Attitudes Towards Conservation in the Sagarmatha and Makalu-Barun National Park, Nepal

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Attitudes Towards Conservation in Sagarmatha & Makalu-Barun National Park, Nepal

By

Morgan Scott

Accepted in Partial Completion of the Requirements for the Degree Master of Arts

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Attitudes Towards Conservation in Sagarmatha & Makalu-Barun National Park, Nepal

A Thesis
Presented to
The Faculty of
Western Washington University

In Partial Fulfillment
Of the Requirements for the Degree
Masters of Arts

By
Morgan Scott
June 2024
ABSTRACT

Rural alpine communities in Nepal and the Department of National Parks and Wildlife Conservation both face the challenge of balancing economic needs with conservation and environmental goals. Both Sagarmatha National Park and Makalu-Barun National Park in northeast Nepal are popular tourist destinations, and the tourism economy is both vital to local communities and residents of the parks, and also can be detrimental to conservation and environmental goals of the parks. This research set out to assess the concerns of residents of both protected areas and to compare the concerns of residents between three major valleys, Hinku, Gokyo, and Khumbu. This research conducted 63 interviews with residents from these valleys and found that overall, their concerns and opinions did not vary by valley, and that the majority of participants understood the need for tourism as well as the need for conservation. This study shows that community-based conservation strategies in the Sagarmatha and Makalu-Braun National Park are viewed mostly positive by residents, and that park management and future conservation policy and action should continue to address the concerns of the residents, primarily resident’s perceived importance of the tourism industry and the importance of community-based organizations.
Positionality Statement

I understand that my positionality as a researcher influences how my research is conducted, its outcomes, and its results (Rowe, 2014). Furthermore, I acknowledge that self-reflection is a necessary and on-going process in my research and my education, and my positionality and reflexivity has grown and changed during the time that I have worked on this research (Holmes, 2020). I do my best to understand now and have tried to be aware of during this research, that my identity as a white, American citizen, masculine-presenting individual engaged in western higher education does and will affect my work in this research and any future research. I believe that my identity and position in part drove me to believe that this research was realistic for me to pursue in the first place, and that I could do so ethically to the best of my ability. A part of my identity and position within higher education that I believe contributed to my belief that this research was within my academic grasp so to speak, is in part due to the experiences I had during my time spent in study abroad trips during my undergrad. During my undergraduate years of study, I was very fortunate to be able to participate in two different study abroad programs, one in the India Himalaya via Wildlands Studies program in 2014, and one in the Peruvian Andes via a Western Washington University capstone summer course in 2016. Both experiences brought me to, albeit very differently in all other social and political elements, very similar geographic areas in the world to Nepal: rural high alpine areas mostly covered by protected areas/national parks. I believe that having had these previous academic experiences in mountainous regions not just inspired me to want to conduct research in Nepal, but also played a significant role in conceptualizing this research as realistic and attainable for myself. Both my study abroad program in India and in Peru were led by white male academics, both with varying degrees of successful research careers in their field and also in the geographic areas which we were in at the time, and I believe that traveling and working with both these men also again helped shape my belief that I too could do similar work because I too am a white American male who enjoys being in rural alpine geographies. Furthermore, I acknowledge that my own personal interest in conservation, ecotourism, and Nepali culture undoubtedly affected my personal understanding of the importance of this research and the role in which I took during both my time in Nepal and my overall time spent working on this research. To explain further, I recognize that my preconceived notions of the importance of these subjects are attributed to the construction of my survey instrument and my focus on conservation and ecotourism. I have done my best to be continually aware of my positionality within this research and at the same time acknowledge that this is an ever-ongoing process and that my positionality did undoubtedly impact my data collection and has undoubtedly impacted this research (Holmes 2020).
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Chapter 1 Introduction

Research Problem

The Himalayas themselves are among the most famous mountains in the world, as the range contains 10 of the world’s 14 highest peaks – those above 8000 meters, and Nepal itself contains 8 of those 10. Balancing natural resource management and community concerns within the protected areas of Nepal is a dynamic challenge. National governing agencies, local community development organizations, and the economic needs of local communities have routinely clashed, making the creation, implementation, and success of equitable and sustainable conservation policy difficult. Created in 1973, the Department of National Parks and Wildlife Conservation (DNPWC), is responsible for managing natural resources and developing park management plans specific to each national park. These management plans are broad in scope and the goals and strategies vary from park to park, but most include the intent of protecting the natural environment within the park, supporting the development and sustainable livelihood of the communities within the parks, and implementing conservation strategies that address both.

Conservation management strategies that follow these types of goals which seek to incorporate local communities in both the decision making as well as the conservation action aspect of management have been researched and discussed under the banner of community-based conservation (CBC). Protected area projects that employ variations of CBC goals and strategies within their management practice do so in a variety of ways in order to meet the specific conservation goals of the environment and resources they seek to conserve as well as the specific communities and cultures they wish to support and have support conservation and conservation practices. Because Nepal’s protected areas serve a multitude of purposes, primarily conserving natural resources as well as working with the needs of diverse and sometimes isolated communities, this thesis focuses on two adjacent national parks as exemplary of such management struggles. Specifically, this research focuses on the conservation projects of Sagarmatha
National Park and Makalu-Barun National Park as exemplary of the struggle of finding balance between conservation and development within Nepal, and within CBC projects overall.

This research investigates the balancing of conservation goals with community needs, including economic and developmental concerns, and community-based natural resource management within two national parks in Nepal. Furthermore, this research is informed by past research which assessed the concerns and attitudes of communities within protected areas, in order to investigate the efficacy of CBC projects. This ongoing pursuit of balance represents one of the main tenets of community-based conservation, which both national parks here employ. This research is a comparative analysis of resident’s perspectives on these issues to bring to light communities' differences, needs, and influences. Results from this research may influence future planning measures taken by the DNPWC.

Research Area

Both Sagarmatha National Park and Makalu-Barun National Park are protected areas that conserve large portions of the vast Nepali Himalayas. Makalu-Barun National Park is the only protected area in the world that conserves and manages a region that rises over 8,000 meters from its lowest basin to its highest peak. Sagarmatha National Park itself is home to more than 4,000 residents and sees more than 45,000 visitors each year (Byers, 2008; DNPWC, 2016). Together Sagarmatha and Makalu-Barun highlight the dynamic relationship between protected area residents and conservation management that inform this research. These two national parks are adjacent and share a lengthy border, as displayed in Figure 1. Both protected areas are located in the east of the country, about a day's journey by car or a few hour plane trip away from the capitol of Kathmandu, positioned so they both share a northern border with the Quomolangma Protected Area within the Tibetan Autonomous Region (China).
Within these two national parks this research specifically took place in three adjacent valleys: two in Sagarmatha and one in Makalu-Barun. From west to east these valleys are the Gokyo, Khumbu, and Hinku, as shown together in Figure 2. The primary trekking route in the Khumbu Valley, leading primarily to Everest Base Camp, begins in the village of Lukla which is technically in the buffer zone of the Sagarmatha, and leads north east up the valley, stopping in the very popular town of Namche Bazar, before ending at Everest base camp, a makeshift seasonal encampment that functions as a sizeable settlement for tourists and sherpas during both the fall and the spring - the popular tourists seasons. The Khumbu valley sees far more tourists per year than the other two valleys for this reason (Byers, 2008; DNPWC, 2016). Because of the popularity of Mt. Everest since its first successful climb in 1953, the Khumbu valley has also been host to numerous and diverse research expeditions and projects, much more so than either of the other two valleys (Baral et al., 2017; Hickok, 2018; Spoon, 2012; Thorsell & Sawyer, 1992). Hinku Valley, the southeasternmost of the three, as the only one in the Makalu-Barun - and therefore the last of the three to be included as a protected area in Nepal - is host to the least amount of annual tourists, has the least permanent and seasonal residents, and is also the only valley out of the three
to have been host to insurgents and periods of active conflict during the Maoist People’s War, which lasted from 1996-2006 (Baral & Heinen, 2005). Lastly there is Gokyo valley, the northwestern most of the group, which has shared some tourism popularity due to its relative accessibility and proximity to its incredibly popular neighbor, the Khumbu valley, and has done fairly well to market its glacial lakes and such natural beauty as tourism destinations, mostly in the form of trekking routes (Ghimire et al., 2013). Since these three valleys have different influences and histories, yet are all adjacent to each other, as well as geographically and ecologically very similar, they were chosen to investigate the Research Question and to assess the concerns and attitudes of the communities therein. This research area and the choice to compare conservation attitudes between three valleys was chosen so as to highlight and discuss any differences and relate these differences and factors contributing to them to the research problem: to provide more insights into the balancing and impacts of the CBC goals within the two national parks. The trekking routes of each of these three valleys, which are the routes of which data was collected within the valleys themselves, are highlighted in Figure 2, 3, 4, and 5.
Figure 2. Position of Research Area, Hinku Valley (RED), Khumbu Valley (GREEN), and Gokyo Valley (PURPLE)

Figure 3. Trekking Route of Hinku Valley
Figure 4. Trekking Route of Gokyo Valley

Figure 5. Trekking Route of Khumbu Valley
Research Question

“How do residents of the Hinku, Gokyo, and Khumbu valley’s attitudes towards conservation vary?”

In summary, this research question was created to investigate the balancing of conservation goals and community concerns as a primary goal of the community-based conservation style management in Sagarmatha and Makalu-Barun. The problem of balancing community concerns and needs with conservation goals is an explicit management goal of both of the national parks that comprise this study's research area, as can be found within their respective management plans (DNPWC 2016, Byers 2008). For example, one of the four main goals of the current Sagarmatha management plan at the time of this study was to “to enhance community stewardship on biodiversity conservation by increasing awareness and improving livelihood of the local people” (DNPWC 2016, p 13). Although the goal of this study and therefore this study's research question was not to explicitly test this goal, this study did use this goal as influential in building a research question that could assess conservation attitudes of residents of both the Sagarmatha and Makalu-Barun as a means to investigate and contribute towards understanding of the research problem: balancing conservation and communities needs within Nepali CBC projects.

Previous research, by using the variable attitudes towards conservation to assess attitudes and beliefs of communities residing within protected areas towards a number of factors, has investigated the impacts of the conservation management style that is CBC (Kidegheso et al 2007, Mehta and Heinen 2001). Researchers have chosen to use the construct of attitudes towards conservation as a means to show how aspects of CBC projects: including management style, outreach and education programs, community participation in planning, and community-based conservation organizations, have positively or negatively
impacted the attitudes of residents, as means to highlight what has worked and what needs more attention to create successful conservation policy (Alexander 2000). Studies that have used attitudes towards conservation (ATC) in this way to investigate CBC projects have taken place in protected areas across the world (Berkes 2004). For example, Kideghesho et al. incorporated ATC in their work studying the impacts of conservation initiatives and wildlife policy in the Serengeti of Tanzania, Alexander used ATC to study residents perception of conservation management and policy within a participatory conservation project in Belize, Infield used ATC to study residents’ view of both the concept of conservation as well as the managers and policy of a conservation area in South Africa, Holmes studied residents attitudes towards fuel-wood extraction practices and desire to de-gazette a national park in Tanzania using ATC, Baral and Heinen used ATC to test hypothesis’ on the impact of social and economic intervention strategies enacted by both a national park and a wildlife refuge in Nepal, Mehta and Kellert used ATC to study the difference in residents’ attitudes towards wildlife protection, community development programs, and ecotourism development programs of the Makalu-Barun National Park in Nepal, and Mehta and Heinen used ATC in their study to compare attitudes of residents from a conservation area and a national park in Nepal towards policy formulation, planning, and management (Alexander 2000, Baral and Heinen 2007, Holmes 2003, Infield 1988, Kideghesho 2007, Mehta and Kellert 1998, Mehta and Heinen 2001). Ultimately, these studies have shown that when conservation policy works with communities and conservation goals, then attitudes towards conservation and towards park management are usually positive, and that when park management and conservation goals do not work with and recognize the needs of the communities within the protected area, then conservation attitudes are usually negative. In this way attitudes towards conservation help researchers and scholars to investigate the impacts of community-based conservation action and strategies undertaken by CBC park management.

A driving force that some of these researchers have used as rationale for their work is the idea that when residents’ attitudes towards conservation, including attitudes towards conservation policy, tourism
development, and community development programs, is positive, that communities are more likely to work with and support conservation measures in action (Mehta and Heinen 2001). Therefore, researchers have framed their studies as necessary and informative from a management perspective in order to create more successful management actions. Research that has used ATC in their studies on CBC projects have shown how ATC can measure and highlight both residents feelings towards conservation and their position towards supporting conservation action, and researchers have used this measure to give protected area management a look into what actions and policy may or may not be supported in the future, and what conservation as well as community development programs may need strengthened so as to increase communities’ attitudes and therefore their willingness to participate in and facilitate positive conservation efforts in the future.

The work that informs this study's research problem and question is research directed towards investigating and providing insights towards similar research problems as the one that this study investigates, that of community-based conservation, and the balancing of conservation goals and community needs and development. This research recognizes that although it is difficult to assume that decision makers will necessarily care about the attitudes of residents of the park, this research follows the stance of the researchers mentioned previously, and those discussed more at length in this work's Literature Review, that this information is both important and relevant to assess and make available to those with decision making power. Many of the studies mentioned in this discussion as well as those discussed in the following chapters of this thesis include direct recommendations for protected area management in their conclusions, and intentionally built their studies' around creating suggestions and highlighting areas of concern for conservation management.

