The Enemies of Conservation: Balancing Humans and Wildlife Within and Surrounding Protected Areas in Tanzania

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Abstract

The purpose of this study is to explore how advances in biodiversity conservation and planetary health programs can be balanced with the protection of fundamental human rights. Specifically, I challenge that current applications of conservation initiatives that include accessibility to land for rural communities living in close proximity to protected areas are insufficient. Human influence on ecological processes stigmatizes land use of local rural communities living near protected areas. I aim to understand how scholars, activists, and authorities at research institutions and conservation organizations can find balance between "people first" and "conservation first" initiatives. By focusing on protected areas such as national parks, wildlife management areas, and game reserves, and the environmental agencies within Tanzania, I investigate how the idea of a "natural landscape" has changed conservation initiatives, and by doing so, will assess conservation implementations that involve local rural communities. The introduction of natural parks often overlooks fundamental rights of the local communities who depend on the land in Tanzania; however, the creation of these parks significantly increases the survival rate of native wildlife. Conservationists' and social scientists' approaches to and understandings of conservation should not ignore the needs of one another and of native and local people who inhabit lands near protected areas. I argue that social scientists and conservationists must learn to work together with involvement from local communities through interdisciplinary studies. Wildlife conservationists and social scientists must account for the social, political, economic, and ecological struggles that occur when addressing the preservation of an occupied natural area. I believe that an increase of rural community involvement in conservation initiatives will lead to an increase of conservation for utilitarian purposes. This thesis addresses when, why, and how humans are neglected in conservation and how they can be more included. It explores how to protect both human rights and wildlife biodiversity.

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"Protected areas are controversial. To many they are essential because their restrictions on natural resource use conserve biological systems that will otherwise be depleted, degraded or destroyed. To critics protected areas threaten peoples' rights and livelihoods, allowing access for some people but excluding others. Protected areas' distribution of fortune and misfortune lies at the heart of their controversies."

- David Wilkie and Dan Brockington (2015, 1)

Chapter 1: Introduction

The human population has increasingly overwhelmed Earth's ecosystems, causing significant geological imprints that experts believe are the creation of a new Epoch, called the Anthropocene (Grinspoon 2016). These imprints are seen in the amounts of plastic in the ocean, amounts of trees leveled, and amounts of species that have gone extinct due to our actions. With 7.4 billion people occupying the earth, the position humanity has acquired as a keystone species has led to its exploitation of natural resources through over-fishing, farming, deforestation, and other forms of resource extraction for food, shelter, minerals, and human-driven needs. Human-caused degradation of the environment has reached a critical juncture. At this point of the earth's timeline, conservation of natural resources is critical. This creates a challenging question: how can we preserve biodiversity while also protecting basic, fundamental human rights?

Conservation is a generalized term. Institutionalized and westernized schools of thought dominate the field of conservation and preservation. With initial understandings of its importance beginning in 1872, "conservation" encompasses the integrated idea of the preservation of diverse flora and fauna while excluding humans (see Chapter 3). As humans gain ability to access resources due to new technologies, they are among the most invasive species[1] worldwide. Humans cause extreme damage to global ecosystems and it is imperative we become fully involved in conservation efforts.

The International Union for the Conservation of Nature (IUCN) is an international organization and a source which carries out assessments on how to conserve global species' habitats and ecosystems while sustainably managing human use of natural resources. The IUCN

[1] An invasive species is defined as an "alien species […] introduced by humans – either intentionally or accidentally - outside of its natural past or present distribution" (Invasive Species 2016).

creates the IUCN Red List, a comprehensive list that analyzes species facing the threat of extinction. Within it, one can see population trends among various species, and understand how species are affected by demographic changes of human or other organisms' actions. The IUCN Red List outlines threats to endangered species and aims to inform actions taken to limit the number of species going extinct (The IUCN Red List of Threatened Species n.d.).

Extinction of species per year is at an all-time high. The IUCN Red List categorizes endangered species into seven categories: least concern, near threatened, vulnerable, endangered, critically endangered, extinct in the wild, and extinct (The IUCN Red List of Threatened Species n.d.). 52 of the 22,000 species (mammals, amphibians, birds) listed on the IUCN Red List are moved up one category closer to extinction each year (Hoffmann et al. 2010; Pimm et al. 2014). By 2100, deforestation will contribute to 18% of species extinction, and the extinction variable raises to 40% if only the species in protected areas are of primary focus (Pimm and Raven 2000; Pimm et al. 2014). Protected areas should not be the leading solutions in the conservation of species. The focus should be ecosystems at large, not just within protected areas boundaries.

There are countless studies on extinction rates and projections of loss in various taxa (Brooks et al. 2002; Thomas et al. 2004; Cheung et al. 2009; Pereira et al. 2010; Pimm et al. 2014). Current estimates are that over the last century, 100 to 10,000 species are lost every year in comparison to the standard evolutionary trajectory of one to ten species lost a year (Pimm et al. 2014). It is imperative, now more than ever, to protect and restore the current biodiversity crisis. Protection and conservation of wildlife biodiversity can slow projected extinction rates. One next step in conservation is working to resolve conflict and find coexistence between local rural communities residing near protected areas and the wildlife within them.

After studying the eviction of Native Americans in Yellowstone National Park in my third year at the University of Colorado Boulder and understanding that many parks and protected areas around the world use the Yellowstone model as an example to follow, I became intrigued at how conservation authorities strive to find balance between the preservation of wildlife and the protection of fundamental human rights. This same year I learned that while the wolf population is successfully repopulating in Yellowstone and its pristine landscapes are preserved, Native Americans were "systematically killed, enslaved, or pushed onto isolated and undesirable land by European Americans, who were privatizing most native land for profit," often under the pretense of conservation (Oatman-Stanford 2018). Actions taken in the name of conservation work to protect wildlife biodiversity, but this often creates tensions between parties involved.

Conservation initiatives are crucial for the protection of animals, human-animal relationships, human resources, and human involvement in local, regional, and global communities; however, the ideas of conservation should not prioritize one over another (Harryman 2016). This thesis aims to recognize that all interrelated organisms and areas of the earth must be considered and included in conservation efforts to create healthy, sustained habitats. To understand how to limit the geological and ecological imprints caused by humans, I review the conservation initiatives in Tanzania through a comparative study of the perspectives of conservation organization specialists, academic scholars, wildlife specialists and collected data from conservation organization websites that work in Tanzania. Specifically, I look at Tanzania because the interaction of native people, tourists, researchers, and wildlife is tremendous. The country is home to 25 biodiversity hotspots, 20% of Africa's large animals, and 40% of its land is protected (Fifth National Report on the Implementation of the Convention on

Biological Diversity 2014). It is also home to one of Africa's largest groups of rural pastoralists, the Maasai. In Tanzania, wildlife tourism accounts for almost USD one billion in annual revenue. The interconnectedness between each group involved in conservation in Tanzania is crucial for successful initiatives.

Including human communities in conservation planning completely changes the way humans are treated. The tactics used by environmentalists and wildlife conservationists should not ignore the native people who inhabit the land they seek to conserve, as they often do (Geisler 2002). Locals needs for land is imperative to their livelihood, but protected areas are imperative to the well-being of wildlife. The areas that conservationists strive to protect often force the removal of indigenous people, but by doing so, are ignorant of the fact that many of these communities can preserve the land with cultural, religious, spiritual and customary practices (Mulder and Coppolillo 2005). "It's no secret that millions of native peoples around the world have been pushed off their land to make room for big oil, big metal, big timber, and big agriculture. But few people realize that the same thing has happened for a much nobler cause: land and wildlife conservation" (Dowie n.d.). In recent decades, conservationist understandings have evolved to prioritize land and wildlife preservation by educating the public on how conservation benefits the local community, the country, and the global population. This can be done through many methods including, but not limited to, community-based conservation or community-based natural resource management (CBC or CBNRM), anti-poaching patrols, ecotourism, wildlife corridors, and conservation schools. Local rural communities living near protected areas are the highest percentage of people who are now called 'conservation refugees.' It is necessary to take into account these conservation refugees because support is imperative to the successful protection of wildlife biodiversity.

The purpose of this thesis is not to disregard wildlife protection as being extreme, nor to create empathy for those humans who have lost their habitats in the name of conservation. I aim to explain which paths can and should be taken for humans and animals to experience mutually beneficial relationships, without depletion of either's resources. Wildlife conservation and biodiversity protection are among the most essential and challenging concerns straining the world today. The question I aim to answer is "which changes in conservation movements must be made to avoid the disappearance of wild animals while also maintaining livelihoods of local rural communities around protected areas?" Literature today incorporates a plethora of information on the problems surrounding conservation but lacks solutions that include perspectives from all sides. This study understands connections between conservation organizations globally and people locally to include humans and wildlife equally in conservation. By understanding literature, influential conservation perspectives, and conservation organization projects, I argue that interdisciplinary studies including social scientists, wildlife conservationists, and ecologists are imperative in order to obtain the goals of conservation.

Chapter 2: Background - The National Parks Movement

The Western World's Creation of National Parks

Over the course of human history, the idea of nature has changed. The westernized myth of the natural state revolves around the preservation of pristine landscapes, that are created for their "pleasing prospect" [2] (Oatman-Stanford 2018). Alternatively, nature and wilderness itself can be viewed, in the utilitarian sense, on how it benefits and is resourceful to humans. The essence of nature varies worldwide, based on cultural and historical contexts. This chapter explores the environmental history[3] of the national park movement in order to understand human interactions with their environment and their involvement in conservation.

Roderick Neumann, Professor of Geography at Florida International University whose research focuses on culture and nature in Western thought and author of *Imposing Wilderness*, argues that the expressional state of the natural world started with 17th-century artist Claude Lorrain's paintings of idealized natural landscapes and "wilderness." Lorrain's paintings serve as guidelines on how the western world, specifically the elite and aristocratic class, idealized, and in turn, modeled the British countryside (Neumann 1998).

[2] Pleasing prospect refers to the idea that an object is aesthetically beautiful to the eye and holds no other purpose.

[3] The environmental history of humankind, their habitats, and surrounding nature focuses on communities, interrelationships, and balance (Nash 1972). Environmental history refers to human interaction with the environment over time. Multiple sub-disciplines of social and natural sciences study environmental history (Brady 2018).

Figure 1: “Landscape with a Piping Shepherd” Claude Lorrain, c. 1629 (Landscape with a Piping Shepherd n.d.).

Through his paintings, Lorrain introduced a new idea of the “natural state” with scenes that influenced what pristine nature means to the western population. This pristine, “countryside ideal,” is an area cultivated to create an idyllic form of nature that is vast and lush with greenery, devoid of human habitation (Figure 1). With Lorrain’s influence, conservation began as a way to preserve the British aristocratic countryside as a designed and perfectly structured natural landscape (Neumann 1998). Lorrain’s paintings pictorialized nature for recreational and viewing pleasure, a theme commonly seen in Anglo-American culture (Neumann 1998). When this romanticized perspective expanded outside of Europe, it formed a history of exclusion by claiming territories and excluding certain populations, explained later in this chapter (Brockington and Wilkie 2015, 2). In the 19th century, Western romanticized views of nature transformed from the visual paintings of Lorrain into the physical development of protected

areas called national parks, a term coined by American painter George Catlin (Mulder and Coppolillo 2005).

The conservation movement quickly expanded West, to the United States of America where, in 1832, George Catlin defined national parks as an area that is “established on the premise that all the people of a nation would collectively benefit from their preservation than would a few from their exploitation” (Mulder and Coppolillo 2005, 15). In Catlin's vision of national parks, First Nations are not excluded from the equation of conservation development or nature; they are celebrated as a part of them, able to contribute to nature's protection (Figure 2). When George Catlin coined the term “national parks” he did not intend to remove the local people who lived within the park boundaries.

Figure 2: “Buffalo Chase with Bows and Lances” by George Catlin, 1832-1833 (Oatman-Stanford 2018).

While George Catlin dreamt of unobstructed wilderness, Scottish-American explorer and publisher, John Muir, idealized natural landscapes devoid of human habitation or influence. John

Muir, also known as “The Father of National Parks,” was a man of Christian faith with an education in chemistry, botany, and geology, who explored the American West in the late 1800s, where he found spirituality in nature. As one of the first settlers to explore and document the area now known as Yosemite National Park, Muir began a movement in which nature's value lay in its way of connecting humans with the world. He saw nature as a reflection of spiritual and religious truths- that its material objects paralleled a higher realm- a philosophy known as transcendentalism (Nash and Nash 2001). Muir wrote, "the clearest way into the Universe is through a forest wilderness" (Nash and Nash 2001, 126). The explorer changed the way Americans who had never set foot in the wilderness viewed these areas. His writings on what he saw and experienced in nature were the first of their kind and his explorations changed many Western understandings of nature. The ideas of Catlin and Muir were instrumental in the construction of the first national park that changed the conservation movement globally, Yellowstone National Park.

The Yellowstone Model

In 1872, Yellowstone National Park was created in the United States of America, and became the primary model for protected areas globally, hereby referred to as the "Yellowstone model." Understanding the history of the development of Yellowstone National Park is pertinent to understanding the fundamentals in the development and management of protected areas worldwide. The park was based upon a model of nature, whereby people could view nature through a transcendental lens of idealization, and value the aesthetic qualities, but do not use its resources.

A natural landscape, following John Muir and changing perceptions of wilderness, lost its initial characterizations in which traditional pioneers saw it "as a place of temptation, waste, and

threat," and became a place for spiritual renewal (Gissibl, Höhler, and Kupper 2012, 33). The Yellowstone model romanticized wilderness and created a collected sense of biophilia, a term introduced by Edward O. Wilson in which a person desires and feels a connection with untouched wilderness (Wilson 1984). The first national park model changed nature to a pleasing prospect, an untouchable landscape meant for the viewing pleasure of elites (Brockington, Duffy, and Igoe 2008). According to environmental historian Roderick Nash, "wilderness […] not only offered an escape from society but also was an ideal stage for the Romantic individual to exercise the cult that he frequently made of his own soul. The solitude and total freedom of the wilderness created a perfect setting for either melancholy or exultation" (Nash and Nash 2001, 47). National parks allowed for this sense of freedom in wilderness without the distraction of human influence. From its inception, the core themes of the Yellowstone National Park have expanded outside of the Western World:

> "The core themes at play in Yellowstone - government protection of unspoiled territory, the overlapping of the Romantic readings of nature with commercial intentions, the clearing of space and removal of indigenous humans and symbiotic processes of naturalizing nation and nationalizing nature - proved of global significance and were eminently exportable. The Yellowstone 'model' seemed especially applicable to other settler societies, where 'empty' spaces and exotic scenery conjoined with processes of land assimilation, cultural legitimization, and identity formation to create fertile ground for national parks to flourish. The project of civilizing nature via national park creation had broad transnational appeal" (Jones 2012, 42).

To reiterate, Yellowstone has played a key role in the efforts and initiatives of conservation, acting as a Western model for national parks and protected areas around the world- a model that does not include humans. "The earliest forms of conservation were barely disguised territoriality" (Mulder and Coppolillo 2005, 28). The Yellowstone model allowed for the eviction of people and their use of the land that is now a protected area in hopes that protected areas would allow for a basic appreciation of nature. Conservation

preserves some biodiversity, but at what price for those completely reliant on the land? This eviction creates conservation refugees. Conservation refugees are those who are evicted from fertile, abundant land to live on marginalized lands in marginal places like Native American tribes in Yellowstone in the United States and the Maasai by the Serengeti in Tanzania with limited rights and access to their former lands (Geisler 2002). "Their contributions to the ecosystem are taken for granted and appropriated with little compensation. Simply put, conservation refugees are invisible because visibility raises the price of conservation" (Geisler 2002, 81). Authorities, policymakers and environmentalists periodically deny or disregard impacts of conservation on local people and provide very little compensation for them (Geisler 2002). Eviction is often viewed as one of the most effective and inexpensive solutions, as it would cost authorities, whether they be conservation or government, money to provide relocation services or any form of compensation. Tens of millions of humans have been evicted from their lands in the name of conservation (Dowie n.d.; Dowie 2009). Based on intrinsic values, the original national park serves as a reminder that parks are created to protect nature. The establishment of Yellowstone National Park began an international movement of safeguarding scenic areas where endangered animals like wolves, or, more internationally, elephants and large carnivores migrate, all while neglecting humans.

