fisheries Department’s monitoring objectives. Responding to this gap in data collection, Blue Ventures conferred with the Fisheries Department upon their arrival in Belize in 2009 and established their research camp in BCNPMR to increase the quantity of data being collected in the region.

The very concept behind Blue Ventures’ model is that international volunteers pay a fee to guarantee their experience of collecting biological data on the Mesoamerican Barrier Reef. They fill the need for biological information by providing the necessary manpower to accumulate regular observations on the physical marine environment and its
targeted inhabiting organisms. After the volunteers have successfully completed their identification training and testing requirements, they have the responsibility to partake in several different types of data collection roles and procedures. This could be a more hands-off task in the position of a boat marshal where the volunteer is required to ready the boat with the necessary safety (i.e. first-aid kit and emergency oxygen) and scientific equipment; maintain visual contact with the dive groups; and take note of the physical conditions (e.g. wind direction, state of the ocean) in order to facilitate a safe and efficient data collection excursion. Alternatively, the volunteers also frequently fulfil the role of data collector, participating in the process under the supervision of an ‘expert’ or field scientist. After completing the required testing standards the volunteers conduct several fish belt surveys along a 30 meter measuring tape and free-swimming fish rover surveys to determine the quantity of target species at a given dive site. Point intercept transects are intended to document the amount of coral cover at a given dive site. The observations of target species (e.g. commercially relevant and threatened species like the Goliath Grouper *Epinephelus itajara* or Tarpon *Megalops atlanticus*) or megafauna (e.g. Nurse Shark *Ginglymostoma cirratum*) are also recorded by the volunteers if spotted on non-survey dives.

In addition to collecting the biological data (e.g. megafauna sightings, coral cover, target species sightings), the volunteers also played a role in condensing and transcribing the data upon returning to Sarteneja from the dive camp in the last week of the expedition. The volunteers filled out the electronic formatted data sheets under the supervision of a BV staff member. BV’s goal was to transform this volunteer-collected data into something useful rather than simply let the information gather dust without a meaningful end purpose, as indicated by BV’s Belizean Country Coordinator. “We write annual reports that we give to the Fisheries Department and provide them with management effectiveness advice on how to improve BCNPMR management.” (S01) (see Chapman, 2011; Jones, Ateweberhan, Chapman, Humber, & Gough, 2010).

**B) The provision of external funding**

The fees that the volunteers pay in order to participate in Blue Ventures’
expeditions go towards providing the necessary resources on the ground for running the expeditions (e.g. maintaining equipment and facilities), collecting data and facilitating community projects. Because Blue Ventures is a non-profit company, any profits are donated to the registered charity, Blue Ventures Conservation. According to the Country Coordinator, these financial contributions are

“…used to support the development of our community-based programs, allows us to bridge funding gaps between project cycles, conduct activities outside of a funded project cycle, address unanticipated needs, etc. For example, marketing assistance provided to restaurants in Belize starting to sell lionfish was funded through Blue Ventures Conservation.” (S01)

The Country Coordinator elaborated on another poignant example of direct support that the donated profits made to Blue Ventures Conservation provided in unpredictable circumstances. In this particular scenario, BV was able to secure the funding required to bring in a specialist from the FDA in the United States to certify a Lionfish Facility and provide consultation for the first shipment of Lionfish to the U.S. Instead of having to apply and wait for funding in order to be able to afford flying this specialist to Belize, consequently risking this timely opportunity to stimulate the market, the Country Coordinator was able to write a letter to the Board of Trustees for BV Conservation asking for funding to achieve the opportune conservation goal.

C) Promoting stewardship

All of the volunteers were asked to predict what sort of impacts their participation in the BV Belize expedition in general would have on their lifestyle upon their return home and what that change would look like. The responses gathered fell under two categories: a) predicted changes in behaviour; and b) predicted changes in perspective. It is important to note that these estimations were made by the volunteers in relation to their participation in the project as a whole and were not in response to the data collection process specifically, although that is unmistakable factor of the expedition. The most commonly mentioned changes in behaviour pertained to a desired shift in resource consumption practices. A portion of the volunteers noted that they would
focus on reducing their intake of fish and seafood in response to their exposure to the realities of dwindling commercial populations.

“Before this I would’ve ordered snapper in a restaurant and not thought anything of it but since they’ve told us about that and the effects on the reef, we should perhaps look at more sustainable fish like tilapia or lionfish and that’s probably the most useful thing I could tell people.” (V04)

Some volunteers also expressed their desire to spread the word upon their homecoming about alternative, more sustainable fish markets such as the Lionfish project currently being promoted by BV.

Multiple volunteers indicated that their involvement with the project altered the perceptions of their lifestyles. Themes that were emphasized revolved around their increased appreciation for the amenities and privileges that they had access to in their lives such as running water. The combination of spending four weeks at a modest research station and experiencing two weeks of village life within a developing country provided a stark contrast to their everyday lives in the Western world, thus increasing their awareness of unequal global economic distribution. In addition, several of the volunteers referred to their participation as providing them with useful insight into future potential career paths in marine conservation.

Furthermore, speaking from my own personal sentiments as well as those reflected in the volunteers, improved fish and benthic species identification was a skill that was highlighted as a positive byproduct of the volunteers’ training and data collection process. The ability to classify species taxonomy while in the water added another layer of enjoyment and fulfillment to the dives. Not only did the volunteers find it more interesting to be conscious of the biodiversity surrounding them, it also instilled within them a sense of pride to be capable of distinguishing the creatures at a family and species level. More specifically, improved fish and benthic species identification was a skill that was highlighted as a positive byproduct of the volunteers’ training and data collection process. All of these components are expressed by one of the volunteers.

“I gain a better appreciation of marine life and now I know lots of fish species and we did one point out with benthic and coral and algae and that was really enlightening because before hand you look at all of the different fans and don’t really think much of it but once you know how varied they are and how they’re all
very different biologically, some of them are animals, some of them are plants. It’s quite interesting really because now I can appreciate it so much more and if I do go diving again I’ll have a much more enriched experience then I would have done otherwise.” (V05)

4.2 Limitations of Volunteer-collected Data within the Case Study

A) Ensuring the quality of data

The high quality of the volunteer-collected data gathered by participants in the Blue Ventures Belize program is one of the organization’s most significant features. The training and testing standards are very rigorous and the acknowledgement of this reality within the conservation community in Belize is what has made it possible for BV to make the broader contributions it has to other organizations. However, like other volunteer tourism operations generating volunteer data, there are a number of challenges within BV’s training and testing process that influence the quality and effectiveness of the data collection process and as one BV staff blatantly reflects, “in Belize sometimes the perception of volunteer-collected data is quite Mickey Mouse and people are very suspicious of it.”

An assessment of challenges faced by Blue Ventures in their data-collection process may help to produce further insight into ongoing or future volunteer initiatives. However, not only are there limitations associated with the data collection process, but also in this case study the final role/utilization of the volunteer-collected data is uncertain and requires further reflection. I did not trace the precise cycle incorporation of the volunteer-collected data from the source to its final and inherently assumed implementation at a larger scale to inform improved conservation practices, however, several stakeholders did indicate several final outcomes of the data. The implications of this assumption will be further examined in the discussion section.

Training challenges:

A) Length of expedition
A common theme that overlapped multiple concerns regarding the training procedure of the volunteers, making it all the more challenging, was the six-week time limit that the entire expedition took place within. “They don’t get enough practice, however, you only have got 4 weeks time, ain’t enough time. Time is a big constraint; time, number of dives and weather, and equipment to actually do the job properly.” Volunteers and staff members alike recognized the challenge of covering such a dense amount of information in the first week of the expedition, spending three to four hours inside listening to lectures, while simultaneously adjusting to a new climate and culture.

“Lectures and explaining things; people don’t listen, people are tired in the first couple of days…” – BV staff member (S02)

“My one thing is that it’s very full on and there’s always something to do and I’m very tired but that’s the only thing I maybe don’t like.” – BV volunteer (V04)

“Draining, tiring, days are very long obviously I knew that coming into it but I didn’t realize how much we were doing in one day.” – BV volunteer (V07)

The length of the expedition was also perceived as posing challenges not only pertaining to training schedules but also gathering the desired biological data, which is the ultimate goal, after training was complete. A handful of the volunteers felt that “We could have been utilized more”, stating that “I think overall I probably did two or three surveys and then I helped with other things like taking photographs but in a way you have a silly amount of surveys for the time I spent training” (V04). Based on the responses of the volunteers within the focus group, they would have appreciated a greater opportunity to contribute further to data collection given that they had spent so much time training to be adequately qualified for that task and it had been a primary factor attracting them to the project in the first place. However, it should be noted that unpredictable conditions such as inclement weather and faulty equipment (e.g. boat engines and air compressors), played a role in delaying the data collection schedule, a common theme throughout other expeditions as well.