For this study attitudes towards conservation were to be represented numerically through quantitative analysis so that differences between participants’ attitudes could be compared and inferences drawn about
their attitudes towards conservation, park management, tourism, and community-based organizations (CBOs). The research question was originally designed to facilitate quantitative data analysis and results. Although changes were made to this plan along the way, the research question was kept the same. These changes were methodological and concerned data collection and analysis, wherein the survey instrument that was originally designed for this research was changed to more of a qualitative structure featuring open ended questions geared towards facilitating conversation with participants, instead of survey style questions with answers that would have been provided to respondents. This change necessitated changes in data analysis from quantitative to qualitative, as discussed more in Chapter 3. These changes were decided upon via conversations about data collection with the study’s research assistants before data collection began wherein the research assistants strongly believed that these changes and more qualitative questions would be both easier for them to conduct and would be more well received by participants. After conversation with my advisor at the time, Dr. All, these changes were accepted, and the survey instrument changed. These changes are discussed further in both the Methods and the Discussion chapter of this research.

The research question that drives this study, in summary, was constructed to follow the structure and rationale of the academic conversation surrounding the investigation of CBC success using the concept attitudes towards conservation, in that studies on the ATC of residents within CBC projects can highlight and provide insight on how programs and aspects of the CBC project are affecting residents, and how residents feel about and support conservation action, both present and future. The research question then applied this rationale to the research area, by focusing its investigation on the attitudes towards conservation of residents living within communities amongst three different valleys within two national parks in Nepal. These two protected areas in Nepal were chosen because their management strategies follow the goals and practices of CBC and are therefore in line with the research problem, and research of similar nature that used ATC to investigate the impacts of conservation management on residents has
been done in the parks before, making them worthy locations for such a study (DNPWC 2016, Byers 2008, Mehta and Heinen 2001, Mehta and Keller 1998). Furthermore, the research question was constructed so as to compare the attitudes towards conservation of residents of three different valleys within these national parks: the Hinku, Gokyo, and Khumbu valleys, respectively. This comparative aspect of the research question was incorporated so as to be able to highlight different factors that contribute to attitudes towards conservation from residents of these valleys, following from the different geographies, histories, and socioeconomic factors of the valleys, and their relative proximity to each other. This research intended to further be able to provide insights to and address the research problem by comparing and contrasting residents of these valleys attitudes towards conservation and their influences.

Research Relevance

This research follows the work of previous studies that investigated CBC projects using attitudes towards conservation. The findings of this research and the conclusions that it draws could form suggestions for both future research conducted in the research area as well as future conservation action taken by both national park policy makers as well as community-based conservation and development organizations. Furthermore, by following the rationale of past research that structured their studies around assessing the success of CBC projects, this research adds to the conversation around CBC as a management strategy, as it highlights the attitudes, feelings, and beliefs of some residents within communities of two CBC projects.

Conclusion

This thesis is built around a study carried out in Nepal in the spring of 2019. The study interviewed 63
residents of communities located along the trekking routes in the Hinku, Gokyo, and Khumbu valleys. The study was intended to investigate the problem of balancing conservation goals and community development needs within protected areas using community-based conservation style management. The study was structured following the work of previous researchers which employed the concept of attitudes towards conservation to investigate the attitudes towards and support of conservation action and policy within CBC projects. In chapter 2 literature surrounding CBC management, attitudes towards conservation, and factors that have been found to influence attitudes towards conservation are discussed. These factors include park management, tourism, community-based organizations, and community demographics. In Chapter 3 the methodology of this work is presented and its structure discussed. The methodological approach, including the structure of data collection, data analysis, and changes that occurred to these elements, are also discussed. In Chapter 4 the results of the study are presented and trends are highlighted. Data is compared between valleys in relation to both respondent's attitudes towards conservation, as well as respondent's attitudes towards tourism, park management, and community-based organizations. The findings presented in chapter 4 are structured so as to answer the research question and provide insights into how and why the research question resulted in such data. These findings and trends are further discussed in the following chapter, Chapter 5, as well as connections and comparisons to relevant literature and conversation. Chapter 5 situates the findings of this research into the academic conversation surrounding community-based conservation management. Furthermore, Chapter 5 discusses the limitations that this study encountered and presents opportunities for future research based both on these limitations as well as the findings and trends that this study found. Ultimately this research found that the attitudes towards conservation of residents of the Hinku, Gokyo, and Khumbu valleys do not vary, as attitudes towards conservation were similarly positive among all participants of all three valleys.
Chapter 2 Literature Review

Introduction

This chapter presents and discusses literature that further describe the research problem of this thesis, the balancing of goals of community-based conservation (CBC) projects with community concerns and the investigation thereof, and the concept of conservation attitudes and three themes that influence them. This chapter first gives a brief introduction to both community-based conservation as well as attitudes towards conservation, and then discusses literature surrounding tourism, park management, and community-based organizations as themes found to be important in forming conservation attitudes and therefore contextualizing this research’s goals of investigating CBC projects.

Community-Based Conservation

Community-based conservation (CBC) is a management strategy and policy practice that aims to address both conservation goals for a protected area and the needs and concerns of the communities living within (Brockington et al., 2006; Brooks et al., 2012; Naganna, 2001; Pimbert & Pretty, 1997). CBC began to emerge in the late 1980’s as a promising response to failing fortress style federal level conservation management practices that preceded it (Brooks et al., 2012; Mehta & Heinen, 2001; Müller-Böker & Kollmair, 2000; Vasseur & Hart, 2002). CBC intends to incorporate communities directly into management goals and policies: recognizing that these communities often had been successfully managing their environment for generations, and that allocating resources and education to them would result in more successful conservation projects all around (Brockington et al., 2006; Brooks et al., 2012; Naganna, 2001; Pimbert & Pretty, 1997). Sagarmatha National Park and Makalu-Barun National Park highlight this issue of balancing the concerns of CBC conservation projects. Both protected areas’
management plans explicitly include management goals that mirror the aforementioned general goals of CBC (Byers, 2008; DNPWC, 2016).

As it developed and spread throughout protected areas in the developing world, CBC shared some prominently discussed success (West, Igoe, & Brockington, 2006). Measuring the relative success of CBC projects has been difficult due the very nature of their goals being multifaceted across both social, economic, and ecological and conservation concerns (Agrawal & Gibson, 1999; Baland & Platteau, 1996; Buchy & Hoverman, 2000; Ostrom, 1999). Some researchers have called for analysis of CBC projects to be broader in scope and to measure more than one of the CBC project’s goals (Pagdee, Kim, & Daugherty, 2006). On the other hand, others state that to do so would only produce very specific results, for they posit that inherent in the need for CBC in the first place is the underlying assumption that every community within protected areas have materially distinct geographies, conservation goals, socioeconomic issues, legal parameters, and political histories: which together create very different situations that prove hard to compare academically (Naganna, 2001; Pagdee et al., 2006; Kellert and Mehta, 2000). Campbell & Vainio-Mattila summarize this thought well in stating that “there can be no universal metatruths about conservation that can be separated from, or implemented in isolation from, the context within which people interact with the species/ecosystem for which conservation strategies are being designed” (2003, p. 423). Padgee et al. expresses a similar concern, that “The success of CFM depends on the relationship between the community and its resources, which should facilitate feedback and the ability to respond to changing conditions over time”, (where CFM= Community Forestry Management, same as CBC for these purposes) (2006, p. 3).

Community-based conservation can be discussed as a prominent and promising strategy of conservation management in the face of global climate change and dynamic ecological and conservation goals (Armitage et al, 2019; Zurba, M., Beazley, K. F., English, E., & Buchmann-Duck, J. 2019; Steenbergen, D. J., & Warren, C. 2018). Researchers and authors evaluate CBC projects and their impacts and successes across the world, in many instances referring to this style of management with a multitude of
titles including: community-based natural resource management, community forestry management, and community centered conservation (Armitage et al, 2019; Phelan, Ruhanen, Mair 2020; Humphries et al, 2020). Current research on CBC projects is broad and ranges from the importance of increasing the level of participation and recognition of indigenous groups within protected areas, the importance of and how to link both direct and indirect benefits from both tourism and conservation action to communities, as well as how specific protected areas management can evolve and change their models of community-based conservation to best suit their context specific challenges and struggles (Dinh, 2020; Dawson et al, 2021; Nepal, 2021; Schultz’s and Way, 2006; Zhang 2020).

In Nepal, community-based conservation strategies are being utilized, even though, as is true in many if not all other CBC style projects across the developing world, they face difficulties and struggles. Nepal has a vast amount of protected area, including almost 29,000 square kilometers of protected and conserved land which is almost twenty percent of the country’s total area, including buffer zones and national parks that do not all follow the same strategy of management (Nepal, 2021; Joshi and Dahal, 2019). Tourism has been and continues to be a very important consideration for CBC projects within Nepal, as the prevalence of the topics within research focused on the number of protected areas of Nepal indicate (Joshi and Dahal, 2019; Poudel and Joshi, 2020; Bhatta and Boustead 2021; Silwal et al, 2022).

Attitudes Towards Conservation

The concept of attitudes towards conservation (ATC), sometimes also referred to as ‘conservation attitudes’, has been used to investigate CBC projects since the style of management was first introduced throughout the developing world (Alexander, 2000; Infield & Namara, 2001; Kideghesho, Røskaft, & Kaltenborn, 2007; Mehta & Kellert, 1998). This construct has been utilized with the intention to assess
residents of protected areas understanding and support of conservation of the protected area as well as specific policy and action performed by management and management institutions (Brooks, Waylen, & Mulder, 2012; Kideghesho et al., 2007). By constructing, comparing, and analyzing these attitudes towards conservation, researchers have been adding to the conversation surrounding conservation management and CBC success (Mehta & Heinen, 2001; Kellert & Mehta, S, 2000).

Attitudes towards conservation have been found to be incredibly varied across the multitude of studies that employed the concept. Scholars have reported on communities that demonstrate both positive and negative attitudes towards conservation within different CBC projects, which demonstrates the difference in both communities needs and interests as well as difference between conservation and community action and strategies between different CBC projects. Further, research has shown differences in connecting positive and negative attitudes towards support for conservation efforts, where sometimes positive attitudes are related to supporting protected area management decisions, yet in other instances they do not. Researchers like Mehta and Kellert in Nepal, as well as Sinthumule in South Africa among others, have shown that positive attitudes can relate to supporting management decision and conservation policy, whereas work by Sharma et al, and Nepal 2017, show how positive conservation attitudes may not always directly link to support for conservation action or support for conservation policy and park management (Sharma et al, 2017; Mehta and Kellert 1998; Sinthumule, 2021; Nepal 2017). This difference shows how in some cases individuals and communities have separate attitudes towards and beliefs about the importance of park management and conservation policy as they do towards the idea of, and the need for, conservation in general.

In cases where the idea of linkages has been brought up, like the work of Ihemezie et al and Khan et al for example, studies show how residents and communities may hold favorable or positive attitudes towards the idea of and need for conservation, but those attitudes are not linked to the community’s support for the conservation management strategies or policies in place where they live (Ihemezie et al, 2021; Khan et al, 2022). Often research that discusses this linking of attitudes towards material support of conservation
action do so with economic or social benefits in mind. As work by Nepal, Rastegar, and others has discussed, when communities or individuals do not believe that conservation action benefits them, either economically or socially, they are less or entirely unlikely to support it (Nepal, 2020; Rastegar, 2019; Stormer et al, 2019). Because of this failure to connect conservation attitudes towards conservation action, and the recognition of the importance of connecting benefits to these communities, the conclusion and suggestions of some of the research that reported on this phenomenon include discussions and recommendations for the protected areas in question to strengthen and/or create educational and economic programs that can help increase communal understanding of the importance of conservation action, as well as work to bring material benefits and broaden existing economies, like ecotourism, to community’s that may have been historically excluded from such programs and economies (Borrensen et al, 2022, Sharma et al, 2017; Stormer et al, 2019; Guzman et al, 2019; Ihemezie et al, 2021). What has been established as a consensus within research on CBC projects that investigate attitudes towards conservation, is that fostering positive conservation attitudes is crucial for establishing, implementing, and maintaining successful CBC project goals (Ihemezie et al, 2021; Duan et al, 2022; Nepal, 2020; Guzman et al, 2019).

There exist a multitude of factors that have been found to influence, contribute to, and inform attitudes towards conservation from the many studies that have used a conservation attitude concept in their work. This thesis has chosen three themes to help contextualize conservation attitudes due to their prevalence among discussions within research done on CBC projects in Nepal, as found in the work of Heinen, Mehta, Kellert, Nepal, and Sharma et al, among many others (Sharma et al, 2017, Nepal, (2020); Nepal, 2017; Mehta & Heinen, 2001; Mehta & Kellert, 1998). These themes are tourism, park management, and community-based organizations (CBOs).
Tourism

Tourism in CBC projects takes many forms. In some protected areas, such as Nepal, trekking, climbing, and mountaineering are the primary attractions, activities which draw tourists from around the world to the many national parks in the country. In other countries and CBC projects tourism economies may include wildlife viewing and guided tours, as well as other types of more adventurous ecotourism activities like diving, rock climbing, skiing, etc. Various impacts on conservation attitudes have been attributed to tourism, particularly ecotourism in this case as it pertains to tourism within CBC projects, including both perceived and economic benefits.