International Understandings of Conservation

Following Yellowstone was the development of numerous parks globally, almost all based on this westernized model. The second national park in the world was established in Australia in 1879, which incorporated American influences (Gissibl, Höhler, and Kupper 2012). In 1895 and 1896, almost 20 years after the creation of the Yellowstone model, the first game

reserves were set aside in South Africa and Kenya "without consideration of local land use, without local consent, and primarily for the enjoyment of outsiders" (Mulder and Coppolillo 2005, 28). The first nationally recognized protected area to conserve and protect the natural world, as well as its natural systems, refused to acknowledge the fundamental rights of local and indigenous people, and now this model is followed worldwide. Labelled "America's Best Idea," Yellowstone National Park became an international model, and in 1925, the model expanded to the African continent with the creation of Parc National Albert (now Virunga National Park) in the Democratic Republic of Congo (Jones 2012). National parks (NPs) are established with the intention of evicting local people from inhabiting and/or using resources from the park, even going so far as ignoring local knowledge of the land (Carroll 2012). Today, there are over 100,000 protected areas internationally (Brockington, Duffy, and Igoe 2008), which cover over 14.8% percent of the earth's surface, and while national parks do protect wildlife and biodiversity, they often have negative impacts on the communities surrounding them.

The first international Convention for the Preservation of Animals, Birds, and Fish in Africa, was held in 1900 and detailed how to create wildlife legislation (Mulder and Coppolillo 2005). Some scholars today view the treaty and conservation as the last form of modern colonialism in Africa, as the treaty was only signed by European colonial powers and it evicts native people in the name of an international movement. Alongside this treaty, the 1900s saw many changes in conservation. In 1962, the First World Conference on National Parks was held in Seattle, Washington in the United States with representatives from 63 countries (Jones 2012). Although representatives from many countries attend these conferences, international beliefs overpower the beliefs of local groups and communities, who have the traditional environmental knowledge to protect their land from resource depletion through traditional practices, whether it

be religious and spiritual or customary (Jones 2012). By the end of the 20th century, there were over 350 national parks globally (Chapman n.d.) to preserve nature and prevent threats to biodiversity.

To address threats to natural and cultural landscapes, and to find a balance between both, various projects stemming from big international non-governmental organizations (BINGOs) (IUCN, Conservation International (CI), World Wildlife Fund for Nature (WWF), Nature Conservancy) and other international conservation movements, projects, and conferences, including the IUCN Green List and UNESCO's Man and the Biosphere project, were created. In 1968, UNESCO began developing its project, Man and the Biosphere (MAB), to understand solutions concerning the environment (Batisse 1993; Mulder and Coppolillo 2005). Officially launched in 1971, the goals of MAB aim "to establish scientific basis for the improvement of relationships between people and their environments" (MAB Programme | United Nations Educational, Scientific and Cultural Organization n.d.). The program examines different biomes throughout the globe to understand how humans and their environment interact, focusing on natural and social sciences[4]. Projects like these need to be emphasized in the field of conservation for there to be open communication between natural and social scientists.

In 1978, the IUCN extended the term 'protected area' to cover all terms such as "national park, nature reserve, or wildlife sanctuary" (Mulder and Coppolillo 2005, 28). More recently, in 2014, the IUCN launched the IUCN Green List with an overarching objective to create better-managed conservation sites that manifest successful conservation outcomes by reviewing components of the Green List Standards. This Standard assesses consistent criterion - design and

[4] Natural scientist refers to ecologists, biologists, botanists, and other life sciences. Social scientist refers to sociologists and anthropologists who focus on human cultures and interrelationships.

planning, governance and management - to understand and list what creates successful conservation outcomes (IUCN Green List of Protected and Conserved Areas 2016). According to the IUCN Green List that promotes effective and successful protected areas, protected areas that are well-designed, well-managed and well-governed "are our most effective tool for conserving nature, and provide a wide range of ecological, socio-economic, cultural and spiritual benefits" (IUCN Green List of Protected and Conserved Areas 2016). However, who determines how it is designed, managed, and governed? In the 21st century, conservation changed general land use around the world so that, as of December 2016, reserves cover 14.8% of terrestrial protected areas, including national parks, and 5.1% percent of global oceans (Protected Planet 2016). These protected areas are often created with western influences due to the Yellowstone model, and these influences cause conflict between conservationists and the local communities who rely on resources provided by the land. Conflict in Anglophone Africa, and throughout the world, between conservation objectives and indigenous livelihood practices, has threatened the success of both conservation initiatives and local traditions (Cernea and Schmidt-Soltau 2006; Baird, Leslie, and McCabe 2009). This research argues that, while humans should be considered a threatening, invasive species that disturb ecological processes, their invasiveness can be limited and managed through the interdisciplinary cooperation of social scientists and wildlife conservationists.

The National Park Movement in Tanzania

Protected areas are a way of seeing and understanding the world as well as giving space for endangered species to reproduce (West, Igoe, and Brockington 2006). The expansion of national parks from the United States set a standard of how protected areas and conservation organizations function worldwide. Countries, like Tanzania, have multiple organizations,

protected areas, and government agencies working to conserve the astounding biodiversity in their land, but tensions between pastoralists, agriculturalists, conservationists, tourists, social scientists, and government officials continue. Nature and wilderness are land considered to be untouched by humans in western thought, a contradictory statement when one acknowledges that the land is now being thoroughly managed by humans. Balance is necessary between people and wildlife to avoid conflict and create amicable situations, not only for successful preservation, but also to create environments where both can thrive. The history of conservation in Tanzania begins with a deep-rooted establishment of colonialism and western influence.

Tanzania was first occupied by Germany from 1880 to 1919. With Western settlers occupying the country, land became the main source of conflict between Germans and native Tanzanians like the Meru people. In 1886, two German missionaries marked off purchased territory in Tanzania, and, upset by the sale of property, native Tanzanian Meru warriors killed them (Neumann 1998). Using their deaths as the reason, the Germans had 8,000 to 10,000 German retaliation soldiers consisting of allied Tanzanian Chagga and Askari warriors invade indigenous property of the Meru and Arusha areas for the political goal of acquiring more land (Neumann 1998).

The German militia also took thousands of cattle from the Meru and Arusha people and brought them to Mount Kilimanjaro in Northeastern Tanzania, leaving the communities impoverished, starving, and degraded (Neumann 1998). Their control forced the Meru people to vacate their lands and hide while Germans seized the "vacant" territories (Neumann 1998). Although the German soldiers did not take property from the indigenous people in the name of conservation, their actions resulted in colonial control of the land that once belonged to indigenous communities. Germany had alienated lands suitable for crops and livestock by

driving the Meru people out. The German occupation represented many trials and tribulations of indigenous people in Tanzania that are still seen today, including conflicts over land rights. The impact of colonization on opposing indigenous communities, like the Meru, was severe and alienating, affecting both local and national land use by creating tension over who had rights to the land. The German invasion allowed national and international outsiders to gain ability to dictate how Tanzanians should use their land because it weakened the local people. Following World War I and after the German occupation, Tanzania was mandated to Britain (Neumann 1997).

During the British occupation of Tanzania, 1.31% of land was alienated (Neumann 1997). Most reserves were set aside for the elite British communities as hunting grounds and land to be used at the expense of others. British rule restricted native communities to certain areas, like the Maasai to the west of the Pangani River and the Kwavi to the east (Brockington 2002). The colonizers saw Maasai pastoralists as irresponsible and unproductive citizens in need of modernization (Brockington 2002). Control over game preservation, indigenous people, their lands, and their livestock continued (Brockington 2002). Even following Tanzania's independence in 1961, pastoralists have been encouraged to participate in commercial beef production (Brockington 2002). Today, influence over rural and indigenous communities continues from outsiders, including both federal and international governments. Non-governmental organizations like The Nature Conservancy and Conservation International are present in countries like Tanzania, working to preserve large ecosystems and wildlife species. Communities are evicted and lands become protected areas in the form of game reserves, wildlife management areas (WMAs), or National Parks (Neumann 1998). The history of the conservation movement surrounding national parks is crucial to understanding the debates

behind conservation internationally, in order to best resolve relationships between the communities most affected by the movement and the rest of the natural world.

Chapter 3: Methods

METHODS

The general questions that guided this research are:

1. How can we continue to preserve biodiversity in protected areas while also protecting fundamental rights of indigenous people and local rural communities living near them?
2. How well does community-based conservation (CBC) work?
3. Why are humans, in the general sense, not included when we think of the natural world?
4. Which systems of protected areas work to benefit ecosystems, biodiversity, and humans and why?
5. Is there a missing link between conservationists and social scientists when looking for balance in conservation initiatives?

STUDY POPULATION AND DATA COLLECTION

Informants

This research focuses on the perspectives of four influential authorities within the field of conservation: an ecologist, a conservationist, a social scientist, and a director of a conservation organization, within the context of conservation literature. Conservation organization projects that included both local communities and national parks (NPs) or protected areas (PAs) in Tanzania were also reviewed in respect to interview questions and literature. This research aims to pinpoint any missing links in conservation initiatives currently working to better the lives of people living near protected areas while focusing on the conservation of wildlife species and biodiversity.

Emails to sixteen potential research participants were sent out summarizing the project goals, sampling questions, and asking if they would be willing to participate in the study. Each

participant who agreed to participate in the study held a Ph.D. in a field concerning conservation. Due to participants living in different countries, video-chat interviews and emailed questionnaires were methods of communication used. The research prospectus, questionnaire, and sample population were reviewed and approved by the Institutional Review Board at the University of Colorado Boulder. I received four completed interview responses from influential authorities working in the field of conservation, which are listed in the Appendix. Due to anonymity, each informant was given an informant number. Interviews were either sent in by email or recorded by notetaking. The following lists the participants interviewed:

1. Informant 1: Director of Conservation Services at an influential conservation organization in Tanzania. Informant 1 received a Ph.D. in Anthropology. They have headed and worked with USAID and UNDP collaboratively or through funded programs, and have worked as a lecturer at universities. “I am interested in conservation because of various reasons; first the love of wildlife, biodiversity, and nature" (Informant 1 2018).
2. Informant 2: A professor at a prestigious university, Informant 2 specializes in Biological Anthropology and Conservation. They focus on ecology and conservation of endangered primate species in South East Asia where they conduct and process survey, census and behavioral data. “I am interested in conservation because I think it is important to protect what is left of the natural world and work towards rehabilitating damaged, but not destroyed parts of this natural world. Healthy ecosystems benefit human and nonhuman life alike” (Informant 2 2018).
3. Informant 3: Author of numerous books concerning climate, people, and the planet, Informant 3 studies astrobiology, and is an award-winning science communicator, and prize-winning author. In the past, they were appointed as the inaugural Chair of

Astrobiology at the U.S. Library of Congress where they studied the human impact on Earth systems and organized a public symposium on the Longevity of Human Civilization. “As a human being living on a changing planet, I am concerned about what we may be losing as habitats disappear and ecosystems shrink or are stressed” (Informant 3 2018).

4. Informant 4: Informant 4 is a Professor of Conservation and Development at a prestigious university. Most of their research has been done in Tanzania, where they have worked on livelihood change, natural resource governance of local communities, microfinance, and institutional performance. Author of numerous books concerning humans and conservation, Informant 4's interest in conservation stems from childhood. Informant 4 opted not to be audio recorded. Their interview answers were recorded by notes.

Literature Review and Analysis

The literature review was an extension of research done by Jim Igoe, Andrew Pullin, Dan Brockington, J. Terrence McCabe, Stuart Pimm, and Paige West. Article title screenings were conducted in order to search for literature sources. These searches were selected to encompass information surrounding protected areas globally and in Tanzania based on both conservation and social perspectives (Pullin et al. 2013). Search terms included: protected area, national park, natural/biosphere reserve, Tanzania, Maasai, biodiversity, conservation, conserved/preserved area, human well-being, community governance, ecosystem, ecology, balance. Books, journal articles, and news articles were selected to understand the debates behind conservation, the positives and negatives of protected areas (PAs), wildlife management areas (WMAs), and organizational movements, and how researchers conduct and understand projects related to conservation. These searches were correlated with responses given by interviewees and ongoing

conservation organization projects both in Tanzania and around the world to understand how they function together.

One of the main questions that exists within the paradigm of nature preservation is "what is the best method to conserve?" There are many debates surrounding the implementation of conservation, and the amount of literature surrounding the problems behind this research question is extensive. In this thesis, the literature citing humans' inclusion in nature is studied, followed by an extensive review of the debate on valuing conservation for its intrinsic or utilitarian purposes. Next, an assessment on national parks and community-based conservation is provided through separate literature. Lastly, by examining the literature behind the motives of conservation, the debate of people first or biodiversity first is discussed. The debates and literature surrounding conservation implementation are analyzed, and the solutions to understand which steps must be taken in order to best balance humans with endangered species and ecosystems are understood through interviews, scholarship, and conservation projects. This literature review and analysis alongside the four conducted interviews are done to thoroughly analyze the thinking that goes behind conservation literature and implementation.

Conservation Organization Selection

Systematic searches of conservation organizations and BINGOs working in Tanzania were conducted to understand the impact of conservation organizations and the role of protected areas and wildlife management areas (WMAs) on the lives of humans who inhabit the area around them. "The Directory of Environmental Organizations in Tanzania" was consulted to find conservation organizations that have projects working with communities and protected areas to help with coexistence. There are 50 environmental organizations and 17 government environmental and conservation agencies of Tanzania and other Tanzanian government agencies

with environmental concerns listed in this directory (The Directory of Environmental Organizations & Environmental Government Agencies in Tanzania 2018). This thesis does not address the 17 governmental and conservation agencies. I studied the nongovernmental organizations (NGOs) that work with protected areas while working with community. These organizations were assessed to understand their projects in the context of the literature and interviews. This cross-comparison study is aimed to understand the links of ecologists, conservationists, and social scientists to improve conservation implementations.

Chapter 4: Human's Place in Nature

Global institutions and BINGOs, such as the World Conservation Society (WCS), have often not recognized humans as a part of nature. As I explained in Chapter 1, the IUCN's list of invasive species does not catalog humans as an invasive species, while other conservationists argue humans as the most invasive and destructive being on Earth. Through the ways we impact our planet, as well as through the ways we try to preserve it, we negatively impact our own species. In western literature and thought, it is common to view humans as a separate entity from nature. When biodiversity is mentioned, it should refer to all species and their effects on the earth. Biodiversity is important because "greater species diversity ensures natural sustainability in all life forms" and, because humans "dominate this planet, [they…] need to preserve the diversity in wildlife" (Shah 2014). It is likely that humans are often separated from biodiversity because they are in charge of preserving it. This chapter explores when and how humans are included in the idea of nature. If our species was widely accepted as a part of nature and ecological systems, advocates could argue for the protection of local rural communities living near PAs.

A protected area is often created to protect a species or a range of species and lands. However, PAs are not just a biome in which to protect biological diversity. They also highlight social interactions and reproduction that occur surrounding that land (Neumann 1998). Anthropologists Dan Brockington and Paige West (2006) explain that protected areas can help determine how humans interact and are involved with their natural surroundings. In doing so, protected areas can show the interconnectedness of living things and how each life affects another, including humans. Whether humans should be, or are included in the idea of nature is a large part of the reason social scientists, ecologists, and other natural scientists are in constant

conflict with one another over environmental culture. Informants included in this study represent the various fields of conservation: ecology, anthropology, climate, policy implementation, organizational work. There is no evident disparity between the opinions of each scientist (Appendix), but it is clear in the literature that multidisciplinary studies and a common thought are scarce in the field of conservation. Informant 1 explained that it is

> "bad enough there is no single school of thought in conservation that all should follow although nations may have guidelines, regulations, policies to guide conservation initiatives. There are some guidelines for best practices from IUCN which could be followed in handling and dealing with certain animal species and groups of species, e.g. best practices in habituation of great apes. This is done in order to reduce different approaches and biased methods that may be detrimental to the survival of chimpanzees or other great ape species. One's background, experience, education and even area of origin and culture can be the source of biases in his thinking. However, it is good that most of the conservation initiatives are not one man's show or designed by one person, [at our institution we] have group work and more people involved as we decide on conservation strategies, objectives or themes during the planning of conservation initiatives."