B) Dive Training
It is not uncommon for volunteers to have no previous experience collecting biological data prior to their arrival, let alone collecting data while diving. Of the ten volunteers on this expedition only 3/10 had previously attempted data collection while diving either during academic courses or preceding expeditions elsewhere. Ensuring the volunteers have adequate diving skills in addition to the required identification standards, adds another layer of difficulty to the in-water data collection process as the volunteers not only have to be able to identify and record a wide range of species at a glance, but also maintain control of their equipment, buoyancy and air supply. The ability of the volunteers to accomplish and demonstrate the necessary diving skills while at the Bacalar Chico dive camp was a point of concern for one of the more volunteers with more diving experience.

“Personally, I think that taking people that have never dove before and throwing them into an open-water course and then an advanced open water course and then saying they’re good enough to dive, survey dives, according to me is a bit iffy. I mean it’s a cool way to get people diving but I’m really not sure how good they’re going to be.” (V08)

One government official from the Fisheries Department also expressed this notion that while doing a fish survey, controlled buoyancy is a challenging yet critical and for an individual who has not dove before, BV’s training period may be too short to master those essential skills.

Highlighted concerns also pertained to the already demanding training schedule and the additional burden that diving certifications may pose on the overall data collection timeline. Not only is the successful demonstration of the necessary diving skills (e.g. maintaining a stable buoyancy while counting the presence of certain species and writing them on an underwater slate) during data collection an issue, but when dive training is combined simultaneously with the already demanding species identification, this could slow down the ability of a volunteer to successfully reach the data collection stage, therefore impacting the conservation outcomes that BV may have. During the expedition, the BV Dive Instructor had ten different certifications to accomplish including a combination of: PADI Open Water, Advanced Open Water and Dive Master. In addition to the scrupulous species identification training, volunteers completing diving
certifications had to study and write tests in order to meet the PADI diving protocols. One of members of the Blue Ventures staff team, emphasized the cost of taking untrained volunteers and taking the time to train them up to the level of PADI Advanced Open Water; the minimum certification level a volunteer must have in order to be deemed ready to collect data.

“I thought ‘well surely if we just took only advanced divers we could get a lot more science done’, but the other staff say that from experience the people that they train up; without being too vain, because they’re learning in a science environment they end up being much better divers for surveying anyway in the end.” (S04)

C) The label of ‘volunteer’

Another element that complicated the execution of the training schedule from a BV staff point of view was the difficult and somewhat awkward label that the paying volunteers hold. The volunteers are not strictly clients or customers who expect their every whim to be fulfilled; they are also responsible for fulfilling their conservation/ data-collection responsibilities, but to what degree the staff can encourage or ‘force’ the volunteers to study/ train is a blurred line and can oftentimes provide tension within the group. A quote from one of the BV staff clearly illustrates this frustration.

“You have to push people all the time to learn their fish, ‘You came out here, you signed an agreement, you get on with it’, however, that goes back into that client thing and you can’t talk to people like that who are spending $2000, you have to be nice, but you have to push people and some people don’t survey.” (S02)

**Testing challenges:**

According to several staff members, the high testing standards that Blue Ventures holds their volunteers accountable to, is one of the most defining characteristics of their operations.

“We have extremely high standards for data collection. Our data is collected with such rigorous standards for collection and testing, it’s such a high standard. So I think that’s what sets us apart.” (S01)
“All of our data goes in as volunteer data and if you compare it with other volunteer data with other volunteer organizations then I think as a standard we’re probably one of the highest.” (S05)

Each volunteer in order to participate in the benthic or fish identification surveys must be able to pass both the in-water identification and the computer-based identification tests with a minimum 95-98% pass rate. Blue Ventures had in their possession a number of different versions of their computer-based test with varying photographs in order to ensure that volunteers were not shown repeated images and memorizing the images rather than correctly identifying the species. Regionally, the Atlantic and Gulf Region Rapid Assessment or AGRRA is the most commonly used survey standards utilized in Belize by the government and other scientists, which has a pass rate of only 75%.

Despite these high standards, one of the BV staff members expressed their frustration with the underrated perception of volunteer-collected data within the conservation sphere in Belize.

“The hardest thing is constantly having to prove that your data is of a good standard… At every presentation that I give that uses the volunteer based data I start off by explaining the training that people go through so that everybody knows how high the standards are… We need to prove that our data is a good quality in order for it to be recognized and that enables us to contribute to all of these [projects]. ” (S01)

A) ‘Lucky’ volunteers

Despite the recognition that Blue Ventures does hold such a high testing standard for their volunteers, there are doubts among the field scientists regarding the true accuracy of the identification results within the tests as well as after the volunteers have passed their required tests. The element of luck surfaced in two separate interviews with BV staff from the field.

“You give them as much training as you can and hope that they pass, however, generally it’s probably a bit of a fluke, they got a good test, they got a good picture, if it had been a different day a different picture they probably would’ve failed. I reckon those who pass are right on the border of failing, even if they pass
with 100%. It’s not a knock on the volunteer’s ability it’s about the time you have available to you.” (S02)

“There’s also an element in luck with these tests they just might be very lucky, I mean I hope not but that’s my biggest worry. You can’t really know for sure how well they manage to get accurate data. But then again that can happen with researchers as well.” (S05)

Further and more frequent testing intervals were suggested by one of the staff members as a way of ensuring the ongoing high quality of data instead of relying on the one single round of identifications tests at the beginning of the volunteers’ time in Bacalar Chico. Other methods that the staff implement to manage the quality of data being submitted by volunteers is to reject the data they view as questionable, which is a decision typically made as a staff team; ask the volunteers to redo the survey altogether or assign volunteers to less challenging tasks such as holding the surface maker buoy or taking photographs so that they are involved but not directly compromising the quality of the biological information being collected, therefore “trying to maximize their benefits and minimize their poor abilities.”

4.3 Volunteer Data to improved conservation, not an inherent transition

One of the major justifications for the presence of BV specifically within the BCNPMR in the first place is because of the reserve’s remote location, therefore creating a physical obstacle limiting the access of professional biologists to the area on a regular basis. Having Blue Ventures stationed there permanently with a regular influx of volunteer data collectors enables the consistent compilation of information that would otherwise be logistically very time consuming and expensive to gather. A quote from one of the BV staff highlights the important role that BV is playing quite concisely.

“The whole reason why we’re there is because it’s clearly one of the ignored reserves to a certain degree because it’s remote, because it’s out of sight out of mind and I hope that we’ve played a role in bringing it more into everyone’s thoughts to a certain degree.” (S01)

Throughout the interviews with those equipped to reflect on the implementation of Blue Ventures’ volunteer-collected data, a number of conservation outcomes or uses
were discussed. To begin, the volunteer-collected data is used to inform the annual reports that Blue Ventures publishes and are available on their website. Primarily, the Country Coordinator is responsible for conducting the necessary data analysis, sifting through the information collected, transcribed and submitted by volunteers to make a coherent account of the state of the reef based on the information collected at the various dive sites within Blue Ventures’ jurisdiction. These reports are then made available to the Fisheries Department combined with management effectiveness advice for the marine reserve (i.e. changing the zonation boundaries to better reflect their ecological needs and anthropogenic uses).

Second, the data collected by BV volunteers also contributes to the information shared within the Belize National Coral Reef Monitoring Network, which BV was invited to participate in by the Fisheries Department. At these meetings national decisions are made regarding reef conservation and use, and BV uses their amassed knowledge of the reef via their volunteers to inform their positions in those meetings. According to BV’s Country Coordinator, one example of a situation where BV was able to leverage their consistent volunteer monitoring to change policy was when they suggested during the Coral Reef Monitoring meetings that the national minimum standard for surveying be raised from eight to ten mandatory surveys per site annually. That suggestion was informed by BV’s high surveying rates compared to the low survey rates of other organizations that were then less capable of contextualizing large fluctuations in the reef’s ecological well being because of the large temporal gaps in their data.