Across the many studies that have investigated tourism in CBC projects researchers have found a wide variety of both positive, negative, and even sometimes neutral attitudes towards conservation as specifically related to and informed by tourism economies and their myriad of benefits and impacts. Furthermore, the holding of favorable or positive attitudes to tourism is not always linked to positive conservation attitudes. Some researchers, like Sekhar, in India, found that positive attitudes towards conservation related to positive attitudes towards tourism, whereas the work by Mehta and Kellert in Nepal found similarly that positive conservation attitudes were related to positive attitudes towards tourism, they also found that when participants of their study did not recognize benefits from tourism that they were more likely to hold less favorable conservation attitudes (Sekhar, 2003; Mehta and Kellert, 1998). In many cases, such as the work by Obradović and Tešin, this connection seems to be the trend when connecting tourism in CBC projects and attitudes towards conservation, where positive attitudes towards tourism and specifically the recognition of benefit from tourism is often found to contribute significantly to positive attitudes towards conservation (Obradović and Tešin, 2023). However this trend is not always the case as the work by Nepal shows that in some cases communities may hold majority positive conservation attitudes even though they do not hold favorable attitudes towards tourism (Nepal, 2021).
As mentioned earlier in this chapter, much of the current discussion surrounding tourism in the context of CBC projects focuses on linkages, benefits, and how to address context specific needs of communities within CBC projects by either expanding benefits, creating or strengthening linkages, and re-working tourism models to be more equitable in their benefits and inclusivity. Research that focuses on tourism within CBC style protected area projects describe both positive examples of creating and fostering these links, like the work of Walpole and Goodwin, and Alexander, as well as examples of projects and communities where these links have been historically hard to establish and benefits have not been recognized, like the work from Nepal and Bennike & Neilson (Alexander, 2000; Bennike and Neilson, 2023; Nepal, 2021; Walpole and Goodwin, 2001). In conclusion, as the work by both Stone et al and Holland et al discuss at length, tourism and ecotourism within CBC projects have both the potential to link communities with both social and economic benefits, as well as much work to do to both increase these links as well as perform best so as to simultaneously address and benefit the conservation and ecological goals of protected areas within which they exist (Holland et al, 2021; Stone et al, 2021).

Park Management

One of the four main goals of the 2016 Sagarmatha National Park Management Plan is to “enhance community stewardship on biodiversity conservation by increasing awareness and improving livelihood of the local people” (DNPWC, 2016, p. 13). This management goal is representative of similar goals of other CBC projects across the world. These projects focus on community involvement and inclusion in the conservation policy and management decision making process. As has been discussed within the conclusions of much research on the topic of CBC management, is the idea that park management needs to be working directly with and incorporating communities into their processes and institutions, including decision making and involvement in both creating and implementing park and conservation policy, as crucial for the success of the protected area. CBC projects that have been unsuccessful in achieving or
sustaining their conservation goals have often had these failures attributed to lack of community involvement and inadequate delegation of resources, as described by Mehta and Kellert, as well as disparities between official management plan strategy and actual park management practices as discussed by Infield and Namara as well as Waylen et al (Mehta and Kellert 1998; Infield and Namara, 2001; Waylon et al., 2010). In relation to conservation attitudes, researchers have found that communities direct involvement in the management process relate to positive attitudes towards both conservation and the protected area management and staff (Ansong & Røskaft, 2011; Infield & Namara, 2001; Mehta & Heinen, 2001; Thuy et al., 2011). Similarly yet inversely, the works of both kideghesho et al. and Brooks et al. found that lack of community involvement and engagement in management decision making and conservation policy creation was associated with less positive and negative attitudes towards conservation (Brooks et al., 2012; Kidegesho et al., 2007).

The importance of direct community involvement in park management and its connection to positive conservation attitudes is further exemplified by the work of Khan et al. as they directly compared the conservation attitudes of communities living and participating in different degrees in various styles of protected area management, wherein those communities that lived in the CBC style project and participated the most in the decision making and implementation process held the most positive attitudes towards conservation (khan et al., 2022). Furthermore, the importance of linkages is again connected to park management and conservation attitudes wherein those communities that recognize and link the benefits they receive from conservation action and park management practices to themselves were shown to foster more positive conservation attitudes (Obradović et al., 2023). To conclude, the struggles that community-based conservation style protected area management seemed to be facing in its earlier days, as reported by Mehta and Kellert in the late 90s for example, are still being discussed today, that being the need for park management to work strongly and directly with communities, in ways that are both respectful and inclusive across multicultural geographies as Obradović et al. discuss, to ensure the success of the protected area (Obradović et al., 2023; Mehta and Kellert 1998).
Community-Based Organizations

In a similar fashion to park management and tourism, literature on community-based organizations CBOs make some connections between participation in and attitudes towards CBOs and conservation attitudes. Community-based organizations are discussed in CBC literature to ‘enhance community stewardship’, and ‘improve the livelihood of local people’ (Acharya, 2002; Lama & Buchy, 2002; Stephen R. Kellert, Jai N. Mehta, S, 2000). In CBC projects both throughout the world, and in Nepal specifically, CBOs play varying roles. For instance, as discussed in the work of Bajracharya, Furley, and Newton, as well as Nyaupane and Thapa, the Anna Purna Conservation Area is a protected area in Nepal, that also follows a CBC style approach, where CBOs and also NGOs are notably very active (Bajracharya, Furley, and Newton, 2006; Nyaupane and Thapa, 2010). Whereas in other protected areas such as the Makalu-Barun National Park, these organizations are not as active nor as historically crucial to its creation as in the ACA (Byers, 2006). Community-based organizations have taken a variety of roles, functions, and titles since the beginning of CBC projects, including community forestry organizations, community natural resource management groups, community conservation groups, community-based education organizations and job training programs, etc.

In many cases the creation and support of CBOs as a strategy to increase and encourage community resource management has been a successful way for CBC projects to work with and address their goals of community stewardship and community-based conservation. Furthermore, although not always, in many cases the communities in which these organizations exist have held positive opinions of them, as is expressed in the work of Mehta and Keller in Makalu-Barun as they state that “Local communities overwhelmingly supported the project’s policy of handing over management responsibility of community forests to them” (Mehta & Kellert, 1998, p. 326).

As work done by Thompson in Bangladesh and Khanal et al. in Nepal show, participation in CBOs and positive attitudes towards them has been related to positive conservation attitudes and successful
conservation practices (Khanal et al., 2017; Thompson, 2012). In contrast, within conservation areas that are not CBC focused and do not have CBO presences, as is discussed and compared to its local CBC and CBO counterparts by Khan, Ali, and Margerum in Pakistan, communities did not hold positive views of conservation nor of conservation action (Khan, Ali, Margerum, 2021). Furthermore this work showed how those communities that did work with various CBOs, including forestry and natural resource management groups, did hold both positive attitudes towards conservation and towards CBOs (Khan, Ali, Margerum, 2021).

This highlights the importance of CBOs within CBC projects as necessary for fostering positive conservation attitudes as well as successful conservation practices on the community level. An interesting modern application of CBOs and their usefulness, both within and not specifically within CBC projects, is the analysis and assessment of CBOs to address and mitigate climate change related issues, as discussed by Khan et al. in Pakistan, Khanal et al. in Nepal, and Grimley et al. in the United States, which all show how CBOs are well suited to and already work to face climate change by adaptions their conservation and management strategies and actions (Grimley et al., 2022; Khan et al., 2022; Khanal et al., 2021). To conclude, a common thread among much of the research that either focuses on or discusses CBOs in a CBC context is that, even among cases and examples where some successful and flourishing CBOs are described, most research suggests that these organizations be strengthened and increased in number and authority (Calfucura, 2018; Fariss et al., 2022). Overall, CBOs are a crucial part of much of both the history of CBC projects and their work to achieve their goals, as well specifically in Nepal throughout its many protected areas.

Conclusion

Together the literary themes discussed in this chapter; community-based conservation, attitudes towards conservation, tourism, national park management, and community-based organization, informed the
creation of this research. These themes and the trends within literature as presented in this chapter greatly influenced the construction of this research’s survey instrument as is discussed further in the following chapter, as well as were used to situate and contextualize the results of this research, as is discussed in the final chapter. Ultimately these themes are still being discussed and studied within the broader filed of conservation management and ecotourism, and this literature review reflects these conversations and relates them to the Thesis and research.
Chapter 3: Methodology

This chapter details the methodological approach, data collection, and survey of this research. Although some methodological changes were made during the data collection portion the overall methodological process was kept the same. For the purpose of the study participants were defined as residents of either the Hinku, Gokyo, or Khumbu valleys, specifically the valley in which the data is being collected. To have participated in this study individuals must reside for some length of time on a yearly basis in the valley, be at least 16 years old, and must have verbally consented to participate in the study. This intentionally allows for participants to live permanently as well as seasonally in the research area.

The research area for the study was defined as being the broader geographic space along the Gokyo valley trekking route, the Hinku valley trekking route, and the Khumbu valley trekking route. Data from the Hinku valley trekking route was collected primarily in and just outside the villages of Chuthang, Khote, Thangna, and Kare. Data from the Gokyo Valley was collected primarily in and just outside the villages of Dole, Machermo, and Gokyo, and data from the Khumbu valley was collected primarily in and just outside the villages of Gorakshep, Dingboche, Lobuche, Pangboche, Namche, and Lukla. Data collection was facilitated with the help of two Tribhuvan University graduate students, Mahendra Gahatraj and Benup Adhikari, as well as Sherpa Nar Bahadur Astani. They aided in facilitating, recording, and translating the collected data. Both Mahendra and Benup had considerable prior field work experience.

Research assistants were compensated for their assistance with a stipend for the expedition period and had their transportation and living expenses covered during the data collection period. Both Mahendra and Benup also conducted their own data collection for their individual research projects during the expedition, which they soon thereafter turned into successful Masters Theses. Research assistants aided in all aspects of data collection. Data collection took place in the spring of 2019; in Hinku valley between March 26th to April 4th, in the Gokyo valley between April 7th and 15th, and Khumbu valley between May
26th and 30th. Data collection in the Hinku and Gokyo valleys were conducted by Mahendra and Benup, and in the Khumbu valley collection was conducted by Astani.

Figure 6. Research Assistant Benup (left) and Various Members of Support Staff after Arriving in the Village of Dole in the Gokyo Valley. Pictured are Support Staff Including Porters, Cooks, Trekking Guides and Sherpas. Scott, M (2019).
Figure 7. Research Assistant Mahendra Working on his Ethnobotanical Project While Trekking in the Khumbu Valley. Scott, M (2019)

Figure 8. Research Assistant Astani (right) Pictured after Conducting an Interview with a Buddhist Temple Steward (left) in the Village of Pangboche, in the Khumbu Valley. Scott, M (2019)
Participant recruitment for this study was conducted from word-of-mouth transmission by the research assistants. Research assistants worked with expedition support staff including porters, cooks, and trekking guides/Sherpa, who knew many people in the villages, to make introductions and recruit for the study. This study followed the standards for verbal consent as described by the Institutional Review Board (IRB). Potential participants had the verbal consent form read aloud to them in Nepali and they either gave consent or refused their consent and participation. When they gave their consent a physical translated consent form was given to them, following IRB verbal consent procedures. There was no compensation offered to the participants, as it was expected to be a short endeavor. This study was approved as ‘exempt category 2’, under the title of EX19-077 (see Appendix 1 for IRB approval form).

Data Collection

Research assistants recorded responses during the data collection conversation in Nepali, and recorded participant responses in notebooks I provided them. Immediately following the instrument administration the research assistants were to translate the data into English, initially. The assistants were to hold onto the data for the entirety of the day, and together we would discuss the day’s data collection and observations at the end of each day. The data collection process, from screening of potential participants, verbal consent administration, instrument administration, participant response, and recording of data, was expected to take no more than 10 minutes of the participant’s time. This data collection process stayed mostly the same throughout methodological adjustments. The participant screening and consent procedure stayed the same, as did participant requirements, and instrument administration process - except for ceasing to provide responses, instead allowing for participants to respond and expand as they felt inclined too. Research assistants were encouraged to facilitate discussion along topics that they felt the participants had experience in and were inclined to discuss further about. The research assistants found early on that it would be easier for them to not translate data daily and to instead translate the data all at once at the end of collection, and this change was accepted and implemented. Figure 9 shows research assistants
Mahendra and Benup conversing with an elderly resident of the Khumbu valley, a hotel owner and manager in the town of Lukla, after interviewing him. At the end of each day of data collection I met with the research assistants and discussed their observations and opinions on how the data collection during the day went: how their interviews went, and what they thought needed to change/adjust about data collection and its process. Figure 10, a picture with my original advisor Dr. John All, both Research Assistants, and myself, shows one of the multiple team meetings held in Kathmandu before going into the field wherein these procedures and eventual adaptations were discussed.