Informant 2 explains:

> "there is a strain of traditional or purist conservation that regards all human influence in protected areas as a compromise to be fought or avoided. There is also a more pragmatic strain (one might say more realistic) that seeks to integrate human needs and responsible human activities into the confines of protected areas."

Informant 1, who works with an influential conservation organization in Tanzania, and Informant 2, an ecologist and biological anthropologist, explain biases do occur in conservation movements. As Informant 1 emphasizes, guidelines for conservation are not designed by one person, which allows for a broader perspective of creating and implementing conservation methods like PAs and projects; however, it is a recurrent theme that conservation initiatives are designed by groups of people with similar backgrounds in education or school of thought. Conservation in Tanzania often follows the the traditional route, in which humans are pushed

aside. However, the country's need to protect biodiversity is proving equal to its need to protect rural communities.

The traditional biases are often the foundation of wildlife conservationist thought because the majority of Tanzania's endemic wildlife is threatened (The IUCN Red List of Threatened Species n.d.; Fifth National Report on the Implementation of the Convention on Biological Diversity 2014). At the 2013 conference of the Convention on International Trade in Endangered Species (CITES), Tanzania was singled out as being one of the most influential countries to harbor the illegal ivory trade (Kideghesho 2016). With the elephant being one of Africa's most iconic animals, the loss of population due to poaching and habitat loss is significant (Kideghesho 2016). In Tanzania, an animal within a protected area is hated by many people in local rural communities because it represents a loss of land, and an animal outside the protected area, dependent on the amount of damage it causes communities, is killed because of competition with local peoples. According to the Great Elephant Census, the count of wild elephants has gone down 30% in 7 years, between 2007 and 2014 (The Final Report n.d.). The Census indicates that a high number of elephant carcasses were found inside national parks, meaning elephants, and many other wildlife species, are also struggling inside protected areas (The Final Report n.d.). The Maasai criticize elephants and most other wildlife as a destructive force that will overrun their crops, and they view this as reason to fear and kill it (McCabe Personal Communication 2018). However, an animal killed illegally by poachers is more common than a Maasai community member killing an animal in order to protect their land (see Chapter 7), but it is imperative to understand and work on solutions that prevent community-wildlife conflicts. Resolving relationships between rural communities in Tanzania and wildlife conservation begins with a shift to more pragmatic schools of thought that include humans as a crucial part of nature.

As the "environment" and "nature" are often considered socially produced, sociocultural groups worldwide show differing perceptions on both based on environmental history (West and Brockington 2006). The colonized derivatives of nature are different from those of the traditional environmental knowledge[5] of people in different regions. Because of cultural biases, humans have created a variety of ways to include themselves in nature: ecotourism, traditional ecological and environmental knowledge, traditional rituals, hunting, poaching, hiking, camping, farming, etc.

Many scholars, like William Cronon (1996), refer to humans' invasive nature and civilization as a disease that infects and spreads, destroying wilderness. They understand 'wilderness' to be a product of civilization and that it "could hardly be contaminated by the very stuff of which it is made" (Cronon 1996, 7; West and Brockington 2006). Cronon's perspective shows that nature is a product of civilization's disease, because it is a creation of civilization. With this, humans will always have an impact on the natural world, and should be accepted as a part of it, instead of entirely separate. If we go back in history, before the development of modern civilization, people like John Muir and George Catlin did not exist because there was no boundary invented between humans and nature. Those who involved themselves in wilderness were the Others, considered uncivilized and savage (Cronon 1996). In the United States, it was clear when first developing national parks that the nation's wealthiest population had the most control over what would happen to the wilderness, seeking it out for personal gains such as estates, cattle ranches, big-game hunting, hotels, and railroads (Cronon 1996). Wilderness became a landscape for the elite tourist, traveling there for recreation or a sense of

[5] Traditional environmental knowledge refers to all understandings of the environment and uses of the environment based on traditional practices and environmental history.

transcendentalism. This created the separation that transformed nature from a place of interconnectedness between all species to an artifact of a museum that is not supposed to be touched by human hands. Humankind cannot truly have a place in nature's hierarchy while we consider ourselves the outsiders or the Other[6]. As Cronon (1996) states:

> "We need to honor the Other within and the Other next door as much as we do the exotic Other that lives far away- a lesson that applies as much to people as it does to (other) natural things. In particular, we need to discover a common middle ground in which all of these things, from the city to the wilderness, can somehow been compassed in the word 'home.' [...] This, then, is the central paradox: wilderness embodies a dualistic vision in which the human is entirely outside the natural" (24).

According to Andrew Pullin et al. (2013) current literature reports a diverse, yet fragmented, body of evidence that does not truly encompass how to properly form policies to create win-win solutions for endangered species and ecosystems, as well as human well-being. Nonprofit organizations, government agencies, or outsiders known as the Other create many policies from countries outside the ones they are implementing them. The Thai concept of nature, unlike that of Western ideals, includes humans as a part of nature, but non-governmental organizations impose western ideas where humans are separated from nature (Roth 2004; West, Igoe, and Brockington 2006). Historically and globally, national park implementation excludes humans and human influence. Stopping westernized influences from controlling this implementation has become difficult. The Yellowstone model created a pattern of exclusion of local rural communities who rely on the land in order to label an area a "conservation success." When asked "how is it known when conservation initiatives work?" Informant 4 replied that it depends on what one is trying to achieve- the exclusion of people or the creation and saving of

[6] The "Other" is an outsider that does not relate to or exist within the local culture, which is intrinsically alien to cultural norms.

wildlife. From this answer alone, it is clear that some conservation initiatives strive to exclude humans from the picture. Once humankind is understood as having a crucial influence on ecosystems in modern literature and is primarily discussed when one talks about nature and wildlife, changes in conservation initiatives, like more inclusive and evolved planning in community-based conservation (CBC), will be seen.

To begin understanding how local rural communities of pastoralists and agriculturalists, like the Maasai, can be better incorporated in developing national parks and reserves, conservationists and social scientists must remove the stigma of being a human. Currently, the preservation of cultural groups is not viewed with as much importance as the protection of wildlife. In Tanzania, many governmental agencies and authorities, conservationists, and environmentalists do not acknowledge local communities as active knowing agents of the environment (Goldman 2003). Local rural communities in Tanzania inherit extensive traditional ecological knowledge of their land that helps protect it as well as use it to its advantage. Nicolas Houde, a political scientist at the University of Quebec, explains six faces of traditional ecological knowledge of a land: factual observations, management systems, past and current uses, ethics and values, culture and identity, and cosmology (2007). Parents, peers, and elders educate pastoralists in Tanzania living in hostile environments (droughts, disease, and livestock rustling) about proper management of homes, resources, and the environment (Mlekwa 1996). When external influences dictate land management, conflict occurs based on tensions between local, federal, and international governments, resulting in local forms of resistance.

Local management of resources demonstrates that humans understand their role in larger ecological processes. In Tanzania, when local communities are made aware of the

revenue ecotourism brings to their communities, community-based conservation and local resource management are enthusiastically embraced (See Chapter 5) (Igoe and Croucher 2007). Community-based conservation is one method to approach this problem which I will further explain in the next chapters. When humans are included in the idea of nature, it is typically because they are negatively impacting it as an outsider. There should be no debate as to whether humans are or are not a part of nature. Academic researchers, conservationists, and social science influencers must accept the Other as a part of nature and ecological systems in order to protect local rural communities living near PAs.

Chapter 5: For What It's Worth- Intrinsic versus Utilitarian Values of Nature

The world today is becoming more populated and thus less habitable (Mulder and Coppolillo 2005). Globally, population growth of humans increases while many species suffer from loss of habitat and resources due to human influences, like deforestation and climate change. The most free-range diversity is found mainly in developing countries, where the threat is most significant, resources are most limited, and habitat conservation is most quickly emerging (Dobson, Bradshaw, and Baker 1997; Mulder and Coppolillo 2005). David Ehrenfeld (1972), Professor of Biology at Rutgers University, argues it is necessary to use functioning ecosystems as the foundations and blueprints to design new environmental models. Within these diverse environmental habitats and ecosystems, multiple species are threatened, while conservation initiatives are twofold - utilitarian and intrinsic. This chapter reviews the debate behind the worth of nature within the terms of utilitarian and intrinsic values.

Throughout the literature surrounding conservation, as well as views on nature and wilderness, a common theme appears: the protection of wilderness for either its intrinsic or its utilitarian values. These unflinching views of nature border the line between objectivity (utilitarian) and subjectivity (intrinsic). The utilitarian view of conservation focuses on nature's relevance and necessity to humans. As explained by environmentalists at Property and Environment Research Center (PERC), Terry Anderson and Shawn Regan, the most westernized concepts of farmers and utilitarian values revolve around "if it pays it stays" (Anderson and Regan 2015). Nature today is often viewed by the public through a utilitarian lens, in that it is valued economically by the resources it provides. However, it is also viewed through an intrinsic lens, as in "nature for nature's sake."

The intrinsic view of landscapes observes nature from afar. It does not look at it in terms of benefits for the self, but values it as an untouchable, pristine object. This view lies in removing the price tag. Western ideals and attitudes towards wildlife are evident in *National Geographic* photos and George Catlin's landscape paintings, where nature is valued intrinsically (Bonner 1993). However, the interaction of the human species with natural habitats needs to extend beyond the aesthetic and should reflect the importance of each species' role in a larger ecosystem. The obvious answer to "why conserve?" would be to save Earth and all living creatures on it. This is proving to be complicated due to the personal agendas of those with the greatest control. The question changes from "why conserve?" to "how can we conserve to make the most positive impacts on as many living things as possible?" The answer lies in improving the understanding of how conservation initiatives can benefit local rural communities through utilitarian values. Humans have inadvertently inherited the roles of stewards of the earth, and require the understanding of proper management to preserve biodiversity, human and wildlife alike.

The utilitarian perspective understands nature to fit societal needs, and its resources are there for utilization. The use of nature, when based on market and economic approaches, offers advocacy for the protection of nature (Mulder and Coppolillo 2005). Utilitarian perspectives evaluate the goods, services, information, and spiritualism the natural area provides (Mulder and Coppolillo 2005). It is the job of environmental ecologists to put a price on land. What they focus on is whether land is directly used, where resources are extracted and utilized, or if it is indirectly used, where an environmental resource is not extracted because it provides benefits to a larger ecosystem (McCabe Lecture 2018). Ecological economists argue that that nature's monetary value is key to conservation; however, with this argument, nature can lose its intrinsic

value by being on the market (Mulder and Coppolillo 2005). Nature should be subjected to the same moral and legal protection humans have given themselves, and should not be exploited for profit to outsiders or national governments while many local and rural communities and conservation refugees suffer.

Gifford Pinchot, American forester and Chief to the United States Forest Service from 1905-1910, provided guidelines for a healthy, productive forest (Mulder and Coppolillo 2005; Gifford Pinchot 2018). He is considered "The Father of American Forestry" for lobbying the idea that national park forestry should be used for recreational purposes, with the exception of responsible industrial logging (Westover 2016). Pinchot was the first chief of the United States Forest Service, and, under his authority, he allowed for national parks to become an industry alongside a protected nature reserve. Pinchot attempted to balance intrinsic and utilitarian values of nature and argued that "'the duty of the people to think and act for the benefit of the whole people [...] demands the application of common sense to common problems for the common good'" (Miller 2013, 176). Conservationists believe in the concept of globalization, or that humankind worldwide should work together to balance the way resources are used (Igoe 2003). Pinchot's idea of conservation includes the common welfare of the collective human species, but, in doing so, he devalued biodiversity by industrializing it.

The utilitarian approach is more commonly seen in the pragmatic approach to conservation, but it is important to note this approach can potentially hurt populations of wildlife biodiversity. In their book, *Conservation: Linking Ecology, Economics, and Culture*, authors Monique Mulder, a behavioral ecologist with a background in social anthropology, and Pete Coppolillo, a biologist, (2005) estimate that the ecological workload of living beings aside from humans ranges from USD 2.9 trillion to as much as USD 33 trillion a year. These numbers

emphasize the amount of work that biodiversity contributes to pollination, population control, water mitigation, or other ecological processes (Mulder and Coppolillo 2005). The workload is measured through extinction, pollution, and environmental degradation by putting a dollar value on biodiversity's goods, services, information, and aesthetic values (Mulder and Coppolillo 2005). Quantifying the workload of nature's biodiversity would result in astronomical labor costs if counted in human work hours, and it is clear humans prioritize biodiversity which is of service to us. A recently published article revealed that humans have caused the loss of 83% of wild mammals and plant life (Carrington 2018). Currently, 70% of individual animals among avian species are poultry (Carrington 2018). Based on these numbers, the utilitarian approach to conservation will more than likely devalue or possibly eradicate wildlife that has no use to humans. *Conservation: Linking Ecology, Economics, and Culture* by an anthropologist and a biologist represent a crucial breakthrough in the field of conservation. Few sources exist like this book in which a natural scientist and a social scientist co-author a literary source. It is crucial that both fields intersect in order to create research papers that reflect the views of each side of conservation.

When the utilitarian approach is taken to create conservation projects, such as ecotourism, the economic value of wildlife biodiversity that does not contribute to human livelihoods is seen. In Tanzania, conservation organizations have created projects in which intrinsic and utilitarian values come together through ecotourism. Projects, including that of the African Wildlife Foundation (AWF) where ecotourism lodges, like Manyara Ranch and Tawi Lodge, are set up for tourists to view wildlife sustainably (AWF – Check out the Manyara Ranch Tented Camp! 2013; AWF – Check out the Tawi Lodge! 2013). They allow the tourists to value nature intrinsically and the local communities to value the market nature creates. Protected areas

may contain more biodiversity, which increases its perceived value to many tourists and local communities. Wilderness are presented to the public as natural resource banks, which require protection from human interference. However, Dan Brockington and Paige West (2006) explore the idea that a protected area distracts from the broader landscape that it is typically a part of. They state that PAs do not protect ecological processes beyond their borders (West and Brockington 2006). These ecotourism programs can also exploit culture and enforce exclusion while increasing revenue in areas of high tourist traffic. Creating a protected area increases the chance of success for an ecotourism organization, but this creation also means that tourists will value a manifested landscape in a protected area over that of an unprotected area (West and Brockington 2006).

The danger of a protected area is that when it is evaluated based on its intrinsic worth (West and Brockington 2006), it negates the mundane areas of nature (Cronon 1996; West and Brockington 2006). Places where cattle roam and indigenous people inhabit are not seen to hold value through the intrinsic lens and therefore are less necessary to protect. Conflict arises from utilitarian values of protected areas over land rights and land use, due to different understandings of how humans should or should not interact with their surroundings. These conflicts lead to resistance to conservation movements (Scott 1977; Baviskar 1997; Goldman 2001; Roth 2004; West and Brockington 2006).

A landscape that is valued for the benefits it provides to ecosystems and not its "commercial products" has allowed for better connections between locals and conservation organizations (West and Brockington 2006). One example of this is the Alaska Native Fund in which the local community pairs with the local government agency in order to stop the extraction of resources and protect the stability of the ecosystem (Revenue from Natural Resources on

Indian Land n.d.). Similarly, as originally studied by Alan Friedlander et al. (2003), a scientist at National Geographic Society, the Seaflower Biosphere reserve in Columbia was created in partnership with local people due to local identification of overfished areas and the local agreement to no longer fish in these areas (Friedlander et al. 2003; West, Igoe, and Brockington 2006). Another study originally done by Ferrari and de Vera (2003) shows "how indigenous peoples on one of the Calamianes islands of North Palawan have used conservation legislation and the language used to separate nature and culture to gain control over terrestrial and marine resources that were under threat from encroaching migrations, tourism operators, and resource-extraction interests" (West and Brockington 2006, 612). These examples show how communication between government and local people can lead to positively preserved ecosystems. Movements like these also require outside consultations from conservationists and social scientists for support. According to conservationist at South African National Parks Scientific Services Dirk J Roux, the reliability of conservation agencies, which can be achieved through peer-reviewed research, is fundamental in the success of research and conservation advances (Cundill, Roux, and Parker 2015). Collaboration among different fields is imperative to the success of conservation.