Third, multiple staff members noted the Healthy Reef Initiative as one of the main benefactors of the volunteer data. The Healthy Reefs for Healthy People Initiative\(^4\) is an international, multi-institutional effort that tracks the health of the Meso-American Reef, the human choices that shape it and our progress in ensuring its long-term integrity. The data given to them from BV provides them with a brief summary snapshot, which they then compile into quarterly reports and distribute on a larger scale, disseminating the knowledge to the public and policy makers alike.

Furthermore, the Ecosystems Unit Management Coordinator for the Fisheries Department indicated that they have a good working relationship with Blue Ventures. BV provides them with “comfortable data” and fills in important data gaps for the Department. Furthermore, it was expressed that BV and their data may have a crucial role to play in the future of the country’s resource management policy.

“We have looked at the data that BV has been giving us and it’s very good, it’s comfortable data and we have a very good working relationship…. Organizations like BV it generate information in fact the data provided will assist us when we do the modelling for example for what is the real value of the resources, of the marine resources out there... the data generated will be helpful.” (G01)

Despite the above list of perceived conservation contributions and verbal confirmation from both the BV staff and the Belize Fisheries Department as the recipients as the volunteer-collected data that it is going towards promoting a larger marine conservation agenda, this research cannot confirm the degree to which volunteer-collected data is actually used to inform policy. In fact, on two occasions BV staff members expressed their doubt regarding the utility of the volunteer-collected data. One stating that they “hope very much that they [the Fisheries Department] use them [the management reports].” Another BV staff member similarly reflected their dissatisfaction with the implementation of the information provided by BV to the department.

“Personally I feel like the reef side of things, the monitoring, I feel a lot of that isn’t really going anywhere or changing anything. The Fisheries department keeps getting our data, and from what I see they’re not really changing anything or the zoning we’ve recommended, it’s just very very slow progress.” (S03)

It is important to highlight that although the information is being collected and there are perceptibly good intentions associated with this process; this does not inherently transition directly into improved managerial decisions. Additionally, the Fisheries Department makes decisions based on more than just data- they also must consider stakeholder input, political priorities, etc. However, just because there is no current evidence that proves volunteer-collected data is leading to directly to policy, this does not necessarily indicate that the data is being ignored. Because of BV’s young age as an
organization in Belize it may take time to tell more decisively what the regulatory impacts they have had for marine conservation efforts.

5. DISCUSSION

Based on the results summarized above it is clear that all stakeholders involved believe volunteer-collected data and knowledge generation are crucial elements of volunteer tourism in this case study for two reasons: (1) without it, the volunteers would most likely not be as interested in the project and as a result the project would be left with fewer physical and financial resources; and (2) the majority of respondents agree that it is playing a role in informing conservation practices and policy.

5.1 Volunteer-collected data as a tourism product

Ideally, all volunteer tourism projects with authentic conservation elements would have the capacity to satisfy the demands and interests of the volunteer tourists while simultaneously providing meaningful ecological information that could be applied practically to broader conservation objectives. However, if the conservation/data collection component does not appeal to tourists, interest in the project will lag and negatively affect the ability of the volunteer tourism operators to collect the desired biological data.

In this case study, one of the major reasons why the volunteers had selected Blue Ventures in the first place was because of the perceived opportunity they would have to make a valuable contribution to marine conservation efforts in Belize via their participation in data collection practices in the Bacalar Chico National Park and Marine Reserve (see Manuscript A for more details). This perception was mobilized and informed by promotional material regarding the reputation of BV as a legitimate institution committed to impactful and strategic conservation endeavours, (e.g. the list of award they have received: Tusk award for conservation, 2013 and ‘Best volunteering organization’ in 2012 as determined by the Youth Travel Awards). de Groot and Bush (2010, p. 1058) pay tribute to this notion of international recognition as it pertains to their
research on entrepreneurial MPAs stating “existing international and national governance arrangements, such as awards and certifications by global organizations can enhance incentives for good [business] practices by enhancing visibility in the marketplace.”

As this perception of BV as a legitimate purveyor of marine conservation was further unpacked, it became apparent that this quality of experience was a significant factor in the volunteers’ choice to participate in the expedition. This led me to determine that without the perception of BV as a notable leader of meaningful volunteer tourism with tangible conservation applications, the volunteers would not be equally supportive or interested in such a project, and may not take part altogether. However, overall the stakeholders that I spoke with agreed that Blue Ventures is having a conservation impact. This would lead to implications regarding the viability of the project as one of the staff members indicated that Blue ventures would not exist without the money and effort that the volunteers represent.

Cousins et al. (2009b) has explored the academic content on this topic of volunteer preferences for authentic and genuine conservation products within volunteer tourism. Cousins et al. (2009b) research evaluating commercial conservation tourism through their interviews with UK tour operators and their counterparts in Southern Africa sheds light on the fierce competition within this lucrative and rapidly growing tourism industry and the struggle to strike a balance between meeting tourist demands for appealing interactions with charismatic megafauna in attractive locations and concurrently developing worthy conservation projects that will make the volunteers feel useful and needed. A step too far in the direction of a project that is overtly superficial, lacking true conservation merit or a tendency towards a volunteer project that is excessively scientific, risks losing the potential business of future volunteer tourists. One of the tensions that surround this difficult balance between authentic yet attractive conservation volunteer opportunities, is the harsh reality that in the end if the project is not desirable for one reason or another, the data will not be collected because there will be no interested volunteers participating in the experience.

Cousins et al. (2009b) goes on to further her argument focusing on ‘conservation science as commodity’ in the context of international volunteer tourism. She explains
that the scientific element attached to volunteer projects like Blue Ventures may not represent a complete divergence from traditional conservation strategies, but rather that the commodification of a tourism product with research characteristics “can be seen as a new medium through which values about nature are translated into scientific priorities” (2009b, p. 14). The achievement of satisfactory scientific credibility for a volunteer project allows it to authenticate itself by appearing both objective and legitimate and “science… is transformed from a power fetish to a commodity fetish”, therefore masking the relationships underlying the process of production (Kosoy & Corbera, 2010).

In the context of Blue Ventures, the commodification of the natural world and the development of volunteer tourism were discussed thoroughly in Manuscript A. Now we see that both nature and science are commodified in this form of volunteer tourism. The environment (i.e. the coral reef in this case) is being packaged and promoted as a tourist product with the attached guarantee that the paying volunteers will have the chance to participate as data collectors therefore contributing to a noble and legitimate environmental cause.

5.2 Volunteer-collected data as a tourist product: presumed conservation implications

As the results section highlights, Blue Ventures’ volunteer conservation expeditions present a suite of advantages and limitations regarding the collection of volunteer data along the Mesoamerican barrier reef. On one hand, the volunteer-collected data facilitated the provision of crucial external funding labour that may not have been available otherwise. On the other hand, just because authentic data collection was a characteristic perceived to be present in the expeditions and in the end presented to the Fisheries Department, this does not directly indicate that conservation practices will be automatically be ameliorated as a result of this increased supply of biological data.

Scholarly research pertaining to volunteer tourism and the concrete and traceable incorporation of volunteer data is outweighed by research pertaining to its counterpart, citizen science. Authors such as Greenwood (2012) have probed citizen science organizations like the long-standing British Trust for Ornithology (BTO) and their contributions to environmental policy. One of the many examples provided in
Greenwood’s (2012) research is the Wetland Bird Survey orchestrated by the BTO which not only supplies indices of national wintering populations but also information on individual sites that is of great importance for management purposes. The U.S. National weather service cooperative observer program (US NWS) turned to volunteers to help collect weather data that was of particular importance to the economy. The outcome of their data resulted in one of the most important long-term data sets in North America—essential for agriculture, development planning and recent assessment of climate-change patterns (Miller-Rushing et al., 2012).

Because I did not follow the entire volunteer data collection and implementation cycle, I am unable to state explicitly to what degree the volunteer-collected data is utilized explicitly. The quality of the volunteer data overall is considered by the majority of stakeholder groups to be of a high caliber and the fact that it is considered amenable at a governmental level is a large accomplishment for Blue Ventures in and of itself.

Despite this uncertainty, according to the responses from the BV staff—the donors of the information, and the responses from the interviewed Fisheries department personnel—the recipients of the information, the data collected by the volunteers is perceived to be more than just a tourist product meant to provide a desirable experience for volunteers. Giving the data to the Healthy Reefs Initiative and the Fisheries Department is seen as a way to legitimize and justify the volunteer collection process. These contributions are certainly nothing to be overlooked. Blue Ventures is making significant efforts to continuously fortify the quality of their data and seeking meaningful outlets for their data.