Figure 9. Research Assistants Mahendra (left) and Benup (front right) Conversing with a Hotel Manager/Owner (back right) after Interviewing Him in Lukla, Khumbu Valley. Scott, M (2019)
Figure 10. Research Assistants Mahendra (front right) and Benup (back right) Conversing with Dr. All (back left) and Myself (front left). Sherpa, A (2019).

Figure 11. Research Assistant Benup (center) Working with Dr. All (right) on His Ethnobotany Project During Trekking in the Hinku Valley, Myself Pictured on the Left. Sherpa, A (2019).
Ethics

This research adhered to the five elements of social science research ethics: respect for autonomy, justice, beneficence, non-maleficence, and research merit (Alele and Malau-Aduli, 2023). To maintain this best practice standards research was conducted which consider informed consent, voluntary participation, confidentiality, anonymity, and potential for harm. Prior to beginning the data collection period, I discussed these concerns and standards with my research assistants at length. The survey instrument was structured for anonymizing while maintaining measurements deemed necessary for the research, and for the information discussed to be as least likely to be harmful in any way to the participant as possible. I also discussed with my research assistants the importance of being open, receptive, and allowing for participants to decline to answer or respond to any questions of the instrument, and to decide to leave the conversation at any point. All of these ethical concerns were not only discussed at length before we began data collection in the research area, but also on a daily basis after the data collection for the day had been completed: wherein together the research assistants and I discussed how the data collection for the day went, if they had any concerns with how things were going, and how we might better uphold these ethical standards in the future. After the data collection period ended, I have done my best to keep the data secure and confidential, taking great care to not let anybody beyond the immediate scope of this research view the data. Furthermore, I did my best to always be physically removed from the actual data collection process, from start to finish, so that my presence as a white, American, academic, masculine presenting individual, was not an integral nor observable, and therefore potentially influential, aspect in either participant recruitment or data collection, on the part of the research assistants and the participants. When I discussed research ethics and ethical considerations with my research assistants we always did so in private and care was taken so as not to discuss any participants' individual identifying factors such as names or personal or private information.
Survey Instrument

The survey instrument for this study was developed to address the research question, and based upon themes found to be informative to attitudes towards conservation within research done on CBC projects. The sections of the survey are demographics, conservation, park management, tourism, and CBOs and NGOs. The complete survey can be found in Appendix 1.

A demographic section was included in the beginning of the survey instrument due to the prevalence of such measures in CBC research, wherein assessments of such factors have been done in many, if not every, study that utilized attitudes towards conservation, and the resulting connections and relationships have varied due to the differing contexts in which they were conducted. As Bamberg et al. (2002) summarizes, there is a “significant link between people’s environmental attitudes, identity processes and affective relations with a specific place”. I believe that this connection between individuals' attitudes towards conservation and their affective relations with a specific place substantiates the need to assess participants’ demographics as representative of the material conditions in which they live and in which their attitudes and beliefs are formed. Specifically in Nepal it has been found in the past that both education, ethnicity, and gender were predictors of positive attitudes towards conservation (Mehta and Kellert, 1998). In other studies conducted in CBC projects throughout the world different aspects on individual demographic measure were found to be informative towards conservation attitudes, including livestock owning in Tanzania and household affluence in South Africa, which highlight difference in findings of demographics and the importance of including them in such work (Infield, 1988, Kidegheso et al., 2007). I composed the demographics section of my interview to be composed of primarily short and brief questions, with the aim to gather very basic information about the participant without asking them any particularly identifying or politically charged questions.
Following the introductory section on demographics, the survey instrument then focuses on conservation, with five questions geared towards assessing respondents’ attitudes towards both the concept of conservation and its relation to the national park. This section was designed so that responses to these questions would form the measure of attitudes towards conservation that would be directly related to research question, and in turn the research problem. Questions in this section were constructed so as to assess how participants “feel (affective) about the protected areas; and to what extent will they support management actions regulating the protected areas (behavioural intentions)” (Kideghesho et al., 2007, p. 7). Originally this section was formatted following the work of past research that employed a four question section on conservation attitudes with answers provided following a 5 point likert scale (Infield, 1988; Kideghesho et al., 2007; Mbaiwa & Stronza, 2011; Mehta & Heinen, 2001; Pipinos & Fokiali, 2009; Wang, Lassoie, & Curtis, 2006). This style of question formatting with answers provided to participants in a quantitative fashion was changed during the data collection period, as is discussed in this chapter and again in chapter 5, to a more qualitative structure featuring open ended questions.

After the section on attitudes towards conservation the survey instrument features three sections on themes that previous studies have identified as potentially informative to such conservation attitudes. These three sections focus on tourism, park management, and CBOs/NGOs and the structure of the questions within these sections are the same. These sections are structured so that they assess participants: involvement in the theme, attitudes towards the theme, and belief in the benefit of the theme to themselves, their community, and the environment. These sections are structured in this matter based upon research that has shown that involvement in these matters as well as the receiving of benefit from these areas is informative to attitudes towards both these themes as well as towards conservation overall (Acharya, 2000; Alexander, 2000; Anson and Røskaft, 2011; Fiallo and Jacobson, 1995; Infield and Namara, 2001; Lama and Bundy, 2002; Mehta and Kellert, 1998; Mehta and Kellert 2000; Mehta and
Heinen 2001; Shrestha and Alavalapati, 2006; Thuy et al., 2011; Sekhar, 2003; Walpole and Goodwin, 2001).

As a note, I included Non-Governmental Organizations (NGOs) because, similar to CBOs, I knew that there was a long history of NGO activity in both National Parks even though I was unsure about any current presence of NGOs (AIN, 2018; Bhatta & Bardecki, 2014). Past research has remarked on the presence and activity of NGOs, including the Sir Edmund Hillary Foundation of Canada, The Himalayan Trust New Zealand, the Himalayan Trust Nepal, the World Wildlife Fund, the United Nations Educational Scientific and Cultural Organization, the International Union for Conservation of Nature, among others (AIN, 2018; Bhatta & Bardecki, 2014). Neither the current Sagarmatha nor Makalu-Barun management plan state what nor how many active CBOs and NGOs are active in either park, and so I considered any organization that was voluntary to participate in, and held some amount of management and decision making power over a natural resource or local economy/practice, as defined within the research by both Bhatta & Bardecki, and Byers, as well as others, for my study (Bhatta & Bardecki, 2014; Byers, 2014; DNPWC, 2012, 2016; Mehta & Kellert, 1998).

As a final note on the survey instrument, the entire original instrument was structured to feature concise questions with 5 point scaled Likert possible answers provided to the participant. The original framing of the survey instrument with this structure can be viewed in Appendix 2. After discussing with both the research assistants and Dr. All we decided to change the format of the questions slightly so that they were more open ended, with no possible answers to be provided to the participants, and the wording of questions slightly re-organized so that the research assistants would have an easier time facilitating, recording, and translating the data. The final survey instrument that was used for data collection with these adjustments can be viewed in Appendix 1.
Chapter 4 Results

Data Analysis

The analysis was based on the construct ‘attitude towards conservation’ (ATC). I intended to use statistical analysis, with the likert scale responses that I was to have collected, to construct a numerical ATC rating for each participant and compare that rating to the participants responses to each of the survey sections, and in so doing answer the research question. However, given the structural changes to the instrument that I did before data collection began, my analysis no longer focused on statistical comparison of ATC. Given the data that was collected, I followed what has been described as ‘conventional content analysis’ (Hsiegh and Shannon, 2005). Due to the changes in methodology which impacted the structure of the questions used in data collection, I have done what I consider to be the best that I can to match the nature of data and responses to the style of analysis most relevant.

The content analysis proceeded this way: first I scanned the translated survey data and entered the data into a spreadsheet, entering in the data in full, employing no shorthand or coding. After organizing the data according to which of the three valleys in the research area the data was recorded in, I read through the data and took notes on themes and trends. I identified specific questions that produced trends within responses that I believed useful in addressing the research question. I identified two questions, “Does this valley need to be protected?”, and “How do you feel about the national park?” to describe participants' attitude towards conservation. Furthermore, I identified five questions from the demographics section to compare due to the variance in responses to them that was present in the data.

Finally, two groups of questions are important in terms of understanding contributing factors to attitudes towards conservation, participant involvement in tourism, park management and CBOs/NGOs and the participant attitude towards tourism, park management, and CBOs/NGOs. Participant involvement was
represented by questions 22, 26, 32, and 33 which were structured similarly by asking the respondent directly if they are or have been involved or participate in the theme. Attitudes towards these factors was represented by questions 23, 24, and 25 for tourism, 27, 28, and 29 for national park management, and 34, 35, and 36 for CBOs and NGOs, which were all formatted the same in relation to respondents' belief in the benefit of the theme to themselves, their environment, and the valley. After identifying these questions and groups of questions as informative to attitudes towards conservation I compared responses from these questions to participants' attitudes towards conservation, both overall and then by valley of participant residence. I compared the involvement of participants in the theme to both their attitudes towards that theme and their attitude towards conservation, both overall and then by valley of participant residence. I conducted these comparisons during data analysis so as to highlight trends and themes that would help answer the research question and further provide insight into the research problem: showing how the themes of this study impact the conservation attitudes of communities living within the Nepali CBC projects, the Sagarmatha and the Makalu-Braun National Parks.

Research Question

The remainder of this chapter is structured so as to present and discuss the data that this thesis’ study found in a progression following from the research question. First this chapter looks at answering the research question with the data that was found and then goes into presenting and discussing trends and themes within the data that help explain and contextualize this answer to the research question. Further discussion and contextualization within literature of these data, trends, and themes takes place in the following chapter.

This study surveyed 63 individuals, 22 women and 41 men, of which all but three individuals were employed in the tourism economy. The average age of participant was 41 years old, with the age of women surveyed being 21-67 years old, and the age of men surveyed being 17-88 years old. The most
common ethnicity of participants was Sherpa, and in total the suture surveyed individuals from 7 different self-reported ethnicity’s; Sherpa, Rai, Tamang, Bhoti, Jirel, Gurung, and Karki, with the most diverse ethnic population living in the Hinku valley, and the least diverse population being from the Khumbu valley. The most common profession of those surveyed was working in a trekking lodge, and 20 of the 63 participants of the study lived in the valleys year-round, with the other 43 living in the valleys on a seasonal basis.

In addressing my Research Question, “How do residents of the Hinku, Gokyo, and Khumbu valley’s attitudes towards conservation vary?”, I compared each valley’s participant responses to two questions, where N=63 for the total participants of this study, and N=34 participants from the Khumbu valley, N=16 participants from the Gokyo Valley, and N=13 participants from the Hinku valley. I identified these two questions in my analysis as reflective of the participant’s attitude towards conservation. The two questions I identified as representative of participant’s attitudes towards conservation are question 17 - “Does this valley need to be protected?”, and question 21 - “How do you feel about the national park?”. This study did not provide definitions for terms that were used in the survey questions, including this concept used here in question 17, ‘protected’, as well as the concept of ‘conservation’ that appears in multiple questions throughout the survey. This is a limitation that is discussed further in the following chapter. Every participant answered positively to question 17, hence there is no discernable variation between valleys according to this question. In response to question 21 there was some variation in responses but no discernable trends between valleys that I identified: each valley mirrored a trend of the majority of responses being positive and a small number being either negative, unsure, or mentioning both positive and negative themes.

Looking at this trend within responses to question 21 separated by valley; participants from the Khumbu valley provided 26 positive responses, 1 negative response, 1 unsure response, and 4 responses that
mentioned both positive and negative themes; participants from the Gokyo valley provided 11 positive responses to question 21, 1 negative response, and 4 responses that mentioned both positive and negative themes; and participants from the Hinku valley provided 12 positive responses to question 21 and 1 unsure response. Below, Figure 12 and represents cumulative responses to question 21 and Figure 13 shows each valley’s participant responses together.

Figure 12. Cumulative Responses to “How do you feel about the national park?”

Figure 13. Comparison Between Responses to “How do you feel about the national park?” According to Valley
Moving on to question 17, “Does this valley need to be protected?”, there were a variety of themes present within participant responses across the board. See Figure 1 for a visual representation of themes present within responses to this question. Themes present in response to question 17 include; the need to protect the valley because it is a world heritage site, the valley provides forest products and basic needs for the participant’s community, and because of the importance of the tourism economy. Some examples of themes are as follows, where participants responded by saying, “yes, before 20 years ago this valley was covered in vegetation but now it is barren and so it needs to be protected”, and “yes it should be protected because it provides us forest products we need for everyday life”, and “yes it must be protected because tourists want to visit a beautiful place like the valley and so it must be protected to maintain the tourism”. As a note here I believe it is worth stating that throughout this chapter where direct quotes from participants are provided, like in the previous sentence, they are quoted directly as the statements appear in the interview data, and as such may sometimes appear rough or abrupt, and that is because the statements are translated from Nepali to English and I have purposefully not modified or changed the statements at all from how they appear in the interview data from which I quote them from.
Participant responses to question 21, “How do you feel about the national park?”, were more varied than those in response to question 17 - “Does this valley need to be protected?”, where positive responses shared similar themes of the need to protect the environment, the need to protect tourism, and the need for continued conservation efforts. Some examples of these themes include participants quoted in saying that, “I feel good about the park, tourist come here because of the park”, “Due to national park the natural resources are protected so it is good for us”, and “it is good for me because if we can conserve the great natural resources we can get everything for our future generation, and promote sustainable development”.