When asked, "what do conservation initiatives mean to you?" informants differed in their opinions on whether or not conservation initiatives should or do revolve around the utilitarian perspective of resource extraction or resource preservation for market value:

> Informant 1: Conservation initiatives means designed projects, or programs, implementing some strategic activities aiming at promoting or regulating the uses of resources or natural wealth available in the ecosystem. It also means strategies that one can take to protect, preserve the resources available. Conservation initiatives mean planned activities or strategies that can be implemented to bring desirable changes in managing the resources. These strategies may either lead to stabilization of populations of some species or maintaining their habitats. These

> strategies may also aim at maintaining availability of ecosystem services such as water.
>
> Informant 2: A plan to conserve some aspect of biodiversity – it should include a written document that includes justification and planning.
>
> Informant 3: I suppose any initiative designed to preserve or save or restore the integrity of a natural area, biome or system. Also, I feel it is our responsibility, as creatures aware of the effect we are having on the planet and its ecosystems, to act with intention to reverse those effects that are harmful to the sustainability of other species (as well as the health of our own civilizations). So conservation initiatives are a central part of that responsibility.
>
> Informant 4: A variety of things. Conservation initiatives can mean saving life. It can also callousness and social injustice or power and control. It is important to learn to appreciate how eclectic conservation initiatives are.

Informants' views on conservation initiatives cover four different perspectives in the conservation and scientific community and reflect different opinions that represent the challenges to conservation. Many conservation movements aim to protect and to maintain wildlife and natural resources that are not able to maintain themselves due to outside influences. While informant 1 emphasizes utilitarian values, informant 4 emphasizes the effects conservation initiatives can have on human social structures. Each informant explained a different aspect that goes into conservation thinking. No conservationist, ecologist or social scientist in this informant group emphasized the intrinsic value of nature which many conservation organizations revolve around. "Conservation goals focus on biological problems, but the solutions lie with people" (Jacobson 1999, 6). Human inclusion is a solution to improve environmental conservation initiatives. It is clear that a conservationists' view centers on the protection of wildlife while a social scientist will aim to protect humans who are affected by this protection.

The importance of community involvement and understanding of whether an area should be conserved because of its utilitarian values or intrinsic values depends on the local people surrounding the areas. The Gimi people of Papua New Guinea are an example of how a local

community can be involved with conservation projects. The indigenous group believes that everything has a purpose, and when its status changes, like eating a fruit or a forest burning down, the purpose of the object is not lost, it simply converts to a new form of matter (West and Brockington 2006). It is a similar concept to Buddhism in which the earth rejuvenates every energy; however, in Gimi culture their ideology is that matter never truly disappears, it merely changes form. This ideology negates threatened species because it reverts a loss of life to a change in its purpose. Dan Brockington and Paige West (2006) believe that understanding the way the Gimi people think of plants, animals, and cosmology will help ecologists and anthropologists change conservation tactics. Working with a community and understanding their environmental knowledge, and not solely through internationalized methods, incorporates social beliefs and customs in designing and managing protection and conservation plans.

In Eastern Africa, drought, war, and poaching have historically destroyed the indigenous wildlife. According to David Simpson's film, *Milking the Rhino,* increases in livestock decreases the amount of available grazing land, which is a pattern seen throughout Eastern Africa (Simpson 2009). Some indigenous tribes disliked wildlife and avoided conservation, hunting solely for meat or land aggregation as Raymond Bonner describes in *At the Hand of Man* (1993). The people would eliminate wildlife in various ways for various reasons: hunting gazelle for food, killing elephants to remove them from their territory and to prevent them from killing their crops (Bonner 1993). Wildlife to indigenous peoples has proven time and time again to decimate their resources and revenue (Bonner 1993). However, new modes of economic production have been seen in recent decades. Bonner explains a successful method of revenue innovation is teaching the people of Namibia to sell to handmade crafts to tourists to increase their economic gain (1993). This market is not an example of community governance, but a clear illustration of

traditional people benefitting from tourism that wildlife conservation brings to their area. Wildlife, in this case, is an asset, rather than a liability (Bonner 1993). The model Bonner sets up makes sense on paper as a necessary cultural evolution to changing times; however, it is an example where indigenous and local rural communities need to adjust to the needs of the Other. This model caters to tourists and outsiders and not to the improvement of the fundamental right of communities. Improvement of communication between wildlife conservationists and social scientists will improve projects in Tanzania to focus on both wildlife and humans instead of the separated projects that frequent literature and organizations currently.

In Tanzania, big international NGO (BINGO) and non-governmental organization projects vary from conservation for its intrinsic or utilitarian worth. Some conservation organizations cater to tourists who value the intrinsic worth of charismatic mega-fauna[7]. However, wildlife conservation that revolves around tourism values goods and services provided to the local, regional, or national population, meaning that BINGO and NGO projects also value utilitarian views of conservation. Utilitarian projects revolve around ones like the African People and Wildlife and USAID project where women raise bees and sell honey to local shops in Tanzania (Beekeeping Empowers Maasai Women in Northern Tanzania 2017). Dirk Roux et al. (2015) find that commitment and research from all institutions (universities, government agencies, international agencies, non-government/businesses, forest services, etc.) must be involved to build trust, stimulate co-learning, and resolve conflicts in conservation. It is clear that conservation success comes from successful interdisciplinary planning.

[7] Charismatic mega-fauna refers to the pleasing prospect of a wild animal not typically seen every day.

In Tanzania, multiple projects and research papers have been published on the inclusion of humans in the management of nature (Newmark et al. 1993; Gillingham and Lee 1999; Igoe and Croucher 2007; Baird, Leslie, and McCabe 2009; Dickman 2010). An ecocentric characterization of wilderness advocates to its intrinsic worth, in which the destruction of nature can be compared to demolishing historic and beautiful buildings, to even genocide (Mulder and Coppolillo 2005). Arguments for conserving biodiversity that are anthropocentric are more often than not considered utilitarian (Mulder and Coppolillo 2005). A preservationist understands the value of another species, and that the relationship between a human and said species can be non-consumptive leading to better preservation. However, a preservationist strategy requires a traditional protected area, one that separates humans from reserves (Mulder and Coppolillo 2005).

> "Critics of the preservationist approach argue that it effectively means that the poorest groups in the developing world (especially the rural poor) are expected to forgo the economic opportunities associated with the ivory trade but still live with all the costs of being in close proximity to elephants. For example, elephants in the communal lands of Zimbabwe have resided crops, which constitute the basic food supply of poor families. Those in favour of a utilitarianism approach suggest it ensures that elephants will be conserved if they contribute to development and to meeting basic human needs through use of ivory trade, tourism and sport hunting revenues for community projects" (Brockington, Duffy, and Igoe 2008, 153).

Conservation distributes fortune and misfortune unequally (Brockington and Wilkie 2015). Whether a national park or reserve is based on an intrinsic value to protect it merely because it should continue to exist, or if it should be protected because of the monetary value it provides to humans, scholars and authorities argue it should either be protected with an outcome of increasing biodiversity and maintaining ecosystems *or* with the intention of protecting local rural communities. While there are many critiques to the utilitarian values of nature, it is a practical solution to include local rural communities in conservation by emphasizing the

importance of wildlife protection. The utilitarian approach to conservation helps scholars and authorities create solutions where wildlife biodiversity is protected *and* local rural communities have access to fundamental rights.

Chapter 6: National Parks and Community-Based Conservation

"In Tanzania, the chimps are isolated in a very tiny patch of forest. I flew over it 13 years ago and realized that, basically, all the trees had gone, that people all around the park are struggling to survive. It became very clear that there was no way to protect the chimps while the people were in this dire circumstance."

- Jane Goodall (Maugh II 2008)

Within the literature of cultural ethnographies of indigenous peoples, conservation research, and the scholarship on new modes of preservation of nature and biodiversity, there is an ongoing observation of national parks and protected areas in Africa being the last form of colonialism with the Other's influence on national and local communities. When an outside organization or agency, like German and Scandinavian governmental and non-governmental organizations in Tanzania, or when a national governmental system, has majority control of resources, they take power away from local management. Community-based conservation is an alternative form to common modes of conservation in which conservation is largely controlled by people living within the areas.

Community-based conservation (CBC) revolves around exogenous and endogenous structures (Mulder and Coppolillo 2005). Colonialism is argued as exogenous, in which outsiders invade and tell locals what to do with their land. Many conservation projects aim to shift to endogenous structures in which local people understand how to sustain their land themselves (Mulder and Coppolillo 2005). According to Tanzania's Fifth National Report on the Implementation of the Convention on Biological Diversity, "participatory management of wildlife, forest, and marine areas is being promoted considerably and has helped in addressing both the need for biodiversity conservation and as a means to sustain livelihoods particularly of

poor communities" (Fifth National Report on the Implementation of the Convention on Biological Diversity 2014, vii). This chapter explores ways in which CBC works and does not work through the perspectives of natural scientists and anthropologists to prove that communication between both fields is necessary for successful CBC.

A protected area implementation should include the involvement of social scientists, ecologists, government and non-governmental agencies, and local people. As of 2003, Tanzania imposed a Wildlife Conservation Policy that instigated community-*based* conservation (CBC), where "based" is emphasized, which allows communities to actively manage and own resources (Hulme and Murphree 1999; Barrow, Gichohi, and Infield 2000; Barrow and Murphree 1998; Goldman 2003). CBC largely revolves around the utilitarian approach to conservation. When nature is used for its utilitarian purposes, population pressures and exploitation encroach upon natural resources, so new technologies and methods of conservation need to be put into place (Holt 2005; West and Brockington 2006). Protected areas are valued more in communities with the implementation of CBC. For example, the Tagbanwa indigenous peoples from the Philippines changed where they practiced traditional forestry into a community forest area by identifying themselves as an NGO to counter environmental and cultural threats (West and Brockington 2006). Local people's ability to continue living in a park after its creation, where they can use the land without state-involved altercations, makes for benevolent living as well as controlled management of resources within these parks (West and Brockington 2006; Mulder and Coppolillo 2005). CBC gives power back to communities through a conservation method where communities manage resources themselves.

CAMPFIRE and Wildlife Management Areas

Regarded as one of the most famous examples of CBC, Communal Areas Management Program for Indigenous Resources (CAMPFIRE) in Zimbabwe represents how interdisciplinary understandings can lead to successful CBC (Dean 2007). CAMPFIRE focuses on conserving wildlife outside of park borders in community lands, which is a different approach than many conservation projects in Tanzania that aim to protect nature by prioritizing either the needs of people or wildlife. A conservation project working to protect the land of endemic wildlife species needs to also work with the people living near them to make sure the needs of humans are met. Conservation cannot work as a long-term solution when the short-term needs of the people are not being met (Mulder and Coppolillo 2005). "Rural people simply cannot afford the luxury of leaving pristine areas alone" (Mulder and Coppolillo 2005, 45). In a utilitarian sense, a species or habitat should be exposed to the market to determine its conservation possibilities (Mulder and Coppolillo 2005). CBC can also be argued as being conjoined to the market to work, whereby handmade crafts gain market value, ecotourism creates revenue, and wildlife is preserved (Hulme and Murphree 1999; Mulder and Coppolillo 2005). Wildlife can be left alone while local communities residing near it are benefiting from the tourism it brings, as seen in CAMPFIRE.

The CAMPFIRE policy was instigated in 1989, which grants control of wildlife to district councils, but the state National Parks Program set guidelines (Dean 2007, 21-22). It represents a co-management of wildlife by local and state authorities that also operate with private tour organizations, who pay to access the land (Dean 2007, 22). CAMPFIRE is considered a success for many reasons: it is believed to increase incentives for conservation due to trophy hunting (Muposhi et al. 2016), where revenue from which is paid out to communities and district

councils (Dean 2007; Muposhi et al. 2016), and this in turn limits wildlife tourism (Dean 2007); however, it also is widely criticized. CAMPFIRE came with the under-representation of women, the expansion of state control in rural areas, the increase in tensions between white tourists and native residents for Zimbabwe, and the reliance on utilitarian values of production goals that do not truly value the conservation of biodiversity (Dean 2007). While CAMPFIRE became a basis for many community-based conservation movements, like wildlife management areas (WMAs) in Tanzania, it struggled to find the right way to educate on the importance of conservation for the preservation of biodiversity instead of what could be gained from the revenue integrated conservation development projects can provide.

WMAs in Tanzania were largely based upon the CAMPFIRE model. Judith Balint, advisor for the World Wildlife Fund for Nature at the CBNRM Policy Program, explained that when people experience the benefits of nature first-hand, they are more inclined to support its protection (Wildlife Management Areas Spread the Wealth in Tanzania 2013). In 2013, 19 WMAs accounted for 3% of the total 31% protected areas in Tanzania (Figure 3) (Wildlife Management Areas Spread the Wealth in Tanzania 2013). As of 2018, the total terrestrial area protected in Tanzania is 38.15% (Protected Planet n.d.). WMAs are mostly adjacent to other protected areas, and can act as a buffer zone and increase migratory pattern areas protected for wildlife (Figure 3) (Wildlife Management Areas Spread the Wealth in Tanzania 2013). While many criticize CAMPFIRE and WMA models, they do drive awareness to local communities in how the preservation of wildlife benefits them.

Tanzania created Wildlife Management Areas (WMAs) in order to achieve active participation of communities (Goldman 2003). A WMA differs from that of any other protected area in that it is structured around the idea that rural communities "participate in resource

planning and management, thereby benefiting economically from the resources they have lived with since time immemorial" (Goldman 2003, 836). According to a 2013 report, the formation of WMAs in Tanzania began with coordinated efforts of government professionals, donors, NGOs, and community leaders and some of the benefits include: community empowerment, increased financial benefits to the Wildlife Division and district governments, and patterns of villages in WMAs distributing their share of financial benefits to support social infrastructure development (Tanzania Wildlife Management Areas Evaluation Final Evaluation Report 2013, v). However, in Tanzania, community-based conservation is still overwhelmingly optimistic for the following reasons:

1. The lack of individual and community benefits available is resulting in dissatisfaction among the Tanzanian people,
2. WMAs are expensive to operate,
3. WMAs rely primarily on photographic and hunting tourism,
4. There is "inadequate monitoring of wildlife resources", and
5. There is inadequate monitoring of socioeconomic indicators of effects on communities in Tanzania (Tanzania Wildlife Management Areas Evaluation Final Evaluation Report 2013, vii-viii).

More recently, in 2017, Professor Katherine Homewood et al. compiled a "Policy and Practice Briefing" on WMA effects on participatory villages in Tanzania. It is evident that a substantial portion of revenue gained by WMAs goes to the centralized government, that land access for community villagers is still limited, that the processes behind the implementation of WMAs are unclear, that villagers are inadequately protected from wildlife, and that WMAs overall fail to provide communities with income from tourism revenue (Homewood et al. 2017; Moyo, Ijumba,

and Lund 2016). WMAs still keep a majority of people hesitant to protected areas in Tanzania, as they have proven insufficient to meet needs of both wildlife and human communities.