5.3 Volunteer-collected data as a tourism product: what can we learn from citizen science and vice versa?

According to Wiggins and Crowston (2011, p. 1), citizen science is an “open movement, with collective goals addressed through open participation in research tasks”. With an emphasis on unobstructed participation this definition contrasts starkly with volunteer tourism and data collection. Volunteer tourists as previously noted “tend to be
middle and upper class, well educated and globally conscious individuals who sympathize with global justice agendas” (Conran, 2011, p. 1456). With this emphasized participation of those privileged enough to be able to afford the financial cost of the trip itself, the foregone income (because the volunteers are not being paid for their involvement) and the time off work to volunteer, it would appear that only a specific demographic of fortunate citizens can afford to experience volunteer tourism.

Two of the benefits of volunteer-collected data encounters within volunteer tourism that relate to this case study are the provision of hands-on involvement in the scientific process as well as an increased interest in environmental stewardship. If only a certain group of people can afford to participate in volunteer tourism, an entire other economic group is being left out in the process. In the case of Blue Ventures Belize, it is foreign citizens that are being engaged directly in the expeditions, not local residents. It would be interesting to investigate whether the costs of production of a volunteer conservation experience could be lowered in such a way that would enable greater participation akin to that of citizen science as a way of investing in the human capital of the host community.

Cousins et al. (2009b) also calls for further inquiry should be made into ways in which organic and locally responsive models of conservation tourism operate. However, a caveat must be provided with research into development of this sort because of the ‘tourism’ component that is inextricably linked to volunteer tourism. If data collection opportunities were opened to more people; therefore presumably providing more ecological data and increasing environmental awareness and participation in the scientific process for a larger number of people, then the carrying capacity of that location would have to be taken into consideration so that the natural health of that site was not jeopardized in the process of trying to save it.

If volunteer tourism can inform citizen science, then citizen science can also take a lesson of value away from volunteer tourism. As previously reflected, one of the major divergences between these two fields is that predominantly citizen science does not create a ‘data collection product’ to be consumed on the free-market in the same way that volunteer tourism does. For volunteer tourism the creation of a desirable tourist product
can ultimately lead to the provision of further funding for conservation initiatives through the accrual of a continued base of volunteer tourist participation (Brightsmith et al., 2008; Ellis, 2003; Mumby et al., 1995). If it were possible for citizen science organizations to design a ‘product’ that would leave the volunteers with attractive skills, qualifications or certifications in exchange for a small monetary value (i.e. a membership or participation fee) then perhaps this could be converted into modest funding for conservation, similar to that of volunteer tourism.

6. CONCLUSION

Human-induced threats to the health of the ocean are causing us to critically reflect on the ways in which we alter the planet’s landscapes and seascapes. With such a fervent emphasis on development in coastal areas combined with the ecologically significant and sensitive habitats located there, the need to mitigate those harmful impacts to ensure the future wellbeing of the region is imperative. Alternative measures such as ecotourism and volunteer tourism have thrived as mechanisms attempting to curb the negative impacts of tourism development while satisfying the innate curiosity to discover and explore unknown places. However, in some circumstances volunteer tourism can take another step further not only as a means of enjoying or consuming the environment in a more conscientious manner, but also as a way of ‘giving back’ through carefully designed programs. In this paper, volunteer tourism has been explored as a potential mechanism for wider marine conservation applications in hopes of filling the scholarly and practical gaps associated with this flourishing branch of the nature-based tourism industry. Overall, this case study of Blue Ventures Belize suggests that NGO-run volunteer tourism projects can ultimately provide meaningful volunteer experiences and simultaneously support marine conservation, if both advantages and limitations are given critical consideration.

In the results section above, the advantages of BV’s approach to volunteer-collected data were presented. The provision of additional labour and financial support for further conservation efforts as well as increased environmental stewardship and
involvement in the scientific process were the advantages associated with participation in
a volunteer tourism context. Several limitations were also identified regarding the
challenge of guaranteeing a high quality of biological data being gathered by the
volunteers due to BV’s training and testing process as well as the challenges in
determining the specific marine conservation outcomes the volunteer-collected data were
informing. It is important to recognize and examine these factors for the important role
they play in shaping the nature of a volunteer project.

As presented in the discussion, the development of a volunteer tourism product
that is equally balanced to satisfy a) the recreational expectations associated with a
‘conservation holiday’ in an exotic location, as well as b) creating a product where the
data has meaningful applications at a larger scale, is a difficult feat yet necessary to
overcome in order to assure a successful operation.

The tourism industry, one of the largest industries in the world, has the potential
to play a role in furthering environmental understanding and appreciation on a global
scale. This is an exciting prospect that deserves further academic inquiry. Future research
could track the direct influence that volunteer-collected data resulting from a volunteer
tourism context may have on wider marine conservation applications could aid in
providing further insight and support for ‘non-expert’ data collection, therefore
potentially increasing the constituency for projects similar to Blue Ventures.
Furthermore, it would be an interesting future topic to investigate the difference between
the experiences of volunteer tourism versus a citizen science approach to the collection of
ecological data and the socio-ecological implications of this contrast.

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January/ February.
5.0 CONCLUSIONS

5.1 Thesis summary

This thesis builds on recent research to show the potential of neoliberal conservation to positively contribute to marine conservation efforts through volunteer tourism, drawing on the results of a case study of Blue Ventures. The overarching research question guided me in investigating whether volunteer tourism as a form of neoliberal conservation can be considered a market-based initiative with meaningful outcomes for biodiversity conservation and community well being. In order to successfully answer the research question three research objectives were presented: to offer an evaluation of the case study of volunteer tourism, based on multiple stakeholders’ perceptions of the project and the identification of commodified and decommodified elements; to explore and compare multiple stakeholder perceptions of the role of volunteer-collected data; and to take a holistic approach to this research by identifying how stakeholders perceive volunteer tourism as a positive or negative force in their lives.

Manuscript A was designed to satisfy the first research objective by asking the question: How do perceptions of a volunteer tourism project’s commodification relate to perceptions of its impacts? The findings demonstrated that despite the presence of both commodified and decommodified factors, volunteer tourism makes an overall positive contribution to the community of Sarteneja. Various community, volunteer and conservation-oriented benefits and disadvantages were documented. On a local level, economic development through direct financial contributions via the Homestay program and indirect financial contributions attributed to the increased expenditure of tourist dollars in the village were major findings. Furthermore, the presence of Blue Ventures’ volunteer project has contributed to community prosperity through the increased amplification of environmental awareness and education, improved English proficiency in the Homestay households, and the alternative employment for women in the community that may otherwise have no other sources of substantial livelihood. Among
the volunteer tourists, their participation in the data collection was highlighted as a way of improving their awareness of marine conservation issues as well as informing predicted shifts their behaviour and perspective once they returned home from the expedition.

The degree to which volunteer tourism contributed positively to conservation efforts was explored briefly in Manuscript A and in greater depth in Manuscript B. In Manuscript B the research question was narrowed down to ask: How can volunteer tourism support marine conservation efforts through the collection of biological data by volunteer tourists? The labour and funding resulting from the implementation of Blue Ventures’ volunteer program were seen as major catalysts for conservation efforts in two ways. First, the high quality volunteer-collected data were perceived as crucial for informing broader conservation initiatives (e.g. the Healthy Reefs Initiative) and helpful for governmental decision-making. Second, the fees paid by the volunteers to participate in the marine conservation expeditions were able to support additional conservation programming (e.g. the Lionfish project).

Identifying and supporting ways in which tourism as one of the world’s largest industries can not only reduce its negative impact on the environment and host community but also contribute positively to conservation efforts through volunteer tourism is an enterprise that warrants further understanding. As highlighted in the overall introduction, strategies that enable us to better understand the damaging anthropogenic impacts that are negatively influencing the planet’s health are needed to help mitigate these effects. The dual conclusions that volunteer tourism a) can have an overall positive impact despite the combined presence of commodified and decommodified factors and b) that volunteer-collected data gathered by volunteer tourists can support marine conservation efforts as illustrated in this case study with Blue Ventures are encouraging findings that have the potential to contribute to these efforts through the positive reinforcement of the volunteer tourism industry.