However, as previously illustrated, responses to this question also contained a few negative responses, as well as a handful of responses that were both positive and negative in content. This array and proportion themes within responses to question 21 are represented in Figure 17 below. Some examples of responses that contained within them both positive and negative themes include, “I am quite happy. But the national park have capture my land and they didn't give the compensation of land so that I am not satisfy”, “It is helpful to some extent but the park officials are not so helpful”, “It is good for conservation and bad for restrict forest product harvest and use on some days”, and “it is good, but it sometimes creates some
conflict between the park and the local people”. I found that this theme of the National Park restricting forest product gathering came up in response to multiple questions in the survey, from participants of all three valleys. In Figure 15, below, I choose to represent all themes present within responses to the question 21, “How do you feel about the national park?”, including some responses which contained multiple themes, resulting in this figure representing 74 themes gathered from 63 responses.

Figure 15. Themes Present Within Responses to “How do you feel about the national park?”

Given the trends and themes present in responses to both question 17 - “Does this valley need to be protected?”, and question 21 - “How do you feel about the national park?”, I believe that the answer to this thesis’ research question, “How do residents of the Hinku, Gokyo, and Khumbu valley’s attitudes towards conservation vary?”, is that they ultimately do not vary noticeably. I believe the data and themes within responses show that even though there exist differences between participant responses across the valleys, the majority of responses and explanations are mostly consistent: in that participant’s attitudes towards conservation were overwhelmingly positive, as shown in the 112 cumulative positive responses
to both questions 17 and 21, as compared to the 12 cumulative negative or both positive and negative responses. The duration of this chapter is dedicated to presenting data and trends found within responses to the themes chosen to contextualize the research question, tourism, park management, CBOs/NGOs, and demographics, so as to provide potential context in further addressing the Research Question.

Tourism

Overall there were multiple strong themes present in the data, spanning responses from participants of all valleys and across all demographic measures. The most commonly shared theme among participants is the belief in, and the understanding of, the importance of tourism. This theme was explained differently by different participants but collectively participants agreed that tourism is beneficial to them, their environment, and they understood the need for conservation in relation to protecting and ensuring the continuation of tourism.

This collective agreement is represented in the positive responses to question 23, "Does tourism benefit you?", and question 24, “Does tourism benefit your community?”. Out of the 63 participants, 60 answered positively to question 23, and there were no direct negative responses: one was not sure, one participant declined to answer, and one responded with “no, but it does directly benefit my son and daughter”, which I choose to categorize as indirectly positive. Furthermore, looking at responses to question 24, 59 participants responded positively and 4 responded negatively, and out of those 4 negative, there was only a single actual “no” response, and the other 3 responses were “not sure”, or responses where the participant declined to answer. Figures 16, 17, and 18 illustrate this theme further.
Figure 16. Cumulative Responses to, “Does tourism benefit you?”, and, “Does tourism benefit your community?”

Figure 17. Comparison Between Responses to, “Does tourism benefit you?” According to Valley of Participant.
Some descriptions of participants’ belief in the benefit of tourism include such responses to question 23, “Does tourism benefit you?”, as “Yes, main source of income is hotel, due to the tourism my family income is good”, “Yes I am a mountain guide and my job is depend on tourism”, and “Yes I am porter and my family depends on me for my income, tourism gives me income”. Furthermore, tourism benefits can be seen represented within responses to question 24, “Does tourism benefit your community?”, where participants have stated that, “Yes, directly and indirectly it is benefit for community because most of the tourists spend time in the community and spend a lot of money here”, “I think so, our community has been developed due to tourism, tourists spend lots of money and help us develop our education, health, and roads”, “yes, in our community some tourists build tap water stations, community schools, and also give some training for local people”, and “yes, because tourism is good for remote area, tourist people increase the income source due to hotel spending, and tourist help built road and schools but also donate money to help rebuild and protect temples here”. During data analysis I reviewed participant responses to question 24 “Does tourism benefit your community?”, like those listed previously, and established three themes found within responses; Economic, infrastructure, and community development and cultural
themes. These themes, along with their prevalence within responses to question 24, are represented below in Figure 19.

Figure 19. Themes Present within Responses to “Does tourism benefit your community?”

Given these examples of responses to both question 23 and 24 I believe that the results show that participants recognize the benefit of tourism for a multitude of reasons, including financially, conservationally, and culturally and developmentally. Financially participants agree that tourism brings income to themselves and their community, conservationally participant’s describe how tourists bring in money which in turns goes towards conservation projects in the park. Furthermore, culturally and developmentally participant’s seem to understand that tourists donate money to help protect cultural centers like temples and schools, and that tourism money, both through donations and park fees, go toward the development of roads, bridges, and water systems in the park, aka development and infrastructure.
I found that participants of all three valleys believe in and understand the benefits of conservation and park management, as shown in Figure 20 and 21, below. In response to question 27, “Is park management beneficial to yourself?”, out of 63 participants, only 5 responded negatively, and 4 participants were unsure. From those that did not recognize benefits to themselves from park management, all five participants remarked on the fact that park management and park policy restricts the gathering of grass, mushrooms, timber, and other non-timber forest products (NTFPs). One participant also commented on grazing restrictions on their property and restriction of range area for grazing stock. This particular theme of park management restrictions on community natural resource use is discussed further in the following chapter.

Figure 20. Cumulative Responses to “Is park management beneficial to yourself?”

![Bar chart showing responses to question 27: 84% positive, 9% negative, and 6% unsure.](chart.png)
In response to question 28, “Is park management beneficial to your community?” 7 participants were unsure, 3 responded with a “no”, with no further elaboration, and 53 responded positively. See figure 22, below, for a representation of responses to question 28 according to the valley of respondent. Some themes that were present among these positive answers to question 28 include referencing education and job training and programs that park management helps facilitate and run for communities in the park, as well as conservation projects and natural resource protection that is important to the participants’ community. These themes are represented in Figure 23. Some examples of themes are; “yes, park gives knowledge training for how to control pollution and conserve environment”, “yes, it promotes our ethnic group and gives ethnic centered training and support”, and “yes, it gives training to local people and support the forest and local forest group”. None of the participants that did not respond positively to question 28 elaborated on their negative response.
Figure 22. Comparison Between Responses to, “Is park management beneficial to your community?” According to Valley of Participant

Figure 23. Themes Present in Responses to “Is park management beneficial to your community?”
In response to question 29, “Is park management beneficial to the environment/valley?” 53 participants responded positively, and there were no direct negative or “no” responses, the remaining ten participants responded with unsure or chose to not respond. See figure 24 for a representation of these responses.

Unfortunately, as mentioned previously in this chapter in reference to the terms ‘protected’ and ‘conservation’, this study did not include a section on definitions, and so the broad, culturally defined and understood concept of ‘the environment’ and ‘this valley’ were not defined beyond just their usage in the survey questions mentioned here. There were no questions geared toward assessing participants’ definition of these concepts, nor was there any piece of this study that provided definitions nor examples of the terms in question. This is a limitation that will be further discussed in the limitations section in the following chapter.

Figure 24. Comparison Between Responses to, “Is park management beneficial to the environment/valley?” According to Valley of Participant

Among the 53 positive responses to question 29, 7 of the participants gave answers connecting the protection of the environment and the valley to the importance of the tourism economy and their jobs.
This connection between the importance of conservation and the importance of the tourism economy was brought up by participants in response to question 17, “does this valley need to be protected?”, 21, “How do you feel about the national park?” and 31, “how do you feel about park management?” as well. In response to question 17, out of the 63 positive responses 22 of them related the need to protect the environment to the need to maintain tourism directly within their response. In response to question 21, out of the 59 positive responses, 9 of the responses connected tourism and particularly 4 of those 9 mentioned that the ‘national park promotes tourism’. And lastly in response to question 31, out of the 47 positive responses, 9 directly mentioned tourism and the tourism economy, with one participant directly stating that “we should protect it since it is place for tourism and tourism gives us money”. I believe that this highlights the perceived connection between conservation and tourism in the area, and this connection is discussed further in the following chapter.

Community-Based Organizations

The final section of the survey instrument for this study was 5 questions surrounding community-based organizations (CBOs) and Non-Governmental Organizations (NGOs). In response to question 32, “are you involved with any community organizations?”, 30 participants responded yes, and 33 responded no. In response to question 35, “Are these organizations beneficial to your community?”, 18 participants were unsure or responded negatively. Comparing this question, 35, to its counterpart tourism & park management questions, 28 & 20 respectively, participants were the most unsure or responded negatively to question 35. Out of the 30 participants that responded positively to being involved with a community organization, all 30 responded positively to question 35, and all of the 33 that were not involved with community organizations 16 of them responded negatively or with an ‘unsure’. See Figure 25 and 26, below, for a representation of the relationship between participation in CBOs and perception of the
organizations benefit to the community. I believe the results from this section display that participation in community-based organizations directly relates to positive perception of CBOs both in relation to one’s environment, community, and oneself.

Figure 25 Relationship Between Participation in CBOs, as Described by, “are you involved with any community organizations?”, and Belief in Benefit of CBOs to Participants Community, as Represented by, “are these organizations beneficial to your community?”
Conclusion

Overall, the results of this study answered its research question directly, in that among those residents of the Khumbu, Gokyo, and Hinku valleys, attitudes towards conservation do not vary. Attitudes towards conservation were found to be primarily positive across residents of all three valleys. Factors that were found to be potentially influential to these positive conservation attitudes include participating in the tourism economy, participating in community-based organizations, and working with and having positive relationships with park management and conservation efforts. Discussion on these topics and their relationships to literature takes place in the following chapter.
Chapter 5 Discussion & Conclusion

Discussion

This research set out to investigate how attitudes towards conservation differ among residents of three valleys within Nepali national parks, the Hinku, Gokyo, and Khumbu. Mehta and Kellert (1998) posit that, “Because CBC can be considered a ‘people-centered’ approach to biodiversity conservation, it is important to examine the attitudes of local communities toward the policies and programs of implementing agencies”, this research assessed attitudes of participants, but did not directly analyzing them. Furthermore, Mehta and Kellert went on to say that, “A specific objective included examining local attitudes toward community development, ecotourism, community forestry, and wildlife conservation policies and programmes.”, which was also incorporated into this study. (Mehta & Kellert 1998, page 4).

This research found little to no difference between participants’ attitudes towards conservation between the Hinku, Gokyo, and Khumbu valleys. This is in large part due to the fact that almost all individuals who participated in this study were involved in the tourism economy present in the area, and that their participation in this industry, and their reliance on the income that industry brings, strongly affects their perceptions of and attitudes towards conservation and conservation management. This is substantiated by the responses from participants that directly connected conservation to tourism, relating the need to conserve the local environment to the public and global perception of the area as desirable to tourists.

Although this research had a relatively small sampling size, (N=63), and thus cannot be taken as representative of the entire population of the research area nor the national parks in which they reside, there are some themes and trends that were commonly reported from participants that can be discussed and contextualized. These themes are: positive attitude towards conservation and park management, perceived benefit from tourism, and perceived benefit from community-based organizations. This chapter discusses these themes and compares and situates them within the conversation surrounding CBC style
management and community-based natural resource management, attitudes towards conservation, and the importance of balancing community economic needs – specifically tourism in this case - with conservation management goals. Further, this chapter discusses some limitations that this study encountered, questions that follow from this research and opportunities for future research.

This research can be considered as a short ethnographic case study. Furthermore, it should be restated that all but 4 out of 63 participants of this study were involved in the tourism industry present in the area. This impacts the relevance of the trends and the findings of this research in such a way that it should be primarily taken as not just a small case study but one of primarily tourism industry workers. I believe that participants in this study were primarily tourism industry workers for three reasons. First due to the size of the tourism industry in the research area and the allure of the income opportunities of the industry, where residents can bring in far more income working the various roles present in the tourism industry than they can in more ‘traditional’ economic roles in their communities. Tourism industry roles include porters, trekking guides, trekking support staff, hotel/restaurant owning/management, and mountaineering climbing guides (Sherpas), whereas traditional economic roles include traditional agriculture, animal husbandry, and trade, which have always been low-income roles compared to the tourism industry in the area. Second, this study surveyed mostly tourism industry due to the time scale in which data collection was conducted. During the busy tourism season that data was collected in the number of individuals living in the parks while employed in the tourism industry goes up dramatically, affecting the ratio of residents who are and are not tourism workers.

Third, this research gathered data from primarily tourism industry workers due to the nature of participant recruitment that was practiced during data collection, wherein most participants were recruited word of mouth style from the research assistants, Benup, Mahendra, and Astani, with help from the trekking guides and trekking support staff that worked with our research team at the time. The guides and support staff that worked with our team and with my research assistants during data collection knew many
residents of the research area, however a vast majority of those that they had existing relationships with and seemingly had ease approaching for participant recruitment for this study were individuals also involved in the tourism industry, like themselves. Although on multiple occasions I spoke with my research assistants and the support staff, both separately and together, about the need to recruit participants whom were engaged in both the tourism industry and all other industries, I recognize post data collection that this ask was not fully engaged with by the research assistants and support staff, primarily I believe due to language barriers between us and a lack of good understanding as to this importance. This is discussed further in the limitations section of this chapter. The four participants of this research who were not employed in the tourism industry were: one government school teacher, one doctor, and two individuals employed in agriculture. I believe it can be inferred that had this exact study been carried out in the same area but with residents of a more diverse economic background then the results and findings would be different and presumably also more diverse, giving weight to how this research should not be taken as representative of the general population of the research area as a whole, and more so specifically of individuals active in the tourism industry present in the area. Again, this factor is discussed further in the limitations section.