Map 1: WMAs and Protected Areas

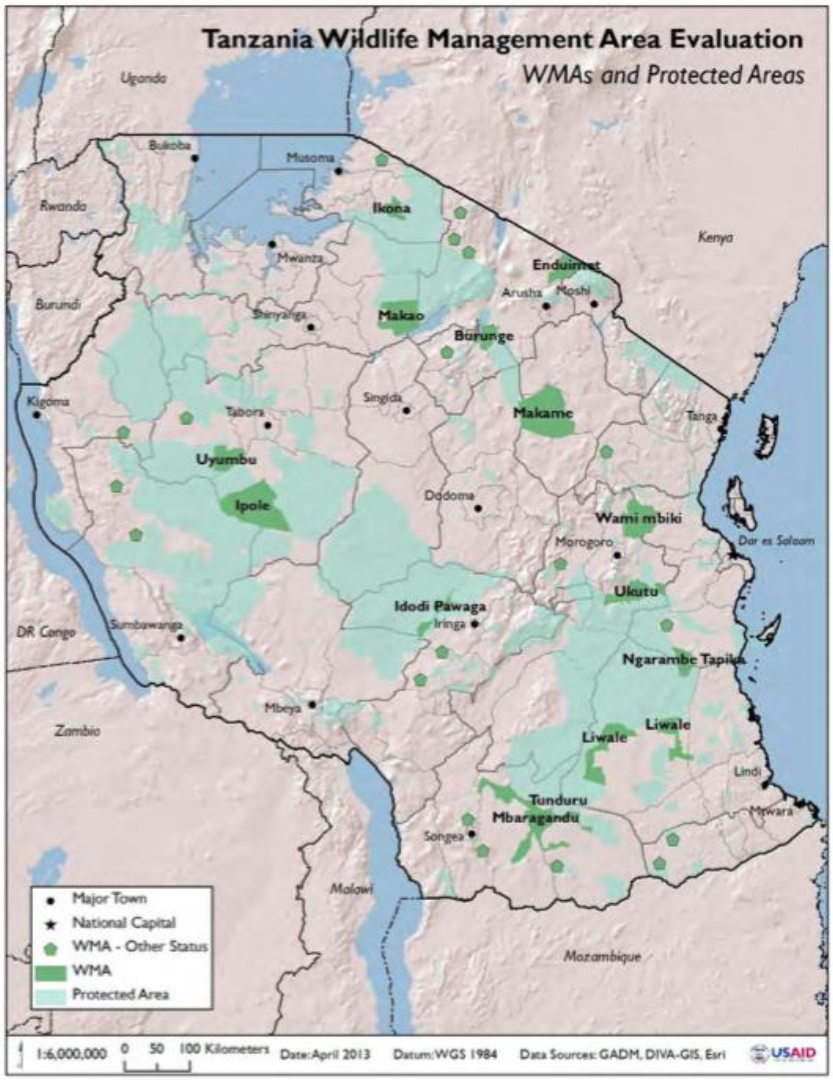

Figure 3: Protected areas and WMAs in Tanzania (Tanzania Wildlife Management Areas Evaluation Final Evaluation Report 2013, 109)

Mara Goldman (2003) argues that land acts in Tanzania (the Land Act and the Village Land Act) render rural communities powerless and do not meet their needs. Community conservation continues top-down development projects when they should be bottom-up community-based. The Acts put the power over land rights back into the hands of the absolute power of the president in Tanzania (Goldman 2003). In 2016, Godfrey Eliseus Massay reported

on the Tanzania Village Act 15 years after its implementation. He reports that progress has been "slow and uneven" (Massay 2016). Conservation organizations such as WCS and The Kesho Trust, as well as conservationists and social scientists, need to prioritize or continue championing local forms of land use.

Perspectives on Community-Based Conservation

When asked the question: "Is CBC the best way to include local people in conservation efforts?" they responded:

> Informant 1: "Community governance is very important in negative or positive performance of conservation goals. This means in order for conservation goals to be met one should always consider governance and good leadership as key factor in success of conservation initiatives. Poor governance in villages, local communities lead to ill-conservation in most areas. Therefore, as one plans for conservation initiatives [, they] have to plan also how to work with the surrounding local community leadership. We have had experiences where working conservation initiatives seemed to work best under certain period and not the other due to differences in leadership and governance."
>
> Informant 2: "It simply depends on the community government – Boulder is good at supporting local conservationist goals; some ranching and mining communities surrounding protected areas (Yellowstone and Grand Canyon as two examples) are harmful towards conservation goals."
>
> Informant 3: "In many cases it not only helps but is essential."
>
> Informant 4: Yes, with important caveats: With oppression, CBC does not result in benefits or in the most legitimate voice being heard. Community government also needs some sort of oversight to overlook funding, the books, or making sure the community is doing the right job.

Almost every informant agrees that community governance around land rights and movements surrounding conservation is the best way to include local communities in conservation efforts. In these interviews, it is clear that CBC works when local communities are interested in the benefits conservation brings. In the case of Yellowstone, many who live adjacent to the park do not accept conservation because wildlife harms their livestock, similar to Tanzanians. In places like

Boulder, Colorado in the U.S., the local community suffers less from destruction caused by wildlife and, therefore, is amicable to the protected Open Space. In Tanzania, as Informants 1 and 4 explain, conservation initiatives work depending on leadership. Oftentimes authorities involved in leadership of CBC do not focus on the needs of local people. The problem lies in the human-wildlife conflicts as well as conservationist-anthropologist conflicts. Some conservation organizations working in Tanzania aim to relieve human-wildlife conflict through solutions such as "living walls"[8] through African People and Wildlife (APW). In an interview with informant 2, they mentioned that they prioritize animals, and humans within the area are a lesser concern. While each informant proved they prioritize local communities or wildlife, they do not emphasize that wildlife conservationists, ecologists, and social scientists must all be involved in the creation of these movements. CBC works in both the perspectives of natural scientists and anthropologists, but if they do not communicate in the creation of these government forms, conservation will forever be in conflict.

Perspectives on Protected Areas

The foundation of national parks is often ambiguous in whether or not they are created for intrinsic value or utilitarian value, because hunting, grazing, and agricultural zones are replaced with areas that local people cannot use (Knudsen 1999; West, Igoe, and Brockington 2006), but that organizations or government systems can extort for profit. When partnerships are created with local people, ecotourism can be set up as a revenue source, often creating a better understanding between organizations, locals, and biodiversity. Sometimes the utilitarian approach is the best approach when there is no extortion of indigenous peoples, and indigenous

[8] Living walls are environmentally friendly corrals that house livestock and protect them from large carnivores that live close to human populations in Tanzania due to habitat loss (Living Walls - Saving Big Cats While Uplifting Livelihoods n.d.).

cultures can be incorporated and better understood by outsiders (West, Igoe, and Brockington 2006). However, in the case of Tanzania, the Maasai and other indigenous communities were alienated from their traditional grazing lands. This alienation began a movement of pastoralist non-governmental organizations (NGOs) based in Tanzania. These organizations start with good intentions, but international and foreign donations create pressure to form civil society in pastoralist communities (Igoe 2003). Many BINGOs are sponsored by multinational corporations, like IUCN and Shell, who are able to use their influence to dictate how and where lands are protected. IUCN does include the disclaimer: "While IUCN does not agree with everything Shell does, the company has nevertheless demonstrated a willingness to change its operations and engage with the wider energy sector in order to reduce potential impacts on biodiversity" (Shell 2016). Large and small NGOs must focus on the way local people think about their land when creating protected areas.

When creating a protected area, local villages, government authorities, scientists, and other parties involved must consider how local people are currently using the land. Paige West and Dan Brockington (2006) explain that The World Database for Protected Areas (WDPA) records state activity related to PAs, but does not record the work and actions of individuals or collective works. The researchers label these areas "informal community-based conservation and natural resource management," which includes land use areas like sacred groves and calf pastures that are often excluded from databases (Pathak et al. 2004; West and Brockington 2006). While not recorded, the WDPA emphasizes that individual actions can affect land use, and this can be overlooked when creating a protected area (WDPA Lookup Tables n.d.; West and Brockington 2006). Privately owned land and operated farms or hunting grounds can use more land than state and provincial protected areas, like in South Africa where it uses 13% and

6%, respectively (West, Igoe, and Brockington 2006). “Development and conservation programs that ignore local perceptions and rely strictly on demographic and economic correlates of behavior to guide policy may fail to address the underlying causes of behavior” (Baird, Leslie, and McCabe 2009, 464). That is to say that individual perceptions and actions must be addressed accordingly in order to institute a national park or reserve properly.

Although community-based conservation is not as common as other forms of protected areas, estimates suggest that community conservation around forests in Africa, Asia, and the Americas cover 3.7 million km2 (West and Brockington 2006). That is not an extensive amount of land compared to the number of protected areas that are imposed upon regions throughout each continent, where in Africa approximately 3.06 million km2 is protected and this increases significantly in Tanzania each year (Figure 4) (Global Update (December 2016) 2016; Newmark 2008). Creating an entire database that encompasses all forms of land use and management will help understand how to regulate and govern parts of the world that are not currently included (West and Carrier 2004; Duffy 2005; West and Brockington 2006). However, it is difficult to categorize all forms of conservation methods and movements, as they are extensive and diverse.

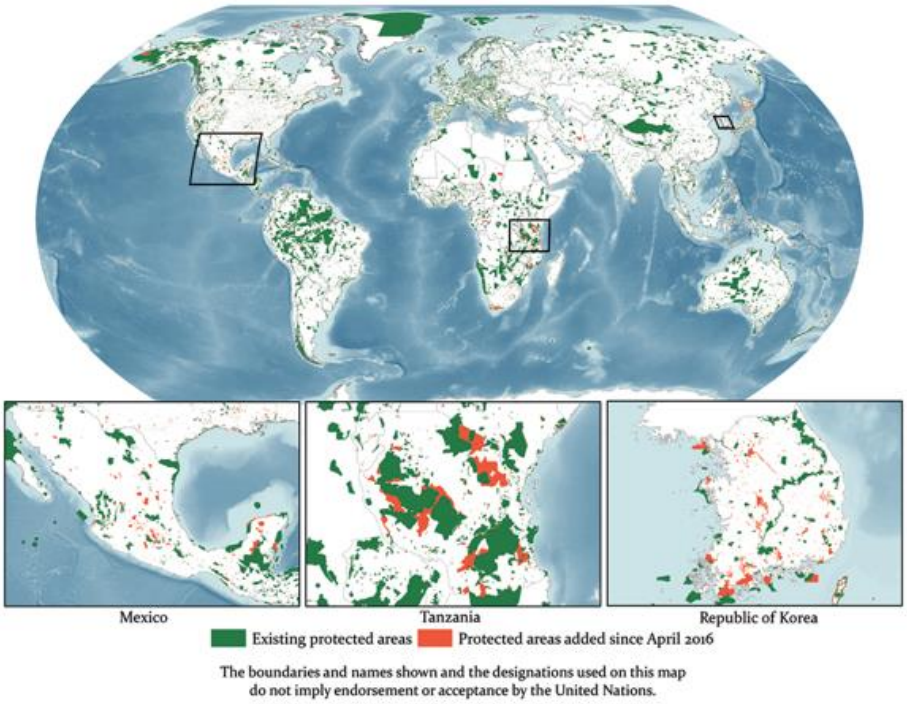

Figure 4: The increase of PAs in Tanzania (Middle) in between April and December of 2016 (a 6.3% increase) (Global Update (December 2016) 2016)

Informants agreed that protected areas work quite well in protecting biodiversity, but had differing opinions on what they lack:

> Informant 1: "It depends on specific protected area and their performance depends on who is assessing it, for example if I talk about Gombe National Park, which is also a protected area I can easily say it has worked to some extent though not 100%. Some of the biodiversity are not carefully monitored to assess their abundance with time. This is the challenge to our park but might be applying in many of the protected areas as well. Similarly, we have a number of protected areas lacking capacity for doing monitoring and evaluation of their biodiversity."

> Informant 2: "When they do not work well a variety of things might be lacking: a) funding, b) clear demarcation of borders, c) lack of enforcement of regulations/laws, d) lack of administrative capacity, e) lack of effective engagement with local human communities, and f) corruption by protected area staff, local government, or national level government."

> Informant 3: "In some places enforcement is lacking, or other government/institutional support. In some places there is not buy-in, or even opposition from local residents."

> Informant 4: In many countries it is local involvement and engagement. Protected areas that are thoroughly affected by humans are unwelcoming to more local control.

Each social scientist and natural scientist had varying opinions on what needs to improve in protected areas to conserve biodiversity. It is necessary these ideas be put together in a context where conservationists operate with social scientists in order to have two authoritative bodies working to proper, all-inclusive conservation solutions that cover all ecosystem services, biodiversity, research, aesthetics, recreation, tourist industries, and other considerations concerning conservation. The tangible costs of the parks are that they cause eviction and physical displacement to poor and weak rural groups (Mulder and Coppolillo 2005). Most informants agreed that many national parks lack local engagement. Of course, success varies case by case, but designed thinking from ecologists and biologists operating with scientists who work with local rural communities need to be prioritized instead of focusing on *either* biology *or* humans. Human population grows, and conservation movements aiming to protect wildlife species should consider this growth, as well as changes in culture that occur because of it, by creating solutions that work long term, not just for the way human populations are currently functioning.

Population growth of humans is another reason social scientists should be included in conservation movements aiming to conserve specific species. Evidence supports Boserup's hypothesis that human population growth is the main factor in the intensification of agricultural systems in Tanzania (McCabe 2003). The more humans there are in an area, the more the same plot of land is repeatedly utilized for agriculture. Similarly, human population growth affects the amount of land used to graze cattle. Stephen Michael, James Stapleton, and Barry Shapiro (2017) explain in "Tanzania's Livestock Master Plan" that the country is seeing an increase in livestock numbers, but productivity gains are low. Conservation organizations like The Kesho Trust that

support alternatives to pastoralism with community government methods for food sustenance while also creating profits for the communities in Tanzania are models to follow. Pastoralism can coexist with conservation, but with potential intensification of land use for grazing, alternatives, like the Mkwaja Chicken Project (Figure 5) work as successful methods of sustainability. The Maasai people are a population of about 800,000 and are considered "people of cattle" in Tanzania and livestock are their primary source of food (McCabe 2003). Land use for grazing is extremely limited (Michael, Stapleton, and Shapiro (2017) and there is hesitation when one considers allowing humans access to resources in protected areas. It seems to defeat the purpose of a park or reserve. However, some downfalls of PAs and NPs are their lack of local approval because local people desire access. Education of local communities on conservation issues helps increase support.

Non-governmental Organization Projects in Tanzania

Figure 5: Mkwaja Chicken Project

The Kesho Trust has completed the Mkwaja Chicken Project in which the community created a chicken rearing facility to replace diminishing food resources from land use changes. Currently,

the organization is implementing "Promoting Environmental Conservation and Cooperation [PECC]." This project works with TANAPA and Poverty Reduction Research and Learning Alliance (PAPR) to understand the needs and ideas of communities surrounding Saadani National Park (The Kesho Trust : PAPR 2018).

Education on environmental issues and community governance are recurrent themes in conservation organizational projects. This education is a slight shift from Jim Igoe's perspective where he states "while NGOs under certain conditions might support the growth of civil society, they can never become a substitute for dynamic communities. Rather than assuming that NGOs have universal and intrinsic qualities, let us rather assume they will reflect the socio-historic conditions of the locale in which they operate" (Igoe 2003, 867). NGOs in Tanzania provide community leaders with formal methods of championing land rights and movements (Igoe 2003). Some conservation organizations have implemented alternative forms of CBC. African People and Wildlife (APW) recruited 45 Warriors for Wildlife[9] to prevent human-wildlife conflict in 28 communities (Warriors for Wildlife - Preventing Human-Wildlife Conflict n.d.). African Wildlife Foundation (AWF) and the Norwegian organization whose mission is reducing emissions from deforestation and degradation (REDD+) work with 21 villages in Tanzania to manage 42,000 hectares of semiarid forests to save 125,000 tons of carbon dioxide and financially reward developing countries working to reduce their greenhouse gas emissions (Kolo Hills REDD+ 2013). German International Cooperation (GIZ) is strengthening capacities for land governance in African through sustainable management of natural resources (Tanzania n.d.). The Mkwaja Chicken Project through the Kesho Trust creates alternatives to pastoralism to limit human-wildlife conflicts, address poverty reduction, and educate on why conservation is

[9] Civilians born and raised where they work in Tanzania (Warriors for Wildlife - Preventing Human-Wildlife Conflict n.d.). They work in preventing human-wildlife conflicts using an Open Data Kit that transmits attack reports and requests for Living Walls to APW and field staff members to resolve tensions (Warriors for Wildlife - Preventing Human-Wildlife Conflict n.d.).

necessary (The Kesho Trust : PAPR 2018). These projects emphasize that to protect humans, land, and wildlife, finding substitutions in which humans are included in sustainability movements surrounding the implementation of a protected area is crucial.