5.2 Contributions of Research
5.2.1 Practical contributions

If current trends in tourism development continue, the already booming volunteer tourism and nature-based tourism industries can be expected to continue to grow. Instead of dismissing volunteer tourism as yet another exploitative form of sustainable development solely because of the ties the industry has to capitalism and neoliberalism, the potential that volunteer tourism holds for instigating positive socioeconomic and environmental change at the local scale has been demonstrated and should be acknowledged in order to mitigate the consequences of further expansion. The ‘magical recipe’ for creating the ‘ideal’ volunteer tourism operation that would concurrently achieve biodiversity conservation, economic growth and community prosperity has not yet been formulated, however, drawing on some of the strengths exemplified in the above case study and other authors it is possible to discern guidelines to help direct the creation of volunteer projects in the future.

Clifton and Benson (2006) investigate the nature and causes of socio-cultural impacts of volunteer tourism in Indonesia. Their work establishes that the provision of economic impacts for the local residents can generate support for volunteer tourism. In order to achieve long-term viability of a volunteer project, full consideration of community desires (not only economic) should be fully acknowledged and pursued. Duffy’s (2002) reflection on a Belizean case study from 1997 considers the less-than ideal development of a similar conservation-diving volunteer tourism operation where the needs and desires of the community were neither integrated nor fulfilled, and the operation was eventually shut down. Evidence from both case studies further underlines the significance of a healthy relationship with the host community in order to achieve an ‘ideal’ volunteer project. Blue Ventures’ presence is felt most immediately among the female members and their households through the Sarteneja Homestay group via the direct economic benefits in exchange for their hospitality while hosting BV’s volunteers. Thoughtfully constructed conservation initiatives by BV with broader implications in the community (e.g. the Lionfish Project and the alternative fishing market being developed; or the class time in local schools and community presentations and workshops) also show that the organization is interested and invested the well being of Sarteneja and Belize.
In addition, the interaction of volunteers and the local host families in a tourism context can foster a reciprocal and mutually beneficial relationship between the two groups, and should be considered a goal of a volunteer tourism project rather than an inherent result of sending volunteers overseas (Raymond & Hall, 2008). Both Wearing (2001) and McIntosh and Zahra (2007) emphasize the important role this intercultural exchange can play in deconstructing colonialist perpetuations of typical host-tourist interactions and cultural stereotypes. The Homestay group acted as the principal vehicle for intercultural exchange between the community and the volunteers, providing opportunities for both groups to practice and improve their proficiency outside of their first language (i.e. English or Spanish); and share their cultures with one another (e.g. through meal preparation or attending cultural events), therefore helping to build mutual understanding and respect over the two-week time period of the volunteers’ stay.

Brightsmith et al. (2008) demonstrate that volunteer projects that support scientific research can create benefits such as developing guidelines for tourism around sites to minimize negative impacts on target species, and disseminating that volunteer research to other conservation agents; while simultaneously helping host organizations to fulfill their requirements of creating ‘true ecotourism’ that will serve to attract patronage from prospective volunteers. Similar to the case described by Brightsmith et al (2008), the Blue Ventures volunteers perceived the opportunity to contribute to conservation and conduct research as meaningful, which results in financial support for the host organization and enables the continuation of their operations. Ultimately, using hands-on conservation experience through data-collection and the aesthetic consumption of the environment as strategies not only to satisfy tourist demands but to secure resources to fulfill local conservation and community needs can be considered necessary components of an ‘ideal’ volunteer tourism operation, despite their commodified nature.

Altogether, including direct and indirect economic inputs for the host community, the provision of a meaningful foundation for cross-cultural exchanges between the host community and volunteers, and the development of a desirable tourism product are all components on an ‘ideal’ volunteer tourism project as informed by the case study of Blue Ventures in Sarteneja, Belize. The evidence provided throughout this thesis has also
illustrated the commodified and decommodified characteristics present in this volunteer tourism project. However, overall I argue that a market-based conservation initiative has the potential to be ‘ideal,’ despite the presence of commodified characteristics, if those interacting with the volunteer tourism program perceive it as locally embedded, meaningful, and valuable, as illustrated in the case study of Blue Ventures Belize.

5.2.2 Scholarly Contributions

This thesis serves as a way of expanding the academic understanding not only of volunteer tourism in facilitating conservation efforts through the market, but also the role that different actors play in supporting these operations. In the absence of strong state oversight, hybridized or multi-sector led governance has become an increasingly prevalent approach to environmental management (McCarthy, 2005; Novellino & Dressler, 2009). In this case study, the private sector, community groups, non-governmental organizations, and the Belizean government all play a role in the development of Blue Ventures’ model for volunteer tourism.

Other researchers such as de Groot and Bush (2010) and Bottema and Bush (2012) explore the role of the private sector in market-based initiatives for marine conservation. They investigate entrepreneurial marine protected areas (EMPAs) and how tourism entrepreneurs (i.e. dive operators) can instill a long-term vision of marine conservation, funding and management in the absence of effective state regulation. Bottema and Bush (2012) determined in their comparison of two case studies in Indonesia that organized cooperation between private sector operators strengthens their ability to self-regulate the dive sites or EMPAs but ultimately government involvement still remained central to inducing compliance among other resource users, without which the legitimacy of the marine conservation efforts through the EMPAs was questioned.

My research reflects this notion, emphasizing that volunteer tourism as a similar market-based initiative can contribute to marine conservation, however, the role that the government plays in this volunteer tourism project is crucial to its perception as a legitimized operation. The endorsement of the biological data collected by Blue Ventures’ volunteers by the Fisheries Department, the initial consultation between the
two actors preceding the establishment of BV’s operations, and shared interests in the effective management of the BCNPMR are all factors that link the two together through volunteer tourism to reach their marine conservation goals. Ultimately, Blue Ventures still relies on the Fisheries Department to use the volunteer-collected data to inform decision-making and management of the BCNPMR.

Not only did the role of the state surface as an integral component of Blue Ventures’ volunteer operations, but the NGO’s role as an influential agent neoliberal conservation is also of interest. NGOs have emerged in the last decade as the principal advocates and implementers of alternative tourism such as ecotourism and volunteer tourism (see examples in (Conran, 2011; Gray & Campbell, 2007; Mostafanezhad, 2013; Wearing, McDonald, & Ponting, 2005).

In the literature, NGOs have been both revered and condemned for the role that they plan in expanding the capitalistic tendrils of neoliberalism. Chapin (2004) documents the increasing concerns surrounding the conduct of three of the world’s largest nonprofit conservation organizations: the World Wildlife Fund, the Nature Conservancy and Conservation International. Unambiguous conflicts of interest are identified, specifically regarding the political exclusion of the indigenous people whose land these organizations are trying to protect. Furthermore, there is unease concerning the strong dependence and convoluted partnerships that are being forged between these large NGOs and the corporations and governments that are responsible for the environmental encroachment the NGOs are advocating against. As a result, the wellbeing of the local communities and landscapes that these large NGOs commonly advocate for are sidelined, and the raising of funds becomes the priority thus throwing skepticism onto the effectiveness of large-scale NGOs when implementing environmental/development programs (Chapin, 2004).

Additionally, Tomazos and Cooper (2012) reflect on the debatable ethicality of volunteer tourism operators, which are often NGOs, profiting financially from arranging for people to go and provide assistance for a worthwhile cause. Some argue that monetary gain is inappropriate in the realm of altruistic intentions, whereas other postulate that organizations committed to philanthropic mission statements have a bottom
line to protect and fees accrued from volunteers help to protect this and promote further projects (Tomazos & Cooper, 2011).

Within the context of this research, the complexity of environmental governance is significantly increased because there are private sector and not-for-profit aspects contained within the same NGO, Blue Ventures Belize. Their ability to simultaneously capitalize on the traditional features of a business (i.e. Blue Ventures Expeditions) as well as a charity organization (i.e. Blue Ventures Conservation) is a unique characteristic that I believe ultimately contributes to the success of their volunteer conservation program.

Previously discussed advantages such as the NGO’s ability to avoid the entrapping cycle of grant writing and seeking external funding, provides BV with a degree of certainty regarding the longevity of their conservation work. The status of NGOs can also prove to afford them a relatively high level of trust among the host communities, wielding scientific credentials, which they can apply outside the reach of centralized government (Cousins et al., 2009b). Furthermore, when volunteer tourism is implemented by NGOs this may provide a more adequate framework by which to navigate the complex relationships and interactions between the host community and volunteers on the ground (Wearing & Ponting, 2009).