It is important to discuss this research in relation with that of the work of both Mehta & Kellert (1998), and Mehta & Heinen (2001), who investigated attitudes towards conservation and factors contributing to them based on a 400-household survey conducted throughout the Makalu-Barun in 1996 (Mehta & Kellert 1998, Mehta & Heinen 2001). Out of the three main findings of Mehta and Heinen, they found two of them to still be present among participants: benefits from tourism were directly linked to positive attitudes towards conservation and the park management, and educational/conservation programs and training/job programs were carried out by the national park.

However, the other primary finding of Mehta and Heinen that this research did not find was the desire to be able to hunt pest animals, which Mehta and Heinen found to be of high importance to residents of the
Makalu-Barun at the time of their study (Mehta & Heinen 2001). In fact, no participant in this research, either from the Makalu-Barun or the Sagarmatha, remarked on the desire to hunt pest animals, nor brought up animal depredation/wildlife issues at all. I believe that this difference in findings points to successful conservation and park management policy and programs being carried out in the parks between the time of Mehta and Heinen’s study and mine (DNPWC 2016). It is because of the introduction and continuation of park management policy about restricting and prohibiting this type of hunting since the time of Mehta and Heinen’s study that I did not include a question directly about this desire/attitude in my study, although I did include an open-ended question about restrictive park management policy: 30 “Does park management restrict your use of forest products?” The only topic that was brought up by participants in answer to this question was seasonal restriction on gathering firewood and non-timber forest products like mushrooms, no participants chose to respond to this question with comments about hunting/wildlife predation. I also recognize that, as mentioned previously, since participants of this study were primarily tourism industry workers, that if this had not been the case and more agriculture workers and residents employed in more traditional economic roles had participated in the study, then perhaps more diverse responses on the topic of wildlife predation may have arisen. I believe it is interesting that the majority of participants from these studies held attitudes that I found to still be held twenty years later, as reflected in Mehta and Kellert stating that “local people wanted tourism, but not at the cost of jeopardizing forests or wildlife and displacing people”, and “An overwhelming majority of respondents reported tourism development was either very important (62%) or important (22%) for their community”, both statements I believe are reflected in my research’s data, although not in the specific case of displacement of individuals or communities, which was a topic that was not mentioned by participants (Mehta & Kellert 1998, page 7, 10).

Overall, much of the findings that these two articles describe were mirrored to some degree in my research, notably with the exception of the participant’s stated desire to hunt and fight ‘pest animals and depredation’ (Mehta & Kellert 1998, Mehta & Heinen 2001). Furthermore, I believe that most of the
trends that these two articles described, including that education level was found to be significant indicators of favorable attitudes towards conservation, was also mirrored in this research. This research did not produce statistically significant results so a direct comparison to these factors as significant predictors of positive attitudes towards conservation cannot be made, yet it can be seen in my results that a majority of participants who recognized negative aspects of conservation and of park management, as seen in responses to the question: “How do you feel about the national park?”, of my survey, had lower levels of personal education.

To further contextualize and situate my findings and trends within the academic conversation surrounding community-based conservation and attitudes towards conservation, I would next look at the main themes among my findings. The first theme is the finding of overall positive or favorable attitudes towards conservation being held by most of the participants of my research. Many other studies that focused on CBC style conservation projects utilized an attitudes towards conservation (ATC) rating or construction that found residents of the communities to have positive or favorable attitudes (Alexander 2000, Baral & Heinen 2007, Holmes 2003, Infield 1988). Research that has reported upon positive attitudes towards conservation include work conducted within CBC projects within Belize, Uganda, and multiple studies in Nepal, whereas research that found and discussed negative attitudes towards conservation, or a more even split of both favorable and less than favorable attitudes, was conducted in CBC projects within Ecuador, South Africa, Tanzania, and again from multiple studies conducted throughout Nepal (Alexander 2000, Baral & Heinen 2007, Fiallo & Jacobson 1995, Mehta & Kellert 1998, Mehta & Heinen 2001, Holmes 2003, Infield 1988, Infield & Namara 2001, Ito et. al 2005, Kidegesho et. al 2007, Nepal & Weber 1995). The reasons for these differences in other researchers' findings are varied, and usually highly locally contextual, many of which are hard to compare to my research directly because most of this work employed statistically analyzed data, and so their findings are discussed in terms of statistically significant factors and predictors of positive or negative attitudes towards conservation, which I cannot provide.
However, there are still some similarities in contributing factors to positive attitudes, primarily the belief in the benefit from tourism and the benefit from community-based organizations or community management groups. Other researchers have also found this theme present in their work, or found these themes to be significant predictors of favorable attitudes towards conservation (Mehta & Kellert 1998, Mehta & Heinen 2001, Alexander 2000, Baral & Heinen 2007, Nepal & Weber 1995). Conversely, researchers conducting studies on conservation attitudes and community-based conservation around the world have also reported a number of different demographic factors to be reasonable predictors of positive attitudes towards conservation. I was hopeful that there would be more variance in my results among participant’s attitudes towards conservation, but since there was not, my research cannot report on any demographic measures that were good predictors of attitudes towards conservation. A number of other researchers who investigated CBC projects and used an ATC construct or rating spent a considerable portion of their discussions looking into what demographic factors contributed to positive or negative attitudes, including sometimes lengthy discussions on local geographic history including political and institutional influences (Ito et. al 2005, Kidegesho et. al 2007, Holmes 2003, Fiallo & Jacobson 1995, Infield 1988, Infield & Namara 2001).

This research presents some conclusions that have followed the conversation on CBC management and research that used ATC as a means to assess CBC projects, including the importance of tourism and the benefit that local residents of CBC projects believe they receive from community management programs and projects, tourism, and park management. More importantly, this research further illustrates a theme of much of the conversation surrounding CBC projects, in that the more that communities participate in the decision making process, and the more that local communities within CBC projects receive direct benefit from tourism, the greater their attitudes towards conservation will be, and the more willing they will be to follow conservation policy, conservation management decisions, and voluntarily participate in conservation projects and initiatives.
Primarily, this theme is about linkages, as has been discussed by authors in the CBC and tourism conversation, where conservation attitudes and willingness to participate in conservation action, has been demonstrated to be linked to participation and the receiving of direct benefit - either from tourism, conservation action, or both (Ansong and Roskaft 2011, Brooks et al. 2012). Work has been done that investigates some of these links further and discusses how these connections are not always black and white: composed only of positive or negative attitudes and receiving or not receiving direct benefit from tourism and conservation (Ormsby and Mannle 2006). Some of this work has shown that indirect benefit, from both tourism and conservation, has also been recognized from residents of protected area projects, and that this reality also contributes to residents' attitudes and willingness to participate in conservation action (Pagdee et al. 2006, Shackleton et al. 2002, Wang et al. 2006). Furthermore research has shown how sometimes positive attitudes towards conservation and or tourism do not always line up with receiving any benefits, both direct or indirect, and that even though positive attitudes exist, willingness to participate is not linked, and inversely, that sometimes residents and communities hold negative attitudes to either or both tourism and conservation, yet still receive benefit from them, and this also has been shown to produce a variance of results in terms of willingness to participate in conservation efforts (Baral and Heinen 2007, Mehta and Heinen 2001).

This research and the idea of linking benefits to participating in conservation strategies is among the forefront of current CBC and conservation management discussion, where researchers have shown and discussed how important these connections are, how fickle they can be, especially in relation to the often volatile and unpredictable nature of tourism economies in protected areas. For this reason researchers seem to be both calling for increasing and protecting the links that do exist in places where these links are shown to relate to willingness to participate in conservation efforts, and to also encourage and develop links that do not rely on direct benefits within communities and protected areas where such connection has been hard to sustain or not present at all. Developing and fostering positive attitudes towards
conservation and willingness to participate in conservation strategies in protected areas and CBC projects that do not experience such direct benefit relationships to conservation and tourism is difficult though, and the conversation on conservation management discusses ways in which protected area management and community organizations strategies to do so.

Limitations

This research encountered a small number of limitations, and this discussion presents these limitations and attempts to connect them to opportunities for future research. As briefly discussed, the participants of the study were almost entirely employed in the tourism economy. A more inclusive study would mean that additional respondents might provide more diverse responses and potentially more varied attitudes towards conservation and tourism for example, which in this study were very consistent. This implies space for future research with methodologies intentionally gathering data from more diverse economic background of participants. Furthermore, there is space for additional research to assess more broadly the views of residents, going beyond just attitudes towards conservation, and creating more diverse survey and interview questions geared towards participants concerns, their beliefs, and their qualms with the topics that this study focused on: conservation, park management, tourism, and CBOs. Future studies of this nature would further add to the understanding of researchers in both the conservation management and the ecotourism fields.

Another limitation of this research was the relatively brief time frame of data collection. Future research would benefit from a longer data collection period. Specifically this study gathered data during the relative beginning of the tourism season, April-early June, and I believe that conducting similar research during both the time leading up to the tourism season - March and April - and during the end of the season - mid to end of June - and into the relative ‘off season’ - end of June until the middle of
September, could provide a more diverse range of data. Considering that the research area experiences such dramatic shifts in tourism industry presence between its busy seasons and its ‘off seasons’, future research comparing attitudes towards tourism conducted in these different seasons may provide interesting insights. This seasonal nature of the research area and the potential difference in responses had this research been conducted in exclusively the ‘off season’ of the tourism industry, highlights potential for future research to explore the attitudes and beliefs of residents when the tourism industry is not actively bringing in money and jobs.

Another limitation encountered through this research was working with research assistants across language barriers. Although I believe that the relationships I had with my research assistants were strong, and that we shared trust and understanding of the intention of this research, there were limitations to our communication that I did not recognize until the end of data collection. For example, I believed throughout data collection that research assistants were encouraging dialogue and conversation with participants, due primarily to the multiple conversations we had on the subject and the positive feedback that I received from the research assistants when I asked them about this factor. In retrospect I believe that, due to our language barrier, the research assistants did not fully understand what I was attempting to convey, even though their responses in our conversations were always positive and affirmative to my requests and concerns. Another factor within the struggles of language barriers were barriers in understanding my requests during the translation process. On multiple occasions during the data collection period my research assistants showed me examples of the responses and notes on the conversations they were having with participants. The notation and responses that I saw seemed lengthy and assumedly descriptive, leading me to believe that the research assistants did understand the concept of encouraging dialogue and conversation with participants. At this stage of data collection though, all the responses and notes that I viewed were in Nepali, and I did not have any conception of what their length and content would be in English. I believe that it also is possible that during the translation process the
responses and notes on the conversations that were had in Nepali were summarized into the short-hand English that may have made sense for the research assistants, resulting in the consistently short and brief responses that comprise this study’s data. Ultimately, future research that intentionally focuses on more open ended and dialogue centered data collection would provide depth that this study did not. In summary, future research that has a more transparent and mutually understood translation process conducted by researchers that are more experienced in working with those they share language barriers with and have more time to develop and strengthen the relationships between researcher and research assistant, would result in better and more informative data.

Finally, as mentioned previously, this study did not seek to assess respondents’ understanding of nor provide definitions of the broad and often culturally defined nature of some of the terms that it employed. This research would have benefitted from the addition of a few open-ended questions in the beginning of the interview process geared towards assessing participants definition and understanding of these terms, of which include: the environment, the valley, your community, protect, conserve/conservation, as well as benefit/beneficial. Definitions for these terms were not provided to participants during data collection, nor did the study directly seek to assess participant’s understanding or lack thereof of these terms, and I recognize that this is a limitation to this work since these terms are indeed culturally and geographically defined. Future research would benefit by including a definitions section of their interview instrument that seeks to assess participants’ beliefs and understanding of terminology. Furthermore, future research would also benefit by being reflexive in nature by structuring and framing their interviews to use the definitions and commentary provided by participants about these concepts in the beginning of the interview to contextualize and inform questions and dialogue in the rest of the interview conversation. By doing so, future research that is more reflexive in nature would result in more culturally and geographically informative and relevant data: data that more accurately speaks to the diversity of understanding that is presumably present among participants. In summary, that this study did not include
any focus on definitions, nor reflectiveness of the survey to relate to participants’ understanding of concepts, is a limitation that this research suggests future studies avoid.

Future Research

Beyond limitations, this study raises two questions for further research within both Sagarmatha and the Makalu-Barun. The first is work that intentionally looks into the relationship or dissonance in attitudes towards conservation between strictly residents who are only employed in agricultural and traditional economic roles, and those who are exclusively employed in the tourism industry. Second, I believe this research highlights the opportunity for investigation into differences in attitudes towards conservation between those residents who live in the parks permanently versus those who live and work in the park seasonally. I believe that although my research did not directly look into these group distinctions and was structured to gather attitude information from all residents of the park, that intentionally assessing and comparing attitudes from these two groups may highlights differences that further provide insights into the research problem, further representing the needs of communities and how they relate to conservation goals.