Perspectives on Wildlife

In his article "Endangered Humans," Charles C. Geisler gives the statistics of African land use. In 2002, after facing international pressures, Africa had over 1,000 protected areas that accounted for almost 380 million acres of the continent's land (Geisler 2002). Fourteen African countries have more greenlined[10] land areas than cultivated land available for agricultural use, and the poorer countries have more land in aid to conservation than those which are thriving (Geisler 2002). Timothy Baird, Paul Leslie, and J. Terrence McCabe (2009) studied local perceptions and behavioral responses of risks caused by wildlife conservation. They focus on Tarangire National Park in Tanzania and discuss participatory risk mapping. As protected areas account for so much land within Africa, and more specifically in Tanzania, this study is highly relevant for further explorations of local perceptions on PAs. The authors find that those living close to the natural park risked wildlife eating people or livestock and human and livestock disease (Baird, Leslie, and McCabe 2009). There is also high incidence of loss of land and access to land is among the top worries of villagers (Baird, Leslie, and McCabe 2009). Their data demonstrates that some villages adapt to different land uses and prepare for protected land borders to expand, while others find the loss of land more difficult to adapt to, and this varies depending on proximity to the park (Baird, Leslie, and McCabe 2009). It also proves that wildlife and loss of land are among the most common worries for local rural communities around Tarangire. Informant 1 explains that "if you [talk] to villages living adjacent to the Park, those

[10] Areas sectioned off as protected areas.

who benefited are likely to say the protected area is the best while those without support are likely to say [it is] not good at all." A park in and of itself is a risk because it creates a border between local people and wildlife, leading to a local understanding that protected areas separate communities from cultivating or using the land. Local communities often view conservation and wildlife negatively as it removes them from the land they have depended on, or it forbids them access to resources they are accustomed to using. News articles, social media, and other sources of information sharing give animals a voice, but local rural communities have had their voice taken away. It is necessary for all parties involved to understand the fundamental rights of humans living near communities when providing information in any of these sources.

Social scientists not only reflect on the direct impact of NPs but also look at the direct impact wildlife has on surrounding communities. Regarding people's view on wildlife around their areas, Gillingham & Lee (1999) surveyed villagers living in the surrounding areas of the Selous Game Reserve in Tanzania. This community has been a site to invoke community-wildlife management (CWM) since 1989 (Gillingham and Lee 1999). In this study, Gillingham and Lee (1999) surveyed attitudes towards wildlife from the people of the Mgeta River buffer-zone over the course of 15 months and collected the following data:

Table 1: percentage response frequencies to fixed-response attitude statements concerning the perceived need for wildlife conservation measures (Gillingham and Lee 1999, 221).

Table 1 Percentage response frequencies to fixed-response attitude statements concerning the perceived need for wildlife conservation measures (n = sample size).

Attitude statement	*Response (%)*		
	Yes	*No*	*Don't know*
A. It is important to protect wildlife for our children (n = 187)	86.5	3.4	10.1
B. People who poach should be punished (n = 189)	92.1	0.6	7.3
C. There are so many wild animals nowadays that the laws to protect them are no longer necessary (n = 185)	10.6	77.0	12.4
D. Villagers should be allowed to hunt as many animals as they need for food (n = 188)	17.4	74.2	8.4
E. Wild animals that cause crop-damage are pests and should be shot (n = 193)	57.3	36.0	6.7

Table 2: Percentage response frequencies to open questions concerning perceptions of wildlife as a source of benefits at the national, local and personal levels (Gillingham and Lee 1999, 221).

Table 2 Percentage response frequencies to open questions concerning perceptions of wildlife as a source of benefits at the national, local and personal levels (n = sample size).

Question	*Response (%)*		
	Yes	*No*	*Don't know*
Does wildlife benefit Tanzania? (n = 199)	71.9	11.1	17.1
Does wildlife benefit people living around the SGR? (n = 199)	54.5	34.8	10.6
Does wildlife benefit you and the people in your household? (n = 200)	47.0	47.0	6.0

Gillingham and Lee demonstrate that the majority of local people view wildlife as beneficial to Tanzania and to the people living around the protected area, but not to their personal households. So, once again, what do parks do to local people? Does community-based conservation work? How can the perceived risks cause by wildlife change in communities residing near protected areas and national parks be reduced? According to many scholars and activists, parks cannot survive without local support (Mulder and Coppolillo 2005; Maugh II 2008; Informants 2018).

As briefly mentioned in Chapter 4, the documentary film "Milking the Rhino" directed by David E. Simpson captures superb examples of finding a balance between conservation and fundamental humans rights. The film focuses on two pastoralist tribes: The Ovahimba people of Namibia and the Maasai people at Il Ngwesi Ranch in Kenya. Some Maasai understand that, to preserve their culture, they need to conserve wildlife. At the Il Ngwesi Ranch, an informant explains to the camera crew that seeing a rhino used to mean fear and destruction, but due to globalization and increased Western influence in Kenya, the degree of acceptance towards nature from some of the oldest cattle cultures in the world is beginning to change (Simpson 2009). The informant stated that the tribal communities "used to hate the wild animals because they would kill." In Kenya, 18% of the land is a conservation site, and these sites barely resemble the rest of the country as is the case for every conserved area (Simpson 2009). "Milking the Rhino" tells the story of the Maasai and the Ovahimba tribes facing necessary cultural changes in order for their

traditions to survive. These tribes begin to understand the answer to the question "why conserve?" is the revenue wildlife tourism brings.

Mentioned in the documentary film is the Myth of Wild Africa, detailing how westernized ideas dictate how the people of the westernized world view "National Geographic" and French painter, Henri Rousseau's primitivistic[11] images of Africa's wildlife scenery. This movie reflects the "white man's Africa" (Simpson 2009). Wildlife is often a fallback resource, in that local and indigenous people near protected areas, like the Maasai and Ovahimba, rely on their cattle for the majority of food resources, but would resort to hunting wildlife if necessary (Simpson 2009; Dr. Helen Gichohi in Milking the Rhino 2009). Occasional hunting changed in the late 1930s and the beginning of the 1940s with the movements of national parks sweeping across Africa. Initially, only Europeans were allowed to hunt on protected lands, and if an African killed any wildlife, it was considered poaching or stealing (Simpson 2009; Dr. Helen Gichohi in Milking the Rhino 2009). The change in conservation laws began with the realization that 'fortress' or 'command and control'[12] conservation methods do not function (Simpson 2009). These types of conservation gate, fence, or lock out native people from entering protected wildlife areas (Simpson 2009). The indigenous tribes mentioned understand that wildlife preservation allows for revenue from tourism; however, with a lack of resources such as firewood, the indigenous peoples cannot protect the wildlife without suffering from lack of fundamental rights (Simpson 2009).

[11] A Western idealization of nature's aesthetic that situates humans in a natural environment before the development of modern civilization.
[12] Fortress conservation or command and control conservation are conservation methods based on the Yellowstone model that entirely exclude local communities.

Dr. Helen Gichohi, the then president of the African Wildlife Foundation (AWF), states that the African landscape is a resource for the people and they need to understand how to preserve it and use it efficiently (Dr. Helen Gichohi in Milking the Rhino 2009). Seeing the benefits of wildlife (no matter how egocentric) will better conservation efforts (Simpson 2009). The people "understand [their] future if the herds are able to grow" (Simpson 2009). The people in Africa are beginning to work hard to conserve animals, accepting new conservation practices as a means, not only for wildlife survival, but for cultural survival as well. With tourism revenue in Namibia directly benefiting the indigenous people, populations are incentivized to participate in new conservation efforts. "Milking the Rhino" refers to the idea of using something for what it is worth and local people began doing this. In this way, local people and wildlife both benefit from the institution of NPs.

Protected areas are considered to be on the frontlines of biodiversity preservation. However, PAs do not always target areas of high biodiversity; they sometimes only target places that are intrinsically pleasing like arctic tundra and beautiful scenery. Additionally, wildlife going through migrations or seasonal ranges that take place or are located outside of protected areas become defenseless. Similarly, protected areas many times only exist within an invisible line surrounding it called 'paper parks,'[13] therefore, the ecosystem within is not a key focus of protection (Mulder and Coppolillo 2005). The size of the African continent attests to why there is so much land protected, but it is impossible to contain all wildlife biodiversity inside PA bounds. The expansion of PA boundaries is often not locally supported as the continent's population is largely rural and dependent on most of the land. Local communities and national states in African countries like Tanzania are often in conflict with one another over land disputes.

[13] A park that only exists on paper. One may not know they are within park bounds.

According to Paige West, Jim Igoe, and Dan Brockington in their article "Parks and Peoples: The Social Impact of Protected Areas," Australia and Latin America have fewer studies that showcase how policies around protected areas work, but local people in Australia have experienced less displacement because of conservation than indigenous people in Africa and North American (2006).

Conflicts occur between park-management regimes and traditional aboriginal practices. While mentioned before that informant 4 explains there must be an appropriate next level of government that supports local government with supervisory control, Amy Dickman, wildlife conservationist and zoologist, argues that "human–wildlife conflicts are often manifestations of underlying human–human conflicts, such as between authorities and local people, or between people of different cultural backgrounds" (Dickman 2010, 458). Outside supervisory control of CBC and other social and environmental risk factors can lead to more intense human-human conflicts, as well as human-wildlife conflicts (Figure 6) (Dickman 2010). For example in Latin America, some indigenous communities use protected areas to protect their traditional practices; however, these areas can also act as a way for national authorities or outside influences to pursue commercial interests, leading to human-human conflicts of interest (West, Igoe, and Brockington 2006). Alliances between state and community have potential to benefit many groups of people, as it relieves tension and produces an area that can be protected. The Kayapo and other indigenous groups in Brazil were able to counter the damming of the Xingu River that would flood Xingu National Park, and by doing so, protected their land and a national park (Turner 1995; West and Brockington 2006). It is credible to say that an alliance between state authorities and local communities would help multiple protected areas be more prosperous; however, these alliances are rare and difficult to form, as local regimes and the militarization of areas are

common. Additionally, some organizations have found alternative methods to ending human-wildlife conflicts. African People and Wildlife in Tanzania has set up way to house livestock so that it is protected from wildlife predators (APW). Fortunately, the topic of human-wildlife conflict is becoming a commonly discussed issue among conservation biologists (Dickman 2010). Now, human-human conflicts between local communities and national authorities, conservationists and social scientists, conservationists and local people must be acknowledged.

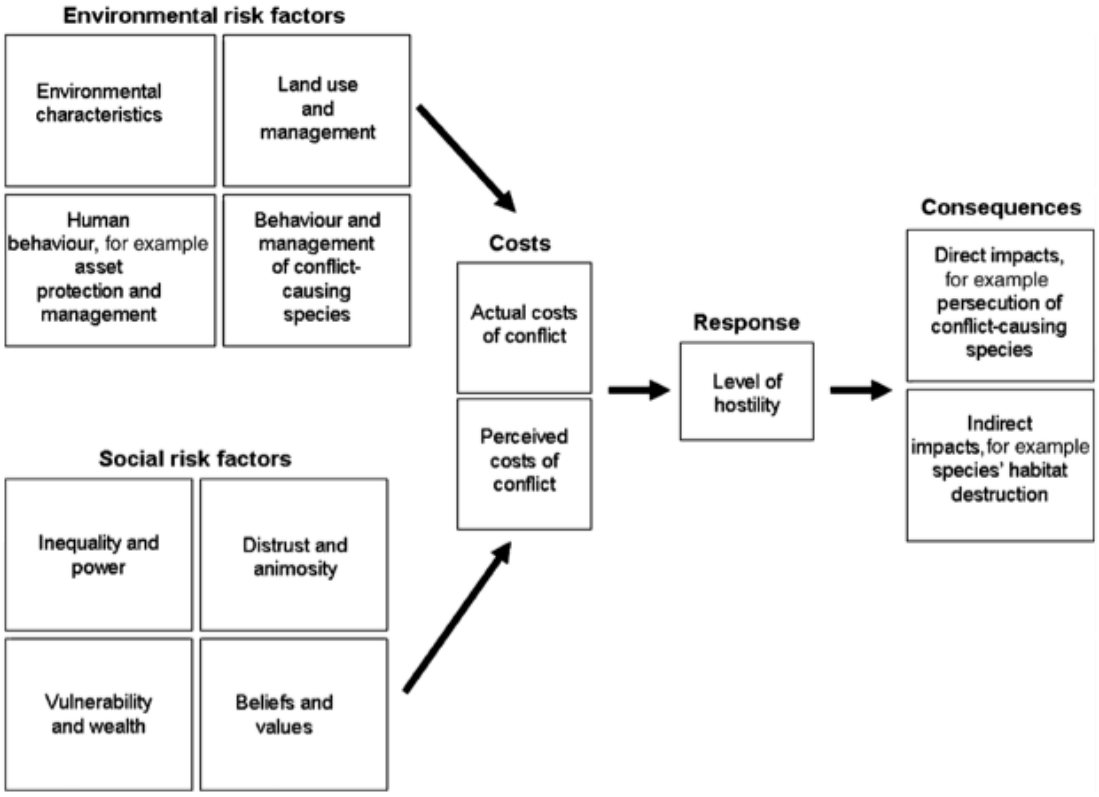

Figure 6: Factors likely to intensify human-wildlife conflict (Dickman 2010, 463).

More specifically, national parks and reserves can affect the relationship dynamics of the local people. Gender relations are affected in places like the Maya Biosphere Reserve in Guatemala, where men were considered the people in charge of social change, and women were unacknowledged (West, Igoe, and Brockington 2006). In this case, "women began to build alliances with one another and work outside of their immediate family," allowing themselves a

new form of power by broadening their social networks and themselves (West, Igoe, and Brockington 2006, 261). The increase in power for women meant that conservation planning needed to consult them as well. Interconnected relationships are changing in rural communities based on land management and categorization. CBC helps manage land to maintain traditional practices, but in the case of Guatemala, outside influence helped empower women. While CBC works on paper, both the case of Guatemala and Tanzania represent a circumstance where management of land varies with culture, and it is necessary that ecologists and social scientists be both involved in the process for the benefit of humans and wildlife alike.

Perceptions of landscapes and conservation advancements affect the social nature of people and their surroundings (West, Igoe, and Brockington 2006). National parks are considered a way for outsiders to control land, whether these outsiders are western influencers in a country once colonized, like Tanzania, or regional and national governmental agencies. A community in proximity to a protected area or reserve generally has more negative feelings projected towards them (Informant 1). Community-based conservation can be seen as a form of resistance, as it attempts to take power away from the centralized government and give it to local communities. It is also an attempt to protect the rights of biodiversity and humans. David Harmon evaluates 11 values of protected areas: recreational, therapeutic, spiritual, cultural, identity, existence, artistic, aesthetic, educational, peace, and scientific research and monitoring (Harmon 2004); however, Brockington, Igoe, and West argue these as social effects to conservation initiatives, and that "the recreationists, tourists, artists, scientists and others who use the protected areas need to be studied" to implement the best conservation methods (2006, 265). It is necessary to understand the missing link between social scientists and natural scientists in

order to understand how communities in Tanzania can be more involved in national park and reserve development and preservation.

Conservation successes must incorporate human wellbeing in order to be considered successful. A conservation initiative that teaches a population how to manage land or resources and provides alternative methods of sustainable access to resources when access to land is taken away is strategic in order to include human well-being in the larger picture of protecting wildlife. While it is clear CBC varies in functionality, it is currently the most effective conservation method that values the fundamental rights of humans and the preservation of wildlife. The differences in opinions between wildlife conservationist and social scientists are evident when it comes national parks and CBC. Literature has a divide when talking about human involvement in conservation, as ecologists, conservationists, and anthropologists are rarely co-authors. In order for better conservation, there needs to be better communication between these groups.