As Wearing and McGehee (2013, p. 124) assert,

“Research has indicated that volunteer tourism organizations can either be considered to have the potential to act as catalysts for positive socio-cultural change or facilitators of neocolonialism and dependency.”

Although I do not agree that volunteer tourism must be labeled as either ‘good’ or ‘bad’ as the above statement indicates, based on the research presented in this thesis I believe that volunteer tourism organizations can also be positive forces of change for biodiversity conservation in addition to catalysts for positive socio-cultural change. Blue Ventures is perceived as a constructive stimulant for conservation as facilitated by their thorough approach to volunteer tourism, ensuring the meaningful dissemination of strategic economic and socio-cultural benefits to their host community, and their rigorous volunteer data collection methods that enable their broader contributions to biodiversity conservation in Belize.
5.3 Limitations and future research

There are several limitations to this research that must be acknowledged. First, this thesis is limited in that its sample of participants was not entirely inclusive, as a result of limited time and resources. Specifically, I did not have the opportunity to interview community members outside of the sphere of direct influence with Blue Ventures, partly because their operations have a large influence in the small host community. Further investigation could fill this gap, by focusing exclusively on the perceptions of volunteer tourism held by a wide range of community members in Sarteneja. Second, the research for this thesis is based upon the information and observations collected during a single expedition with Blue Ventures. Although I only observed one expedition, I did have the opportunity to meet the following group of volunteers and they were not extraordinary in form or function to other expedition. Finally, it is recognized that the findings are limited in the sense that this was a case study. Yet as Grimm and Needham (2012, p. 491) point out, the results from their case study on volunteer tourism in Ecuador “cannot be generalized to all situations, but they can provide a general understanding of similar groups or phenomena because human behavior is rarely unique to a single group”. The findings from this case study offer insights that should be broadly relevant to other cases of volunteer tourism, particularly other cases that include diving, marine conservation, homestay programs, and/or NGO host organizations.

This thesis captures a snapshot of a volunteer tourism project on the ground. However, even since my departure from Sarteneja in August 2013, Blue Ventures has continued to evolve, offering different volunteer projects in addition to their marine conservation expeditions (e.g. Lionfish dive trips and 2-4 week community expedition). There is a need for additional research that tracks the precise contributions that data from volunteer tourism are making at the policy level, to provide a better understanding of the industry’s contribution to conservation. Pursuit of this avenue of research would further inform the ways in which neoliberal conservation is embodied in practice. In addition, a comparative analysis between the fields of citizen science and volunteer tourism would prove to be insightful concerning the degrees to which volunteer participation shapes the perception and behaviour of volunteers post-involvement.
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Appendix A: Participant Consent Form (Interview)

CONSENT FORM TO PARTICIPATE IN RESEARCH

You are asked to participate in a research study conducted by Alex Meeker, a Masters student from the Department of Geography at the University of Guelph, Canada. The research is being conducted under the supervision of Dr. Noella Gray.

If you have any questions or concerns about the research please feel free to contact Alex Meeker at ameeker@uoguelph.ca or Dr. Noella Gray at (519) 824-4120 ex. 58155 or grayn@uoguelph.ca

If you volunteer in this study, we would ask you to do the following:

1. Participate in an in-person interview that will last approximately 45 minutes to 1.5 hours (scheduled at your convenience).
2. With your permission, this interview will be audio recorded in order to create a transcript of our conservation.

This research intends to explore the intersection of two increasingly prevalent conservation strategies: marine protected areas (MPAs) and volunteer tourism. Marine protected areas are parks established for the purpose of protecting marine resources and habitats, while volunteer tourism is a form of tourism in which volunteers participate in research and conservation activities. By examining the interactions between these two social phenomena, the researcher aims to better understand their combined impact on marine conservation efforts and the communities who engage with them. Ideally this research will result in contributions to the academic fields of volunteer tourism and marine conservation and inform better practices in these fields, both in Belize and elsewhere.

You may feel uncomfortable answering questions about specific experiences with which you have been involved.

In order to avoid/lessen this discomfort please be aware:

- Your involvement in this study is voluntary
- You may withdraw your participation at any time throughout the interview and the study itself without repercussions.
- You may skip any question(s) that you feel uncomfortable answering without repercussions
- The researcher is working independently as a research assistant for the University of Guelph and is not in the direct employment of Blue Ventures or the government

Once the interview is complete the audio files will be transferred to a password protected, encrypted computer and deleted promptly from the original recording device. Within a two-week time frame the recordings will be transcribed and the original audio recording will be deleted from the researcher’s computer. Any physical audio or written files or backup devices will be locked and secured within the researcher’s field site accommodations and be transported back to the
University of Guelph upon completion of the research term. Here the collected data will only be accessible to the research and her faculty advisor. There is a possibility that you may be contacted for a follow-up interview by the researcher. You may also request a follow-up interview in the event that you have more information you wish to share.

Portions of the interview transcript may be used in future publications (in the form of direct quotations). However, your name will not be used in reference to the selected quotations. Comments may use broad descriptive statements such as “a member of the community of Sarteneja felt that volunteer tourism promoted greater economic growth”. The researcher will take measures to ensure your confidentiality within the final publication but it is still possible that specific details you use in the interview will indirectly identify you. Please be aware that once the information has been published your words cannot be retracted.

It is advised that you avoid providing specific details if this is a concern for you. For this reason, complete confidentiality is not possible within this research project. As a result please ensure that you are sharing details and information that you are comfortable making public.

The data collected for this study will be stored at the University of Guelph for seven years, after which it will be destroyed.

If you have questions regarding your rights as a research participant, contact:

Research Ethics Coordinator
University of Guelph
437 University Centre
Guelph, ON N1G 2W1

Telephone: (519) 824-4120, ext. 56606
E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236

SIGNATURE OF RESEARCH PARTICIPANT

I have read the information provided for the study “The Contribution of Volunteer Tourism to Marine Conservation: A case study approach in Northern Belize” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

____________________________________  ________________
Signature of Participant                Date

PHOTOGRAPHIC CONSENT

I have read and understood that the researcher may use photographs and/or video clips that include pictures of me in her final research documents and/or presentation. I give my consent for her to use these pictures/videos.

____________________________________  ________________
Signature of Participant                Date
Appendix B: Participant Consent Form (Focus group)

CONSENT FORM TO PARTICIPATE IN RESEARCH

You are asked to participate in a research study conducted by Alex Meeker, a Masters student from the Department of Geography at the University of Guelph, Canada. The research is being conducted under the supervision of Dr. Noella Gray.

If you have any questions or concerns about the research please feel free to contact Alex Meeker at ameeker@uoguelph.ca or Dr. Noella Gray at (519) 824-4120 ex. 58155 or grayn@uoguelph.ca

If you volunteer in this study, we would ask you to do the following:

3. Participate in a focus group with other volunteers that will last 45 minutes-1.5 hours. The researcher will moderate this exercise.
4. With your permission, this focus group will be audio recorded in order to create a transcript of the conservation.

This research intends to explore the intersection of two increasingly prevalent conservation strategies: marine protected areas (MPAs) and volunteer tourism. Marine protected areas are parks established for the purpose of protecting marine resources and habitats, while volunteer tourism is a form of tourism in which volunteers participate in research and conservation activities. By examining the interactions between these two social phenomena, the researcher aims to better understand their combined impact on marine conservation efforts and the communities who engage with them. Ideally this research will result in contributions to the academic fields of volunteer tourism and marine conservation and inform better practices in these fields, both in Belize and elsewhere.

You may feel uncomfortable talking about a specific project or experience with which you have been involved.

In order to avoid/lessen this discomfort please be aware:

- Your involvement in this study is completely voluntary
- You may withdraw your participation at any time throughout the focus group and the study itself without repercussions. However, because of the group nature of focus groups your words may not be able to be removed from the transcript.
- You may refrain from answering any question(s) that you feel uncomfortable answering without repercussions.
- The research is independent from Blue Ventures and the government; the researcher is not affiliated with either group.