As the tourism economies within both Sagarmatha and Makalu-Barun, as well as protected areas throughout Nepal, and continues to grow in popularity as eco and adventure tourism destinations that draw visitors from throughout the world, that existing problems and conflicts between tourism and the goals of conservation will continue to progress and deepen as well, and so research into these conflicts, the concerns of the residents, and ways to manage both this powerful economy and conservation goals, will continue to be important. I believe this projection is supported by the continual documented rise in park visitors to both Sagarmatha and Makalu-Barun since they were both opened to the outside world, respectively (DNPWC 2016, Byers 2014).
Conclusion

Almost all residents who participated in this study held positive attitudes towards conservation. Most participants showed belief in the benefit of both conservation and park management to themselves, their community, and their environment. When asked directly how they felt about the national park in which they live, participants responded with descriptions of positive feelings, and understood that the park, park management, and conservation policy is necessary and good. A few participants responded that both park management staff and policy sometimes created conflict with locals and residents of the park, yet none of these respondents elaborated on these conflicts. In part, this demonstrates that park management has theoretically done a successful job in both working with the residents and communities within the park, and in creation of and implementation of park and conservation policy that takes the needs and concerns of residents into consideration. Furthermore, these findings show that residents of these communities may be supportive of future conservation and park management policy and action.

This study found that most respondents showed positive attitudes towards tourism. Again, participants demonstrated belief in the benefit of tourism economies to themselves, their communities, and their environment. Some participants directly linked the tourism economy, and the income that it brings to their communities, to conservation and conservation policy. Respondents that spoke on this connection highlighted the theoretically mutually beneficial relationship of conservation and tourism: where conservation strategy and action is necessary for tourism as its protects the natural environment and resources of the park so that the park continues to flourish as a globally recognized tourist destination, and tourism is necessary for the continuation and progression of conservation efforts due to the income and resources that the economy brings to the park. Furthermore, some participants mentioned the multifaceted nature of the benefit of tourism, in that tourism brings in direct income benefits to residents as well as financial resources to the park and therefore conservation efforts as well as community development
programs that the park supports via park entrance fees and climbing/trekking permits. Here, this research has demonstrated the importance of the tourism economy to the residents of the parks, showing both the importance of the income opportunities that the industry provides and the collective understanding of the industry to residents. Furthermore, this could inform park management and policy making agencies relevant to the area how important tourism is to the residents of the park, and how future conservation and park management strategy and policy must take that into account in order to be most successful.

All participants who had experience working with Community-Based Organizations held positive attitudes towards them, and responded positively to the belief that CBOs are beneficial to themselves, their community, and their environment. Among the participants that did not have experience with CBOs, attitudes towards them were more varied than those that did, wherein only 11 participants who did not have experience with CBOs responded that they believed CBOs are beneficial, 12 participants without CBO experience said they were unsure about CBOs being beneficial, and 7 outright said ‘no’ they did not recognize benefit. This contrast highlights both the success and the struggle of CBOs in the area, wherein this research shows that CBOs have been successful in working with some residents, and that relationships and understanding of benefit between residents and CBOs seem to be good among residents who have participated with CBOs, and yet there also exists space for CBOs to expand, educate, and attempt to reach and relate to more of the residents of the area.

In summary, this study has assessed the attitudes and beliefs of a small number of residents of the Hinku, Gokyo, and Khumbu valleys, inside the Sagarmatha and the Makalu-Barun National Park, Nepal. This research found that attitudes towards conservation did not vary between the residents of these valleys. In addition, this study has discussed opportunities for further research on both the concerns of residents of these valleys and on a more varied economic background of residents. This research has provided insights into the conservation attitudes of primarily tourism industry workers in the area. Furthermore, this research has highlighted the importance of the tourism economy to the research area and has shown how
successful conservation management and community relations have fostered positive attitudes towards both conservation and conservation action in Sagarmatha and Makalu-Barun. In conclusion, this research shows that more work is necessary to further understand residents’ attitudes, beliefs, and concerns about tourism, park management, conservation, and CBOs in a more diverse and representative nature.
Bibliography


[https://doi.org/10.1007/s10531-006-9132-8](https://doi.org/10.1007/s10531-006-9132-8)


Appendix 1 Final Survey Instrument

Section 1. Demographics

1. How old are you?

2. What is your preferred gender identity?

3. What is your ethnicity?

4. Where are you from?

5. Where do you live now?

6. How long (months) do you live in this valley?

7. How long have you been coming and returning to this valley?

8. How many people do you live with in this valley?

9. How many people do you live with outside the valley?

10. What are your sources of income?

11. What are your household’s sources of income?

12. What is your profession in this valley?

13. What is your profession outside the valley?

14. What education have you had?

15. What education does your family have?

16. Where does your family go to school?

Section 2. Conservation/National Park

17. Does this valley need to be protected?

18. Does this park protect the environment?

19. Is the park doing its job?

20. Does the park protect your community?
21. How do you feel about the national park?

Section 3. Tourism

22. Do you have a job in tourism?

23. Does tourism benefit you?

24. Does tourism benefit your community?

25. Does tourism benefit the environment/valley?

Section 4. Park Management

26. Have you ever worked in the park?

27. Is park management beneficial to yourself?

28. Is park management beneficial to your community?

29. Is park management beneficial to the environment/valley?

30. Does park management restrict our use of forest products?

31. How do you feel about park management?

Section 5. CBO/NGO

32. Are you involved with any foreign NGO?

33. Are you involved with any community organizations?

34. Are these organizations beneficial to yourself?

35. Are these organizations beneficial to your community?

36. Are these organizations beneficial to the environment/valley?
Appendix 2 Original Survey Instrument

Section 1 – Attitudes towards Conservation

Answers choices provided: strongly agree, agree, neither agree nor disagree, disagree, strongly disagree

1. The environment in this national park needs to be protected.

2. The national park was created to protect the environment.

3. The national park was created for the betterment of our community.

4. Generally speaking, I like the national park.

Section 2 – Demographic Information

5. What is your age? (choose one) 16-25, 26-35, 36-55, 55+

6. What is your preferred gender? (choose one) M/F

7. What ethnicity do you identify as? (categories were to be chosen after initial data collection/discussion with RA)

8. Did you grow up in this valley? Do you currently live in this valley? How long have you lived in this valley? (choose one) 0-5, 6-10, 10+

9. What is your household/family size (choose one) 1, 2-4, 4+
10. What are the sources of income in your household? (choose one) Mountaineering, trekking, agriculture, Lodge, Porter, other

11. What is your current income? (categories were to be chosen after initial data collection/discussion with RA)

12. Is that your year-round profession? (choose one) yes/no

a. If no, do you have other work in a different location during the year? (choose one) yes/no

13. For how many months do you stay in the park in a year? (choose one) 0-3, 3-6, 6+

14. What level of education have you had? (choose one) less than high-school, high-school, more than high-school

15. Are you involved in the tourism industry in any way? (choose one) yes/no

16. Are you involved in the park management in any way? (choose one) yes/no

17. Are you involved in any community based organization in any way? (choose one) yes/no

Section 3 Benefit of Tourism

Answers provided: strongly agree, agree, neither agree nor disagree, disagree, strongly disagree

18. Tourism in the park is beneficial to the conservation of the park’s environment.

19. Tourism in the park is beneficial to yourself.

20. Tourism in the park is beneficial to your community.

Section 4 – Benefit of Park Management
Answers provided: strongly agree, agree, neither agree nor disagree, disagree, strongly disagree

21. Park management and management policies are beneficial to the conservation of the park and its environment.

22. Park management is beneficial for yourself.

23. Park management is beneficial to your community.

Section 5 – Benefit of CBOs

Answers provided: strongly agree, agree, neither agree nor disagree, disagree, strongly disagree

24. Community based organizations are beneficial to the conservation of the park and its environment?

25. Community based organizations are beneficial to yourself?

26. Community based organizations are beneficial to your community?
Appendix 3 IRB Approval Form

WESTERN WASHINGTON UNIVERSITY
Office of Research and Sponsored Programs

MEMORANDUM

To: Morgan Scott

FROM: Stephanie Richey, Research Compliance Officer

DATE: 2/25/2019

SUBJECT: Institutional Review Board—Exemption Research Approval

Thank you for submitting a research protocol regarding your human subject research EX19-077 “Conservation Attitudes in the Sagarmatha and Makalu-Barun National Park, Nepal” for review by the Institutional Review Board (IRB).

Approval: The IRB has reviewed the materials you submitted and found the project described falls into Category #2. Although the research qualifies for exempt status under 45 CFR §46, the investigators still have a responsibility to protect the rights and welfare of their subjects, and are expected to conduct their research in accordance with the ethical principles of Justice, Beneficence, and Respect for Persons, as described in the Belmont Report, as well as with state and local institutional policy. All students and investigators collecting or analyzing data must be qualified and appropriately trained in research methods and responsible conduct of research.

Determination Period: An exempt determination is valid indefinitely, as long as the nature of the research activity remains the same. If the involvement of human participants changes over the course of the study in a way that would increase risks, please submit a modification form.

Problems: If issues should arise during the conduct of the research, such as unanticipated problems that may increase the risk to the human subjects or change the category of review, notify the Research Compliance Officer promptly. Any complaints from subjects pertaining to the risk and benefits of the research must be reported to the Research Compliance Officer.

If you have any questions, feel free to email me at compliance@wwu.edu.

REVIEWER’S SIGNATURE:

[Signature]
Application Approval Signatures

Principal Investigator Agreement

I have read and agree to uphold the responsibilities of the Principal Investigator as outlined on previous page of this application. I attest that the materials provided in support of this application are an accurate reflection of the proposed research.

Morgan Scott
Principal Investigator Name

[Signature]
Principal Investigator Signature

2/15/19
Date

Faculty Advisor Agreement (If Required)

I have read and approve the attached application submitted for review. I agree to provide appropriate education and supervision to the student investigator and share the Principal Investigator responsibilities as stated above.

John Ali
Faculty Advisor Name

[Signature]
Faculty Advisor Signature

2/15/19
Date

Department Chair Agreement

I certify that I have reviewed this research protocol and that I attest that facility, equipment, and personnel are adequately prepared to conduct the research.

[Signature]
Department Chair Name

[Signature]
Department Chair Signature

2/15/19
Date
Application: Human Subjects Research

IRB Use Only
Protocol #: EX19-017

Review Status: ☐ Exempt ☐ Expedited ☐ Full
Cat: 2

Reviewer 1: ___________________________ Date: 2/19/19

Reviewer 2: ___________________________ Date: ___________________________ Notes: ___________________________

Approval Period: NA to NA

1. Investigator Information

Principal Investigator (PI) (One per application is allowed)
First Name: Morgan
Last Name: Scott
Degrees: BA Environmental Studies
Department: ENVS
Home Institution: WWU
Address/Mail stop: 1307 oldfairhaven parkway, Bellingham WA, 98225
Phone: 2064369377
Email: scottm34@wwu.edu
Status: ☐ Faculty ☐ Staff ☒ Graduate student ☐ Undergraduate Student

Faculty Advisor (Required when Undergraduate & Graduate Students are listed as PIs)
First Name: John
Last Name: All
Home Institution: WWU
Department: ESCI
Position: Research Professor
Address/Mail stop: Department of Environmental Science, Huxley College of the Environment
Phone: 3603259737
Email: allj@wwu.edu

PI Proxy (A researcher authorized for correspondence with the IRB, if different from the Principal Investigator)
First Name: 
Position: 
Phone: 
Last Name: 
Address/Mail stop: 
Email: 

2. Study Information

2.1 Short Study Title: Conservation Attitudes in the Sagarmatha and Makalu-Barun National Park, Nepal
2.2. (Optional) Anticipated Determination:
   Step 1. Complete our online application guidance tool.
   Step 2. Select the level that was estimated (or anticipated) to apply to your application and, if applicable, the category(ies).

<table>
<thead>
<tr>
<th>Level</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ☒ Exempt</td>
<td>Exempt category 2.2</td>
</tr>
<tr>
<td>b. ☐ Expedited</td>
<td></td>
</tr>
<tr>
<td>c. ☐ Full Board</td>
<td></td>
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</tbody>
</table>

2.3. Funding: Is this research funded by a grant (external or internal) or contract?
   ☒ No
   ☐ Yes → If yes:
   Funding Agency: ______________________
   Grant Number: ______________________
   Grant/Contract Title: ______________________
   Grant Award Term: ______________________

2.4. Other Universities: Does this study involve collaboration with or study of faculty, staff, or students at another university?
   ☐ No
   ☒ Yes → Is the PI listed on this application the Lead PI between all collaborators?
     ☒ Yes → Contact the other university’s research compliance office then select an answer below based on what they determine. Then continue with this application.
     ☐ The other university will conduct a separate IRB review.
     ☐ The other university will rely on Western’s IRB review.
   ☐ No → Contact a Research Compliance Officer before continuing. The WWU IRB may be able to rely on the review and approval of the university where the Lead PI is affiliated.