Chapter 7: People first versus Conservation First

Conservation success revolves around various conservation variables and movements. The earliest examples of conservation movements to protect biodiversity began in the early 1800s as hunting grounds and game reserves for the rich and powerful. Another conservation movement is the creation of organizations such as the IUCN, founded in 1948, and the Society for Conservation Biology's Social Science Working Group, established in 2003, in which anthropologists are becoming increasingly, if not completely, involved (West and Brockington 2006). The simple argument of conservation is that it results in the protection and preservation of an ecosystem or species. As William Cronon (1996) states, the idea of protection revolves around "endangered species." However, a more recent debate among popular conservation literature is whether people or biodiversity should be, will be, or were prioritized. As stated previously, conservation is often a divide between the prioritization of people *or* biodiversity. Human interaction with nature increases with the rise of protected areas, which in turn leads to an increase in ecotourism organizations, advances in CBC, and more education of local people on conservation-related issues (West and Brockington 2006). Conservation should not be a matter of "people first" or "conservation first," but rather a way for conservationists and social scientists to work together to find balance between both.

One of the most common patterns in the debates behind conservation is the split between wildlife conservationists and social scientists. Social scientists believe in the prioritization of humans surrounding protected areas while conservationists prioritize biodiversity. The preface of *Conservation; Linking Ecology, Economic, and Culture*, by Monique Borgerhoff-Mulder and Peter Coppolillo, begins with conservationists eating at a campsite by the Katuma River in Tanzania. They are eating a poached buffalo stew, addressing the ethical problems surrounding

conservation solutions for Katavi National Park. This chapter addresses the paradox that is “how do we balance the rights and interests of human populations with our equally human obligation to preserve some measure of biodiversity and a healthy functioning planet for future generations?” (Mulder and Coppolillo 2005, xiii). The buffalo stew would not be considered poaching if the locals paid to hunt on the lands once belonging to them. Mulder and Coppolillo (2005) argue that there needs to be legitimate discussions between ethics, environmental policy, biology, and the social sciences, which people are currently avoiding. They address it as a “new unity of knowledge” through interdisciplinary studies (Mulder and Coppolillo 2005, xiv). As stated in the book *Nature Unbound*, while humans have “the right to enjoy nature and the ecological services that nature provides, [... they] also have the duty to restrain [their] behavior in such ways as to ensure the continued enjoyment of this right” (Brockington, Duffy, and Igoe 2008, xv). Nature, in this sense, is valued for its intrinsic and utilitarian purposes. However, in the image of Dan Brockington, Rosaleen Duffy, and Jim Igoe, there is little room for proper management or local population inclusion. Humans should be integrated with the idea of nature, especially local rural communities with traditional environmental knowledge.

Authors Paige West and Dan Brockington (2006) suggest that when planning a conservation project, those involved should learn social, economic, and political ideologies in order to combine nature and culture. A strict division of nature and culture creates the mindset that people and their activities are "unnatural" and separate from nature (West, Igoe, and Brockington 2006). However, some indigenous peoples, as Kent Redford, conservation biologist, explains, are occasionally presented as ecologically noble savages who are closer to nature and understand it better (Redford 1991; West and Brockington 2006). Redford explains "to live and die with the land is to know its rules" (1991, 1). Globally, many indigenous tribes associate their

land with sanctity, like the Kuna people of Panama who have "spirit sanctuaries" in which spiritual animals, plants, and demons reside and are not to be removed or tampered with (Chapin 1991; Colding and Folke 2001). Social taboos can be built into conservation movements for communities and social researchers to understand ecological systems, and for wildlife conservationists to understand social systems. In the case of the Kuna people, neither ecologists, wildlife conservationists, nor the Kuna people want to interfere with the biodiversity residing in those areas. Conservationists and social scientists can find ways to work together case by case to value the rights of humans and wildlife. In the case of Tanzania, and other western influenced countries, a solution lies in interdisciplinary studies. Humans are often considered an inconvenience when creating a protected area; however, the benefits of protected areas rarely meet the losses, as the costs of evictions and exclusions are hardly accounted for, and efforts of protected areas create a static pattern of fixing the local people in time and space (Brockington 2002; West, Igoe, and Brockington 2006; McCabe Lecture 2018). Conservation implementations do not work when there is no indigenous and local rural community support or when the ways "protected areas become instrumental in shaping battles over identity, residence, and resource use" are ignored[14] (West and Brockington 2006). For example, in East Africa, immigrants responded to a protected areas' restriction of certain ethnicities by changing their ethnicities (West and Brockington 2006). PAs also become a way to link local and indigenous people with conservation movements.

Human disturbance, at times, coincides with the success and growth of wildlife. For example, in Keoladeo National Park in India, cattle grazing was banned to protect grasslands; however, this led to a decrease in the bird population that inhabited the park due to an increase in

[14] For an opposing view, see *Requiem for Nature* by John Terborgh (1999).

foliage, and so grazing was reinstated (Lewis 2003; Brockington 2002). Additionally, in the United States, some Native American tribes have benefitted from the tourism national parks provide (Begay 2001; Ruppert 2003; West and Brockington 2006; Economic Impact of National Parks 2018). However, traditional practices are often lost because of this compromise, like in the Alpine Meadows where Native Americans would go to collect huckleberries but no longer can because the area is now part of a national park (Begay 2001; West and Brockington 2006b; Lewis 2016). Additionally, a domesticated animal is not what people want to see on wildlife safaris, just like an indigenous tribe with westernized culture will not attract tours. Indigenous people can benefit from PAs when they are created to include them.

It is clear that the mechanics behind protecting nature will inhibit human activities, and resources that were otherwise accessible without bordered parks will now negatively impact human well-being (Pullin et al. 2013). These mechanics surrounding conservation then prioritize either people or wildlife biodiversity. Should humans be considered when implementing or updating protected areas? Should their consequences be accepted as a result of the increase of biodiversity? Conservationists, ecologists, social scientists were asked: "How do we know when conservation initiatives work?" They responded:

> Informant 1: “We know that conservation initiatives work if specific strategies, or specific activities conducted to improve situations in response to the challenges addressed show improvement of the situation. That can be realized if for example, specific indicators were set as baseline in the beginning and later showing positive changes after the implementation stages. You must always have a monitoring and evaluation plan in your implementation where indicators established before and after implementation are compared to show the differences. By doing that you will be able to tell if conservation initiatives work or not.”
>
> Informant 2: “My personal bias is that conservation successes are real but require continuous vigilance – the causes of environmental degradation, pollution, and population declines can occur again if we are not careful. Also, we need to attend to the health of human populations that are a part of, or adjacent to, areas where

> conservation activities are taking place. Often poverty and lack of access to resources characterize rural populations (and often the outcome of the same unsustainable development that is causing environmental harm). It is of critical importance to address the needs of these people and to develop real and long-term solutions."
>
> Informant 3: "Sometimes the data is clear: We see populations of threatened species bouncing back."
>
> Informant 4: It depends on what you're trying to achieve. If it is the exclusion of people or the creation and saving of wilderness—then its working by keeping it free of people. Satellite tree measurements help understand how much a forest covers and grows to measure if it is working, but measurement techniques vary. The preservation of ecosystems or preservation of species is not the most motivating to communities due to property frustration. A community's awareness of conservation leads to a different sense of objectives. Ecosystem preservation is a proxy.

Personal or group attitudes and data detailing to species population growth and decline are clear indicators of working or failing conservation initiatives. Each informant understood that conservation initiatives are working if they show a rise or sustained population of the species they aim to protect. Informant 2, the ecologist, and Informant 4, the social scientist both acknowledged human well-being as a part of conservation success. That is to say, humans are acknowledged on both ends of the spectrum, but biodiversity is not largely included in human planning just like humans are not a significant focus in biodiversity planning. In February 2008, at an annual Convention on Biological Diversity (CBD), members and representatives of the International Indigenous Forum on Biodiversity (IIFB) walked out, stating the convention ignored their interests (Dowie 2009). Michael Gavin et al. (2018) finds evidence that these conventions fail at their purpose of diminishing the loss of biodiversity, and Dowie (2009) explains that representatives of indigenous communities feel ignored. Gavin's recent finding proves that communication needs to improve amongst the representatives of indigenous people

and the representatives of biodiversity. Conservation should no longer be viewed as biodiversity or people first.

Some conservation movements, like CAMPFIRE when it first started, work to prioritize people and wildlife because the local people are heavily involved and can benefit. National parks like that of the Arctic National Park in Alaska in the United States and Kakadu National Park in Northern Australia were brought about by natives and conservationists aiming to block natural resource extractions (Catton 1997; Lawrence 2000; West, Igoe, and Brockington 2006). When conservation is prioritized over people, land-use rights are drastically changed. Historically, elite populations gain control over resources, alien land, and marine areas, and native peoples land-use practices become criminalized, and this pattern is still seen today (West, Igoe, and Brockington 2006). How can an end to these extreme changes be found? "Displacement from protected areas is one of the most controversial and contested aspects of protected areas" (West, Igoe, and Brockington 2006, 257). Displacement, however, often goes undocumented, and conservation projects can simplify the cultures, practices, and beliefs to fit into categories outsiders can understand (Harmon 2004; West, Igoe, and Brockington 2006). Displacement alters a community socially, politically, and economically and conservation initiatives often do not provide long term solutions to these changes (West, Igoe, and Brockington 2006; McCabe 2003).

Most parks follow the Yellowstone model of exclusion. The Serengeti, before its establishment in 1951, was home to thousands of people from the Maasai tribe. British authorities removed approximately 7,800 square-kilometers from Serengeti National Park, renaming it the Ngorongoro Conservation Area where the pastoral tribe was evicted to (Poole 2015). Ngorongoro stands out because it is one of the longest going attempts of combining

Tanzania people and wildlife. After the separation of the Ngorongoro Conservation Area from Serengeti National Park, the British supervisors deemed that cultivation, pastoralism, and wildlife were incompatible and the Maasai lost sources of food and water by being evicted from the protected area (McCabe Lecture 2018). With the ban of agriculture in 2012, the protection of human rights in Tanzania began fading quickly. When the preservation of nature through PAs begins at an international or federal level, it directly affects the lives of local communities who, more often than not, are left with unfulfilled promises and negative attitudes towards the idea of conservation.

The Ngorongoro Conservation Area (NCA) was originally designed on a dual mandate: to increase community development and to conserve wildlife (Barrow, Gichohi, and Infield 2000). However, NCA authorities are facing difficulties in reconciling conservation and development due to population growth surrounding the area (Barrow, Gichohi, and Infield 2000). This population growth also proves problematic because pastoralist groups near the NCA are not clear on the benefits the conserved area brings to them. The General Management Plan (GMP) aims to improve understandings between parties involved, like representatives of wildlife conservation groups and pastoralists' (Barrow, Gichohi, and Infield 2000). Although local people have stated this had been the first time their attitudes towards and thoughts concerning future management of the area, it is unclear who the pastoralists' representatives are. The GMP is a document that provides basic guidelines to future planning to: "maintain a dynamic multiple land use system which perpetuates the historical balance of people and nature, conserve the biodiversity and ecological integrity of the Serengeti ecosystem and Ngorongoro Highlands, […] protect water catchments vital to the region's ecology and residents, [… and] encourage

responsible tourism" (Barrow, Gichohi, and Infield 2000, 78). However, even ten years after the adoption of the GMP, many promises are still left unfulfilled (Swanson 2007).

Documents and legislations like the Endangered Species Act in the United States value the importance of nature and protected areas and focus on the protection of wildlife typically surrounding one area or species. These legislations confine land once belonging to indigenous people in order to enable the survival of a species "whose habitat then becomes the object of intense debate about appropriate management and use" (Cronon 1996, 18). Those involved in creating conservation legislations should consider the vulnerability of native, local, and indigenous humans. In Western ideology, humans have been separated from the idea of nature since the British countryside was idealized by artists like Claude Lorrain, but indigenous humans with traditional ecological land have long understood their place in an ecosystem. Land outside of civilization is now a social construct, that materializes nature into that of utilitarian value where any interaction with the natural world alters it (West, Igoe, and Brockington 2006). Conservation initiatives should not value preservation of a species over preservation of a human community but often does, and the complex paradigm continues.

The utilization of nature gives more value to the preservation of it; however, after the implementation of a national park, nature's utilitarian values disappear and the killing of wildlife is considered poaching. Poaching is a deplorable treatment of wildlife when referring to killing an animal illegally for profit and personal gain instead of survival and community benefits. Seen in the film, *Milking the Rhino*, it is clear poaching is not the same as what most westerners think. Local authorities often arrest people for killing an animal within a protected area and outside of legal constructs for food, whether or not it is endangered. Fear of poaching, another stigmatized human creation of how separated humans are from nature, evicted the Wanniya-Laeto people

from the protected forests of Sri Lanka (Stegeborn 2004; West, Igoe, and Brockington 2006b). As Wiveca Stegeborn from the department of archaeology and social anthropology at The Arctic University of Norway explains, “yesterday’s hunters and gatherers [are becoming] today’s poachers” (2004, 242). Hunting was imperative for humans, and still is in many smaller communities. Tanzania today "gazettes more land for hunting than for national parks," for those who are able to pay (Riggio et al. 2013, 21). Hunting trips that cost tens of thousands of dollars are paid for by tourists and elite classes outside of Tanzania. These hunting lands often do not incorporate any forms of CBC, nor does it allow for different groups outside of elite classes to be able to utilize them. Additionally, cultures rely on hunting for traditional rites of passages, like the Maasai lion hunts.

In Maasai culture, lions are hunted as either a cultural ritual or a retaliatory behavior against the killing of livestock (Goldman, Pinho, and Perry 2013). Authorities consider lion hunting in this practice illegal if it is hunted inside a park, if it is done without the proper sports hunting permit administered by the Director of Wildlife for a specific location, or if it is not done in defense of the life of livestock (Goldman, Pinho, and Perry 2013). Elders in Maasai tribes encourage group hunting, which scholars Mara Goldman, Joana Roque de Pinho, and Jennifer Perry infer is due to the difficulty of prosecution as a group hunt makes individuals difficult to find (2013). Lion hunts in Tanzania now occur to protect against to predation of livestock, but this also allows individuals to gain prestige, eliminate a threat, select leaders, and reaffirm the protective role of Maasai warriors called Ilmurran (Goldman, Pinho, and Perry 2013). Goldman, Roque de Pinho, and Perry’s ethnographic work explains the social perspective of why hunting is important to certain communities and emphasizes that "deep ethnographic engagements with communities are not often part of conservation projects or research on lions but address the need

for cross-disciplinary research for improved conservation" (Brosius 2006; Redford 2011; 2013, 498-499). It is clear that socially and ecologically, the creation of hunting grounds does not include the needs of wildlife and local people, and developing initiatives should include social scientists and ecologists.

As explained with wildlife management areas in Chapter 6, poverty alleviation also arises with the discussion of "people first versus conservation first" attitudes to conservation methods. Protected areas can strive to reduce, but are an impossible method to eradicate, poverty (Sanderson and Redford 2004, 146; Brockington and Schmidt-Soltau 2004). How can the economy not be affected negatively if those managing protected areas ignore destructive practices so as not to impact those most in poverty (Sanderson and Redford 2004)? There are conflicting relationships between protected areas, conservation, and indigenous and local peoples. Protected areas dispose and evict people, but simultaneously, can "be instruments by which indigenous people win control over land and resources and defend themselves against the transformations of modernity" (Brockington, Duffy, and Igoe 2008, 114). A protected area should not be an instrument used for indigenous people to ignore the ecological pressures of modern times, nor should it be an excuse so humans can exploit other areas of the environment because 14.8% of the earth is protected. A conservation area is what Brockington, Duffy, and Igoe describe as 'space making,' which can be understood as a tool to create a space that incorporates the pleasing prospect, or somewhere considered a place with beauty to behold (2008). Historically, the British countryside structured the path for how nature is seen. Because it separated humans from the landscape, conservation today must choose to prioritize one value over the other. The way some native peoples want to use lands and natural resources in Tanzania sometimes is not in sync with the ideas of conservationists and vice versa. In order to understand

‘space making,’ one must look for “outsiders interested in finding and helping indigenous groups, a capacity to make local cultural identity intelligible to outsiders, and individuals mandated to speak on behalf of the group” (Brockington, Duffy, and Igoe 2008, 120). These outsiders should be all parties included in conservation planning.