Once the focus group is complete the audio files will be transferred to a password protected, encrypted computer and deleted promptly from the original recording device. Within two weeks, the recording will be transcribed and then the original audio recording will be deleted from the researcher’s computer. Any physical audio or written files or backup devices will be locked and secured within the researcher’s field site accommodations and be transported back to the...
University of Guelph upon completion of the research term. Here the collected data will only be accessible to the researcher and her faculty advisor. Portions of the focus group transcript may be used in future publications (in the form of direct quotations). However, your name will not be used in reference to the selected quotations. Comments may use broad descriptive statements such as “a member of the community of Sarteneja felt that volunteer tourism promoted greater economic growth”. The researcher will take measures to ensure your confidentiality within the final publication, however, because of the public nature of focus groups, your fellow participants will witness your participation and therefore the confidentiality of your comments and identity cannot be guaranteed. As a result please ensure that you are sharing details and information that you are comfortable making public. Out of respect for your fellow participants, please do not disclose who was present and what was said during the focus group. In addition, please be aware that after the focus group has been conducted, the responses of single individuals cannot be removed or deleted from transcripts.

The data collected for this study will be stored at the University of Guelph for seven years, after which it will be destroyed.

If you have questions regarding your rights as a research participant, contact:

Research Ethics Coordinator
University of Guelph
437 University Centre
Guelph, ON N1G 2W1

Telephone: (519) 824-4120, ext. 56606
E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236

SIGNATURE OF RESEARCH PARTICIPANT

I have read the information provided for the study “The Contribution of Volunteer Tourism to Marine Conservation: A case study approach in Northern Belize” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

____________________________________  _______________
Signature of Participant                Date

PHOTOGRAPHIC CONSENT

I have read and understood that the researcher may use photographs and/ or video clips in her final research documents and/or presentation that include me. I give my consent for her to use these pictures.

____________________________________  _______________
Signature of Participant                Date
Appendix C: Participant Consent Form (Participant Observation)

STUDYING THE INTERACTION BETWEEN VOLUNTEER TOURISM AND MARINE CONSERVATION

PURPOSE OF THE STUDY

You are asked to participate in a research study conducted by Alex Meeker, a Masters student from the Department of Geography at the University of Guelph. The research is being conducted under the supervision of Dr. Noella Gray.

This research intends to explore the intersection of two increasingly prevalent conservation strategies: marine protected areas (MPAs) and volunteer tourism. Marine protected areas are parks established for the purpose of protecting marine resources and habitats, while volunteer tourism is a form of tourism in which volunteers participate in research and conservation activities. By examining the interactions between these two social phenomena, the researcher aims to better understand their combined impact on marine conservation efforts and the communities who engage with them.

If you have any questions or concerns about the research please feel free to contact Alex Meeker at ameeker@uoguelph.ca or Dr. Noella Gray at (519) 824-4120 ex. 58155 or grayn@uoguelph.ca

PROCEDURES

If you volunteer in this study, the following will be undertaken with your permission:

1. The researcher will be taking part in activities alongside the other Blue Venture volunteers while noting significant experiences and occurrences within the group. The researcher may record observations regarding the volunteer experience, such as attitudes expressed or interactions between volunteers and other stakeholders.
2. The researcher may not always be taking physical notes in the moment but will record pertinent observations later on.
3. The researcher will take note of significant group activities and occurrences during ‘working’ hours as well as during ‘non-working’ or socializing hours. However, any information that is divulged or activities that are observed in the shared sleeping quarters among the volunteers will be considered private and will not be documented.

PARTICIPATION CONSENT

If you do not wish for notes to be taken regarding your actions and participation in the volunteer activities, please notify the researcher. Additionally, if you give your consent for the researcher to document your participation, but change your mind, you have the right to withdraw your participation. At this time any notes relating to your activities or statements will be removed and not used in any future publications resulting from this research.
Appendix D: Interview Guide

INTERVIEW GUIDES

Volunteers:

1) How did you hear about Blue Ventures (BV)?
2) Have you taken part in any other international volunteer tourism projects before?
   a. If so, how has BV compared so far to previous experiences?
3) Do you volunteer currently or have you volunteered in the past in your home country?
   a. If so, how is this similar or different to the volunteer work that you are undertaking here in Belize?
   b. If not, what are the factors that draw you to volunteer internationally/ keep you from volunteering at home?
4) Can you tell me about your interest in marine conservation and sustainable development?
   a. Are these themes that you were interested in before volunteering with BV?
   b. Do you foresee your experience here with volunteer tourism and BV as potentially impacting your lifestyle back at home?
      i. If so, why and in what form would this change take?
      ii. If not, why not?
5) What were your motivations for choosing to participate in a volunteer project such as Blue Ventures? What were the factors that ultimately attracted you to BV specifically?
6) How are you enjoying the experience? What about it do you like? (Like the best). Is there anything you dislike?
7) Are there any benefits or disadvantages for you in participating in this program?
8) Do you have any previous experience conducting biological surveys?
9) How do you feel about the quality of training that the volunteers have received so far to prepare them for the ‘real’ biological surveys?
   a. Has it been adequate?
   b. Is there anything that you feel was lacking in the training and should be included in the future?
10) Are you aware of how the data that the volunteers collect is utilized?
11) How important is it to you that the data are used for marine monitoring or management?
12) In your opinion, does BV contribute to the local community of Sarteneja?
   a. If yes - how? Do you consider this to be a meaningful contribution? Why? Are there ways in which BV could contribute more to the community?
   b. If not – why not? What would you like to see BV do differently in the community?
13) In your opinion, do you feel that the volunteer tourism activities offered by BV are contributing positively or negatively to marine conservation efforts in Belize?
   a. What do you think are some of the initiative’s strengths or weaknesses with regard to marine conservation?
Community members:

1) What is your name, age, and where are you from? How long have you lived in this community?
2) How does your family make a living?
3) How important is tourism to people in Sarteneja?
4) What are the benefits and disadvantages of tourism in the community?
5) Are you aware of the company, Blue Ventures? Have you had any personal experiences or affiliations with them?
   a. If so, what did this experience involve? Was it a positive or negative experience? [for Homestay hosts – see below in addition]
   b. In what way are the people in your community involved in Blue Ventures? Do they receive any benefits or experience any disadvantages from being associated with the company?
   c. In your opinion are there some people that may be benefitting more from the BV projects than others or is it perceived as an equitable operation?
6) Do cultural interactions occur between the volunteers working for BV and the local community?
   a. If so, how often does this interaction occur and what does it look like?
   b. In your opinion is this interaction a positive or negative experience for people in Sarteneja?
7) Do you know about the work that the volunteers do when they go out to the Bacalar Chico Marine Reserve? [if not – explain briefly] In your opinion, is this work important? Why/why not?
8) Do you foresee tourism continuing to be an important aspect of community life in Sarteneja? Is it something that you
9) Why is conservation important from your perspective?
10) Did you have the opportunity to take part in the Homestay program? Would you like to be part of it? Why/why not?
11) What do you think about tourism as an alternative source of livelihood for those who rely on fishing? Is it a reasonable shift?
12) As a teacher yourself, have you experienced first hand the work that BV does within the local school of Sarteneja?
   a. Do you view their programs as being significant impactful on the students in a positive/ negative way?
   b. What is your opinion on the importance of encouraging environmental stewardship among the youth and younger generations in the context of Sarteneja?

FOR HOMESTAY HOSTS:
1) How did you come be involved with BV as a host for volunteers?
2) For how long have you been hosting volunteers?
3) How many volunteers do you host each year?
a. Do you receive a large number of visitors in your house that are not billeted through BV?

4) How important are volunteers as a source of income for your family?

5) What do you like about hosting volunteers? What do you dislike?

6) Have you been to Bacalar Chico with the Women’s group? If so, what did you think of the work they do there? Do you think it is important?