2.5. Research Location: Please list the locations where the study will be conducted. This can be as general or specific as needed for the study (a software platform, university, state, country, etc). Examples: Online/Qualtrics, Western Washington University, another university, Washington State, Europe. If additional lines are needed, please attach a separate table.

<table>
<thead>
<tr>
<th>Location</th>
<th>Activity at this Location (Recruitment, data collection, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sagarmatha National Park, Nepal</td>
<td>Interviews</td>
</tr>
<tr>
<td>Makalu-Barun National Park, Nepal</td>
<td>Interviews</td>
</tr>
</tbody>
</table>

3. Study Design

3.1. Purpose: What is your research question or hypothesis? Use lay language, avoid technical terms, and please spell out acronyms the first time they are used.

Research Question: “How do attitudes towards conservation differ among residents of the Gokyo, Khumbu, and Hinku Valleys?”
3.2. (Non-Exempt Applications Only) Design: Describe how your study design is appropriate for examining your research question or hypothesis. If your study is based on similar studies in your field, please describe this background and provide literature citations.

3.3. Additional Application Instructions: If any of the following are applicable to your research, please check the box below and reference the instructions provided.

☐ Research on Students in Classrooms ➔ Read and follow our Classroom Research Instructions
☐ Collection of Existing Data (requesting data already "on the shelf" or available before the research begins for recruitment or study procedures) ➔ Read and follow our Secondary Data Instructions
☒ International Research (occurring outside of the United States) ➔ Complete the International Research Instructions
☐ Use of radiation (x-rays, DXA scan, etc) ➔ Contact the WWU Environmental Health & Safety Office
☐ None of the above

4. Participants

4.1. Participants with special considerations: Check any of the following populations that you will be working with and complete any necessary supplements.

☒ Non-English Speaking Populations OR Use of Non-English Materials ➔ Complete the Non-English Supplement
☐ American Indian/Native Americans or Indigenous peoples ➔ Complete the Indigenous Populations Supplement
☐ Prisoners ➔ Complete the Prisoners Supplement
☐ People with Impaired Decision Making ➔ Complete the Impaired Decision Making Supplement
☐ None of the above

4.2. Adults or Minors: Will you recruit subjects under 18 years old, over 18, or both?

☐ Under 18 ➔ Read our guidelines on research with minors and complete the Minors in Research Supplement
☐ 18+ ➔ Select a method (or methods) for ensuring that subjects are 18 years old or older:

Population: The nature of your population naturally excludes participants under 18 (Ex. senior citizens). This option is possible for WWU students for non-federally funded research, as the IRB considers WWU students to be mature minors. If checked, please describe the nature of the population in question 4.2.
☒ Screening: Participants will be asked for their age during screening. If checked, explain this process in your answer to question 5.2.
☐ Consent: A statement is included in the consent form indicating that by signing the form the participant is confirming that they are at least 18 years old.
☒ Other age of consent ➔ If the age of majority to participate in research for your population is different (which may be possible in some states and international research), please specify the age of majority in the box to the right. Then check one of the boxes above (<18 or 18+) as if you are answering for the age of majority for your research subjects. For example, if your research is conducted on adults in Alabama, you would type "19" in the box to the right and then select the "18+" box and indicate your method for screening.

4.3. Inclusion/Exclusion Criteria: Describe any criteria that would make a subject eligible or ineligible to participate. This could include age range (if more specific than minors vs adults), sex, gender, university class status, or any other characteristic.
Individuals are ineligible to participate in this study if they do not live in the specific valleys for some portion of the year, on a yearly basis. Individuals are ineligible to participate if they are not 16 years of age or older.

4.4. (Non-Exempt Applications Only) Number of Subjects: What is the maximum number of subjects (or subject groups, such as cases or controls) that will be enrolled? If you cannot estimate the number of subjects, tell us as much information as possible.

5. Recruitment & Screening

5.1. Recruitment Methods: Recruitment includes any activity where information is provided about the study to a prospective participant.

Describe how you will recruit your subjects. Include how you will identify subjects, and the method of outreach (phone, email, social media advertising, fliers, class announcements, research database, word of mouth, etc).

Exempt applications do not need recruitment documents attached to this application. The IRB will review your process only. For all other application types, recruitment documents must be attached in addition to this description. Do not insert the recruitment text in this box.

If your recruitment involves obtaining contact information from any part of a student’s education record, including Canvas, other class rosters, and WWU Registrar’s office, you must obtain and attach a clearance letter from the Registrar’s office.

Recruitment will be conducted in informal conversations with individuals in common public spaces and on the current trekking route, and spread through word of mouth.

5.2. Screening: Screening includes obtaining information from prospective participants before they have consented to participate in the study in order to determine their eligibility.

If you will be obtaining information about prospective participants in order to determine if they are eligible for the research, please describe this procedure. Indicate whether you plan to keep the data from screening as part of the study.

The screening that will take place in this study includes inquiring the individual’s age, their living situation, their willingness to participate in the interview, and will take place in informal conversations.

6. Consent: Adults

Consent is a process. A consent form is documentation of the end of the process. For research with only minors write NA on the first line of 6.1.a and complete the Minors Supplement.

6.1. Consent Type:

Step 1. Read our guidance on consent types.

Step 2. Read our guidance on consent forms. Templates and examples are available to help write your consent form.

Step 3. Check the option(s) below for the consent process(es) that will be used.

Step 4. For Non-Exempt Applications: Attach your final consent form(s) to your application for submission.

Exempt Eligible Applications: While the IRB expects you to still have a consent process and consent form, do not attach your consent form to this application. The IRB will only review your consent process. The

<table>
<thead>
<tr>
<th>Consent Type</th>
<th>If you have multiple consent types checked, indicate below what portion of the study each consent type will cover. Ex: Electronic Consent - online survey; Written Consent - interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. □ Written consent</td>
<td></td>
</tr>
<tr>
<td>b. ✗ Verbal consent*</td>
<td></td>
</tr>
<tr>
<td>c. □ Electronic consent*</td>
<td></td>
</tr>
</tbody>
</table>
d. □ implied consent*

   ➔ If 6.1.d is checked, what action will indicate consent?

e. □ No consent**

*If you have checked 6.1.(b-d) AND your research is not exempt, you must submit a Waivers Supplement.
**If you have checked 6.1.(e) you must submit a Waivers Supplement.

6.2. Consent Process:

a. When will the consent form be distributed prior to the consent process? For many studies, the consent form is distributed right before participation, like with an online survey using electronic consent. For other studies it may be more appropriate to distribute the consent form ahead of time so that the participant has a longer amount of time to read and consider the form.

The consent information is first read to potential participants. The giving of the consent form will take place immediately after the verbal consent conversation, and right before the interview begins.

b. Please confirm that participants will be given the opportunity to ask questions about the research. □ Confirmed.

c. Please confirm that participants will receive a copy of the consent form or are asked to print a copy from an electronic source. □ Confirmed.

6.3. Influence & Coercion: Even if you don’t pressure subjects to participate, would it be difficult based on your role or any other factor for subjects to opt out of participating? For example: Professors conducting research in their classrooms may unintentionally cause students to feel pressured to participate.

□ No

□ Yes ➔ 6.3.b. If yes, describe what steps you will take to prevent against this:

6.4. Deception or Incomplete Disclosure: Will you provide false information, withhold information, or delay disclosure of information about the nature of the research to any subjects during the consent process?

□ No

□ Yes ➔ 6.4.b. If yes, describe this process and the reasoning why it is important. The IRB understands that this can be an important technique in some research. This question helps us understand how that is the case in this study.

7. Procedures

7.1. Procedures: Using lay language, describe the study tasks that participants will be asked to complete. Include the:

- List of tasks involved or data that will be collected
- Overall sequence of the procedures (if applicable) – for example, participants complete an online survey, followed by an interview, and then a focus group. If the sequence is variable you can explain that.
- Time required – for example, if the study is an online questionnaire, the length of time to complete the questionnaire. If the study involves two parts, the length of time for each part.

The tasks that the participants will be asked to complete are answering and expanding upon interview question/prompts. See the attached list of interview questions for reference. Every interview will follow the same sequence of questions, although the study does allow for expansion upon a topic/question if the participants wants to. The time required to complete the interview depends on the length of responses that the participant gives for each question, but is estimated to take 30 minutes.
8. Data Security Protections

8.1. Identifiers: Will you be collecting any of the following information at any point (including during recruitment)?
- Name and contact information (address, phone, email)
- Date of birth (does not include the year of birth or someone's exact age, unless the subject is over 89 years old)
- Western ID number, MTurk ID, social security number, medical record number, or other identifiable number
- IP address
- Photographic image or audio or video
- Any other characteristic that could uniquely identify the individual (does not include demographic information unless the subject pool is small enough that someone could be identified by that method)

☐ No
☐ Yes

8.1.b. If yes, list the identifiers you will be collecting.

8.1.c. If yes, describe how long identifiers will be kept. The IRB prefers deleting identifiers if practical and as soon as possible.

8.2. Data Identifiability: Check the option(s) that apply to your data.

☐ Public
Subjects are identifiable when data is collected and published.

☐ Data is Never Linked
The researcher will never know, or have any possible way of knowing, the identity of the subjects OR there is never a link between the subject's data and their identifiable information.

☐ Data is Linked At Any Point
There is a link (at any point in the study) between the subject's data and their identifiable information, either directly or indirectly. The IRB understands that the link may be severed at some point. Your description of how long identifiers will be retained should be included in your answer to question 8.1.

If checked select an option below:

☐ Directly: Subject's data will be labeled with or inherently contains their identifying information. Example: labeling a survey with a subject's name; audio or video recordings

☐ Indirectly: Subjects will be assigned a code, which will be used to label the data. This code will link to the subject's contact information. The code cannot contain elements that could identify a participant.

8.3. (Non-Exempt Applications Only) Methods of Data Protection:
Step 1. Read our guidelines on research data and security protections.
Step 2. Identify what level of security is required for your data.
Step 3. Check all options that apply. By checking an option below you are confirming that you are following the security procedures associated with that type of data.
If multiple are checked, please specify what data is covered under each level. For example, Level 2 – Online Survey, Level 3 – Medical records.

☐ Level 1
☐ Level 2
☐ Level 3
☐ Level 4
8.4. Withdrawal: If a participant enrolls in the study, and later withdraws, will you destroy their data?

☐ NA → Due to the nature of the study, the participant cannot withdraw after data collection. For example, an online survey where data is never linked to identifying information.

☐ No → If no, this information must be included in the consent form.

☐ Yes

9. Incentives

9.1. Incentives: Are you providing incentives of any kind for participation?

☐ No → Skip to Section 10

☐ Yes → Continue to Question 9.2.

9.2. Incentives Type & Amount

Step 1. Read our guidelines on providing research incentives.

Step 2. Describe:

- The incentive type: gift cards, cash, course credit, extra credit, Mturk payments, gifts, food, etc
- The amount (for course credit or extra credit you can provide an estimated range if the exact amount is unknown)
- If payment will be pro-rated for the completion of certain tasks
- If they withdraw early from the study, whether subjects will still receive compensation

9.3. If Course Credit or Extra Credit Incentives Are Used: You must provide a comparable alternative assignment worth equal amounts of credit for subjects who choose not to participate. Please provide a description of the alternative available.

9.4. If Requesting Cash or Physical Gift Cards AND Research is Funded: Amazon e-gift cards are the preferred monetary incentive method for research where funding is administered by or through Western. To use another method, describe how the integrity of the research will be affected in a material, negative way by using the preferred method.

10. Risks & Benefits

10.1. Anticipated Risks: Please describe any reasonably foreseeable risks. This can include a risk of emotional or physical discomfort or harm. Include how you will reduce the possibility of these risks.

We do not anticipate any foreseeable emotional, nor physical risk by participating in this study. The proposed interview conversations are expected to be fairly short, around 15-30 minutes long, and are not expected to inconvenience any participants in any way. The topics covered in the interview are believed to be covering information that is not emotionally sensitive or discomforting.

10.2. (Non-Exempt Applications Only) Benefits: Briefly describe the potential benefits of the proposed research (to the field, to the subjects):
Application Supplement:
Alternative Language

1. Investigator Information

This information is repeated from your application in the event that your supplement is separated from your application.

<table>
<thead>
<tr>
<th>Principal Investigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Last Name:</td>
</tr>
</tbody>
</table>

1.2 Study Title: Conservation Attitudes in the Sagarmatha and Makalu-Barun National Park, Nepal

2. Translation & Comprehension

2.1. English Language Proficiency: Select any of the following below that apply to your subject population.

☑ Subjects lack fluency or literacy in English

☐ Subjects have fluency in English and a foreign language. The researchers will use the preferred language of the subject.

2.2. Researcher Language Proficiency: Are the researchers who will interact with subjects fluent the subjects’ primary language?

☑ Yes

☐ No ➔ if no, please answer the questions below.

2.2.a. Describe how you will obtain translations of your study materials.

2.2.b. Describe how you will ensure the translations are accurate and appropriate.

2.2.c. Describe how you will provide interpretation during the consent process and throughout the study, including the qualifications of the interpreter(s).

2.2.d. Describe how you will ensure that subjects will fully understand the study procedures and consent process.