7) How do you feel as a woman in the Homestay program? Since your participation have you noticed any changes in yourself or in the relationships with your family?
Other NGOs
(e.g. Wildtraks, Sarteneja Alliance for Conservation and Development)

1) What is the nature of the work conducted by SACD?
   a. Do you offer any tourism-oriented programs? Do you work with volunteers? Why/why not?
   b. What do you perceive as some of the benefits/challenges with relying on volunteers within your organization?
2) I’ve had the chance to look through the Sarteneja tourism development plan that was written in 2009 and I was wondering if you were able to give me an idea where progress regarding tourism stands in the village.
   a. Any plans to update this plan in the near future?
   b. The plan was published before BV had become fully implemented in the community? Has their presence shifted the development plan in any way?
      i. If so, how?
3) In your opinion is the model of the smaller scale volunteer tourism one that is benefitting Sarteneja? What are your thoughts on VT seeing as two of the major tourism operators (WT and BV) operate using this model?
4) Does your organization have any affiliation with BV currently or in the past?
   a. What does this interaction entail/look like?
   b. How long has this relationship been present between the two NGOs?
   c. Do you perceive this as a positive or negative relationship?
5) In your opinion, is BV making a positive contribution to the community of Sarteneja? (Why/why not?)
6) In your opinion, is BV making a positive contribution to marine conservation efforts in Belize? If so – how? If not – why not?
7) More generally, what is your opinion on the role of NGOs in conservation work in Belize? What are the challenges for NGOs to do their work effectively?
8) In your opinion, who should be responsible for implementing conservation activities in Belize?
9) From your perspective, who should be responsible for funding conservation activities in Belize? How? What are the current opportunities or limitations for implementing conservation activities in Belize?
10) In some of the literature that I’ve reviewed regarding changes in conservation and protected area management there is increasing attention being paid to the idea that one must “sell nature in order to save it”. What this means is that when nature is ultimately providing a service or product with an attached a dollar value, people will be more inclined to preserve nature. A common example of this is ecotourism, where there is a direct monetary benefit that results from maintaining a healthy environment (i.e. the creation of protected areas and charging visitors an entrance fee like at Shipstern). What is your perspective on this concept? Do you feel that tourism projects like those involving volunteers here in Sarteneja?
Government Officials within the Department of fisheries

1) Name, age, where are they from?
2) How long have you worked in this department?
3) Can you briefly describe the responsibilities of your position within the department as they pertain to marine conservation?
4) Have you heard of the volunteer tourism organization in Sarteneja, called Blue Ventures?
   a. If so, what has been the department’s interaction with BV?
   b. In what ways do you support BV’s efforts?
   c. In what ways does BV support your efforts? In your opinion, is there anything they could do better/differently?
   d. Does the department support operations like BV elsewhere in the country?
      i. If so, what does this support look like? Financial, political, technical?
5) Volunteer tourism is one of the major themes of my research. The term refers a growing model of tourism that relies on paying volunteers to achieve developmental goals in a wide spectrum of fields such as education or in this case conservation efforts. An example would be BV relying on volunteers to collect biological data or WT where volunteers are responsible for caring for the animals. Based on this statement, do you believe that volunteer tourism is a way of contributing to successful marine conservation efforts in Belize? If so – how? If not – why not?
6) The mission statement located on the webpage for the Belizean Fisheries Department states their aim is "To provide the country and people of Belize with the best possible management of its aquatic and fisheries resources, with a view to optimize the present and future benefits through efficient and sustainable management". Do you think that VT could be considered as helping to achieve this mission statement?
7) From your perspective as a government official, what do you see as some of the major strengths or weaknesses of VT?
8) Do you feel that ecotourism/volunteer tourism is contributing positively to the Belizean people/economy?
BV employees

1) Name, where are you from, how old are you?
2) Can you tell me a bit about your educational background?
3) How long have you been working at BV?
4) What are the responsibilities of your current position with BV?
5) In your opinion, what are some of the key factors that set BV apart from other VT operations?
6) Are there any other volunteer initiatives in Belize or elsewhere that you know of or that you’ve participated in that could compare to BV in terms of making tangible, positive impacts in the field of marine conservation? Or do you feel that BV is unique in its model and objectives?
7) How does BV as a volunteer tourism operation set itself apart from mass tourism projects? (changed the order of this question because it was too heavy up front)
8) In your opinion, what is the primary purpose of BV’s work in Belize? Are there any other purposes?
9) In your opinion, what are the expectations of BV volunteers in terms of contributing to the project operations either in Bacalar Chico or in Sarteneja?
   a. What are their motivations based on your years of experience?
   b. How does BV work to meet the expectations of the volunteers?
10) Are BV programs designed primarily to meet volunteer expectations or to provide useful scientific data? Or both? Is it ever difficult to meet manage the roles of both of these needs the volunteers as they are coming to you both as tourists/clients and data collectors?
   a. What are some of the difficulties?
11) What are the challenges (if any) associated with relying on lay volunteers as primary data collectors?
   a. What mechanisms does BV have in place to control the quality of data being collected?
   b. Are these mechanisms designed by BV or are they drawn from another program or organization?
12) Does BV attempt to make the data collected more readily available to a wider audience?
13) How does BV as a volunteer tourism operation set itself apart from mass tourism projects? (changed the order of this question because it was too heavy up front)
14) What is the nature of the relationship between BV and the Bacalar Chico marine reserve staff/fisheries department?
15) Are the data produced by BV (volunteers) used by the marine reserve staff or the Fisheries Dept?
   a. If so, how? Are you satisfied with the way in which the data are used? Are there any ways in which you would like to see the data put to better use?
   b. If not, why not? What are the challenges to using these data to inform marine conservation/management efforts?
16) On the website BV holds both a charity and a business license, could you shed light on the purpose of having both? Does this dualistic nature offer certain advantages to BV?
   a. If so, can you describe what these advantages are? (will save this question for Jen)

17) Contribution that BV is making to the community?

18) Contribution that BV is making to national conservation efforts?

19) In your opinion where do you see BV going in the next 5-10 years/ where would you like to see it go?

20) In some of the literature that I’ve reviewed regarding changing trends in conservation and protected area management there is increasing attention being paid to the idea that one must “sell nature in order to save it”. What this statement implies is that when nature is ultimately providing a service or product with an attached a dollar value, people will be more inclined to preserve nature. A common example of this is ecotourism, where there is a direct monetary benefit ideally to a large group of stakeholders that results from maintaining a healthy environment. Projects like that increasingly fall under the heading of market-based conservation (where one is creating markets that enclose spaces in nature where there were none before). What is your perspective on this concept? Conservation should pay its way…
FOCUS GROUP QUESTIONS

Blue Venture Volunteers

1. How did you enjoy the remainder of your time at BCDC? How do you feel now that you’re coming to end of your experience with BV?

2. Around the time that I was leaving camp, the volunteers were really just getting into the meat of the actual data collection process. Unfortunately not having had the opportunity to take part in it as much as I would have liked, I was wondering if you could tell me about how the process went. Things that you liked/ didn’t like, the feelings that you have now coming away from that experience of contributing data to BV operations.

3. Do you feel that your volunteer placement will have a lasting positive/ or negative impression on the wellbeing of the park and the surrounding community?

4. Having participated in this volunteer operation, do you foresee any changes that you may make to your own lifestyle upon returning home as a result of this volunteer placement?
   a. If so, what would these changes look like?
   b. If not, why not?

5. Do you intend to share this experience with others once returning home? What sorts of information do you anticipate sharing with others?

6. Do you feel that the opportunity to live with a host-family contributed positively or negatively to your overall experience with Blue Ventures?
   a. Can you give examples?

These next questions are aimed more at VT in general than specifically BV experiences, looking at the bigger picture of VT.

7. Volunteer tourism has been described as activities that are undertaken by tourists in order to “aid or alleviate the material poverty of some groups in society, restor[e] certain environments, or [conduct] research into aspects of society or environment” (Wearing, 2001 p.1). How does this statement apply to your experiences with Blue Ventures? Is it symbolic or a misrepresentation of what you have seen in your own experiences?

8. In some of the literature that I’ve reviewed regarding changing trends in conservation and protected area management there is increasing attention being paid to the idea that one must “sell nature in order to save it”. What this statement implies is that when nature is ultimately providing a service or product with an attached a dollar value, people will be more inclined to preserve nature. A common example of this is ecotourism, where there is a direct monetary benefit ideally to a large group of stakeholders that results from maintaining a healthy environment. Projects like that increasingly fall under the heading of market-based conservation (where one is creating markets that enclose spaces in nature where there were none before). What is your perspective on this concept? Conservation should pay its way…
Blue Venture Host Families

1) What are the expectations of you as a host family?
2) Has your experience interacting with the volunteers overall been a positive or negative one? Are there any particular instances that stick out in your mind as particularly memorable?
3) In your opinion, do you think that the compensation that host-families receive is fair?
4) How has the opportunity to host BV volunteers impacted the community as a whole?
5) What is your overall impression of BV?
6) Do you know about the work that the volunteers do when they go out to the Bacalar Chico Marine Reserve? [if not – explain briefly] In your opinion, is this work important? Why/why not?
7) Do any of you keep in contact with the volunteers after they have left Belize?
8) Home-stays are seen as a mechanism for nurturing intercultural communication and understanding. Do you feel like you/ your family has benefitted from hosting volunteers from different parts of the world?
   a. If not, do you feel that you/ your family has suffered in any way because of hosting volunteers in your household?