Within the debate of "people first or conservation first," there are assumptions about what utilitarian values can contribute to the argument (Brockington, Duffy, and Igoe 2008). Indigenous people seem to be included in conservation efforts only when it seems economically and ecologically suitable and convenient. Not only has conservation revolved around a history of exclusion, but also a history of conflict. To better conservation tactics, any grievances that indigenous peoples have towards conservation and western methodologies of enforcing protection laws must be settled (Brockington, Duffy, and Igoe 2008). This will benefit the work of all scientists working towards bettering conservation, as it first relieves initial tensions local rural communities and indigenous people have towards a protected area. In the case of Tanzanian WMAs, land conflict characterizes many tensions (Marks et al. 2018). According to a 2018 report done by Ecosystem Services for Poverty Alleviation (ESPA), there are seven main issues with WMAs including there being no fair and transparent consulting or planning done for the WMAs to improve community support (Marks et al. 2018). Being cognizant of indigenous peoples’ involvement in conservation movements will make conservation efforts more tedious, but much more ethical and overall valuable. This balance between anthropocentric and ecocentric understandings is critical.

Regarding conservation and self-interest, an individual's behavior does not change parallel to how their environment changes if their perceptions stay the same (Baird, Leslie, and McCabe 2009). Human perception must evolve accordingly in order to make the proper

innovations to environmental interactions. If a human associates a particular environmental factor as a risk to their habitat and habitat-based traditions, their perceptions of that aspect of the environment are negatively altered. It is difficult to say “let’s help animals more than humans” because that constitutes the mindset for people first versus conservation first initiatives; therefore, it is time balance amongst all living organisms, including humans and local peoples, is communicated among social scientists and wildlife conservationists when discussing biodiversity conservation practices.

Chapter 8: Conclusion

As many would agree, the human species is no more important than wildlife biodiversity, nor do we have more rights to the resources earth provides. Many communities in Tanzania view wildlife and wildlife conservationists as their enemy, and many conservation organizations and wildlife conservationists view local communities as their rival. Protected areas are critical, now more than ever in the preservation of threatened species, as extinction rates incline at faster rates each year. Endangered species and vulnerable ecosystems have been given a voice in the world due to their dire circumstance, and it is time the same is done for humans who rely on raw, natural resources for their well-being. Resources are most limited where habitat conservation is most widespread. It is crucial that the fundamental rights of humans who have lost their land in the fight for preservation intertwine with global ecosystem prosperity.

This thesis began with the quotation from David Wilkie and Dan Brockington: "to many [protected areas] are essential because their restrictions on natural resource use conserve biological systems that will otherwise be depleted, degraded or destroyed. To critics protected areas threaten peoples' rights and livelihoods, allowing access for some people but excluding others. Protected areas' distribution of fortune and misfortune lies at the heart of their controversies." Drawing on scholarship from environmental biology, cultural ethnographies, and conservation literature, as well as semi-structured interviews and conservation organization projects, this thesis has addressed five general questions regarding conservation in Tanzania: How can we continue to preserve biodiversity in protected areas while also protecting fundamental rights of indigenous people and local rural communities living near them? How well does community-based conservation (CBC) work? Why are humans, in the general sense, not included when we think of the natural world? Which systems of protected areas work to

benefit ecosystems, biodiversity, and humans and why? Is there a missing link between conservationists and social scientists when looking for balance in conservation initiatives?

Chapter one and two provided background information on the history of conservation movements and their importance. Chapter three explained the methods used to gather data to address the debates and conversations behind conservation. Chapter four saw how humans are and are not included in the idea of nature and chapter five discussed whether conservation is more successful if it is conserved for utilitarian or intrinsic values. Chapter six understood the limitations of community-based conservation and wildlife management areas and the potential they have to drive success in wildlife preservation. Finally, chapter seven challenged that conservation should steer away from the "people first" or "conservation first" mentality. First and foremost, it is necessary that these debates be recognized as being among the most common in conservation literature. Each debate argues for, or against humans or wildlife biodiversity, but rarely in continuum with each other. Conservation lies in controversies, but none as controversial as the idea that communication between wildlife conservationists and social scientists is limited.

Rural local communities residing near protected areas were the main focus of this thesis and the semi-structured interviews. While the sample size of interviews conducted for this study was small, each informant has been, and continues to be, a highly influential person in the field of wildlife conservation, ecology, climatology, or anthropology, and their views are representative for their field. Informants had both similar and differing opinions to questions regarding the broad concept that is conservation, proving they must come together in collaborative projects, like in the planning of CBC, in order for studies to be balanced. It was understood that community-based conservation is one of the most successful and accepted protected area models, but its success varies case-by-case. In Tanzania, it has not been fully

successful as local rural communities have not experienced holistic benefits of the protection of nature. As stated in Chapter 6, conservation movements aiming to protect wildlife species should consider the evolution of human populations and their cultures to create solutions that work long term.

Most literature on conservation positions human and wildlife into separate categories. These categories leave little room for interdisciplinary studies as most ecologists and social scientists work to either exclude local rural communities or to emphasize their rights in terms of conservation. This can be seen in the relationship between books like *Fortress Conservation* (2002) by Dan Brockington, Professor in Development Policy and Management, and *Conservation is Our Government Now* (2006) by anthropologist Paige West against books like *Requiem for Nature* (1999) by ecologist John Terborgh and *At the Hand of Man: Peril and Hope for Africa's Wildlife* (1993) by investigative reporter Raymond Bonner. Many changes have evolved since these books were first published but the underlying idea still stands: there is a pronounced disconnect between social scientists and natural scientists when looking at past and current literature. Based on interviews from people in many fields of conservation, it is clear there are few missing links in conservation understandings, as many perspectives are similar in how conservation initiatives should be implemented. The difference comes from expressing these ideas on paper, together, in order to make changes towards structured and informed CBC around protected areas.

With the separation of conservationists, wildlife activists, and social scientists, it is clear there is not just one missing link in communication, but conservation movements are lacking communication in general. This simple solution of communication would cause immense changes in Tanzania and the world of conservation. Social scientists do not study wildlife, and

most wildlife conservationists do not know people. Literature focuses on ecology *or* human cultures. Most readings have underlying tones leaning towards one or the other. *Fortress Conservation* and *Requiem for Nature* are examples of impassioned people aiming to address the needs of a threatened group, like humans and biodiversity rich environments respectively. This is also seen in conservation organization projects in Tanzania where prioritization of conservation is split.

Based on trends within conservation literature, collaboration between wildlife conservationists and social scientists is the first step to creating a conservation system where wildlife preservation is successful while basic fundamental human rights are protected. Granted, this optimistic approach does not truly create any policy or legislature for the protection of either wildlife or fundamental rights of communities living near PAs further, but informing the public that this communication is scarce in conservation literature is a step in the right direction. I believe a solution to the research question "how can we preserve wildlife biodiversity while also protecting fundamental rights of local rural communities around protected areas?" begins with interconnecting groups of scientists, whether they be social, ecological, or political to understand that we all hold a key role in the preservation of the planet we call home.

Recommendations

There are many directions to take this study. As Brockington, Igoe, and Schmidt-Soltau (2006) explain, further explorations in the impacts of human use on the landscapes and on various taxa, long-term patterns of human resource use, and methods of coexistence to end human-human and human-wildlife conflicts are directions to take this study. Interviews of a larger sample of ecologists, social scientists, and authorities at conservation organizations will increase the range of opinions understood. Follow-up questions would include: what can we do

to include humans in the idea of nature? How can we steer away from westernized methods of conservation? How can the stigma of hunting by local communities be changed? Another proposal is to begin interviews with local rural communities to look into bettering bottom-up conservation methods. This study would help better understand how to improve CBC initiatives.

There is a rising movement of interdisciplinary conservation projects beginning to surface. The Center for Collaborative Conservation at Colorado State University in the United States was initiated in 2008 and aims to train and educate conservationists in collaborative research skills in order to address diverse conservation needs (Reid n.d.). Similarly, in 2018, Convivial Conservation's project, CON-VIVA, was launched at Wageningen University in the Netherlands with similar intentions to minimize the human-nature divide through interdisciplinary studies in Finland, Tanzania, the United States, and Brazil. CON-VIVA focuses on reconciling environmental conservation with economic development (Büscher and Fletcher 2018). With the current increase in conservation projects aiming to limit human-wildlife and human-human conflicts, conservation initiatives will become more diverse and likely more successful in order to find balance to protect human rights and wildlife.

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Appendix

1. Why are you interested in conservation?

Informant 1: I am interested in conservation because of various reasons; first the love of wildlife, biodiversity and nature. Second, my experiences with nature and biodiversity over the years either in areas I lived or worked. Third, my education background in natural sciences. The places I have lived and worked have played a role to my passion and interest in conservation; the more I understood behaviors and lives of some biodiversity the more I felt doing something to support for their survivorship. Briefly, the more I understand and see challenges facing biodiversity and natural resources with time in our ecosystem, the more I feel to get involved in finding solution for preserving and conserving biodiversity and natural resource assets. The passion I have for nature and biodiversity gives a push in me to get involved.

Informant 2: I have been interested in the nature since I was a young child – bugs, amphibians, reptiles, birds, and mammals were always fascinating to me and seeing these creatures in the wild brought me great joy. I remember learning about ecology and ecosystems in high school and these topics made "sense" to me – and provide answers to questions that were not well formulated in my mind. As an undergraduate, I took a variety of anthropology and zoology courses including animal behavior and primate behavior that allowed me to expand my knowledge about biodiversity and ecology. As a graduate student I began to better understand how ecosystems and biodiversity was being impacted by human development and I started to think about the importance of protection – and hence, conservation. During my lifetime humanity, has managed to wreak havoc on the natural world through a range of activities including warfare, unsustainable use of resources, expansive habitat conversion, and a variety of development schemes (dam construction, road construction, urban and suburban construction, and more generally industrialization). Moreover, environmental degradation and pollution have often been direct outcomes of our destruction of the natural world. As I took stock on all of a more than 20 years ago my interest in conservation intensified and has been a primary focus of my scholarly activities over the past decade. I am interested in conservation because I think it is important to protect what is left of the natural world and work towards rehabilitating damaged, but not destroyed parts of this natural world. Healthy ecosystems benefit human and nonhuman life alike.

Informant 3: As a human being living on a changing planet, I am concerned about what we may be losing as habitats disappear and ecosystems shrink or are stressed. Conservation addresses these concerns. As a scientist focusing on planetary scale processes, I am aware of the fragility of certain areas and aspects of the Earth system and how conservation plays an essential role in maintaining the integrity of the natural systems upon which we depend.

Informant 4 (transcribed notes): As a child—it was important—watched nature documentaries—as a researcher, it affects peoples—its impact wasn't well received

2. What do conservation initiatives mean to you?

Informant 1: Conservation initiatives means designed projects, or programs, implementing some strategic activities aiming at promoting or regulating the uses of resources or natural wealth available in the ecosystem. It also means strategies that one can take to protect, preserve the resources available. Conservation initiatives means planned activities or strategies that can be

implemented to bring desirable changes in managing the resources. These strategies may either lead to stabilization of populations of some species or maintaining their habitats. These strategies may also aim at maintaining availability of ecosystem services such as water.

Informant 2: A plan to conserve some aspect of biodiversity – it should include a written document that includes justification and planning.

Informant 3: Do you mean how do I define them? Or what meaning do they hold for me? For the former: I suppose any initiative designed to preserve or save or restore the integrity of a natural area, biome or system. For the latter: See #1 above,. Also, I feel it is our responsibility, as creatures aware of the effect we are having on the planet and its ecosystems, to act with intention to reverse those effects that are harmful to the sustainability of other species (as well as the health of our own civilizations). So conservation initiatives are a central part of that responsibility.
Brockington: A variety of things—callousness and social injustments—power and control—saving life—intent=> freedom of oppression—he doesn't think of a typical thing—learn to appreciate how eclectic conservation initiatives are

3. Based on question 2, how do we know when conservation initiatives actually work?

Informant 1: We know that conservation initiatives work if specific strategies, or specific activities conducted to improve situations in response to the challenges addressed show improvement of the situation. That can be realized If for example, specific indicators were set as baseline in the beginning and later showing positive changes after the implementation stages. You must always have a monitoring and evaluation plan in your implementation where indicators established before and after implementation are compared to show the differences. By doing that you will be able to tell if conservation initiatives work or not.

Informant 2: Ideally, we have good baseline information regarding something we are trying to conserve; as time passes we can collect new data and compare to the baseline. If what we are trying to conserve is becoming more frequent, we are having some success. Many examples come to mind – levels of pollution in bodies of water (reduction of certain types of pollutants in the Great Lakes and the Cuyahoga River are examples in the USA that are the outcome of concerted conservation planning). Also, the number of individuals of a species – we have seen significant growth in the population of bald eagles over the past thirty years – a major conservation success in the USA. For the Tonkin snub-nosed monkeys in the Khau Ca forest in Vietnam we have seen the population grow from about 50 animals in 2002 to more than 130 today. This is the outcome of a conservation initiative that includes education, gun confiscation, population monitoring, and high efficiency stoves. It has also included a number of census exercises that use a consistent methodology to yield comparable data. My personal bias is that conservation successes are real but require continuous vigilance – the causes of environmental degradation, pollution, and population declines can occur again if we are not careful. Also, we need to attend to the health of human populations that are a part of, or adjacent to, areas where conservation activities are taking place. Often poverty and lack of access to resources characterize rural populations (and often the outcome of the same unsustainable development

that is causing environmental harm). It is of critical importance to address the needs of these people and to development real and long-term solutions.

Informant 3: Sometimes the data is clear: We see populations of threatened species bouncing back.

Informant 4 (transcribed notes): Depends on what you're trying to achieve—exclusion of people or the creation and saving of wilderness—then its working by keeping it free of people—trees measurement releases satellite to see how much a forest covers—measurement techniques vary—preservation of ecosystems, preservation of species is not the most motivating—property frustration, awareness of conservation-> different sense of objectives—ecosystem preservation is a proxy—important things you need to think or be aware of

4. Based on question 2, how can conservation initiatives change to benefit all biodiversity?

Informant 1: Conservation initiatives can be designed to benefit all biodiversity if conservation initiatives are designed to conserve the ecosystem at large; here targeting all the biodiversity in that particular ecosystem. All biodiversity is likely to benefit if conservation initiatives proposed looked at the ecosystem, communities and all species found in the area. This is best designed to improve health of the habitat or landscape. When we put our focus in conserving one species for example chimpanzees may forget to do monitoring of other wildlife in the same ecosystem but focusing on multiple.

Informant 2: Good question without a straightforward answer. At a basic level, one answer would be that we should be focusing on conserving landscapes or ecosystems – and by doing so we will benefit all biodiversity. I fear that often, however, the historical context of an ecosystem or landscape that requires conservation is such that it is difficult to replicate successful conservation initiatives from one location to another. The challenges of conserving grizzly bears in Montana and Wyoming may differ so dramatically from the challenges of conserving dugongs in South Asia, or lowland gorillas in the Congo (and the concomitant biodiversity in each of these areas) that we must be open to a wide range of solutions. Moreover, to identify the appropriate solution to each case requires a deep understanding of the context of the conservation challenge that is being considered.

Informant 3: One important change is acknowledging, in some areas, the human activities that are taking place in conservation areas. Sometimes it is necessary to allow for and guide human use of lands alongside and within protected areas. The benefit of this is that when it is done well it can help the human occupants feel more invested in, as opposed to threatened by, conservation initiatives.

Informant 4 (transcribed notes): saving endemic species requires global science—an authoritative body to determine how endangered that species is—how to produce more of those species complete local control would help make it difficultto ___ with biodiversity—outsiders aren't really always—in India its government official—the appropriate would be the nect leve of government—community to district or wad—locally but also has supervisory control

5. Through the appropriate agency and following a legal framework, how well do protected areas work to benefit biodiversity? What is lacking?

Informant 1: Protected areas work and do not work, there are some protected areas designed to conserve specific ecosystems, landscapes and ecological niches and they do their best to perform the functions they were established for. However, there are many protected areas in operation losing biodiversity with time due to various reasons. Such can be considered not working, although might be delaying the disappearance of resources which to some extent is a good outcome also. One can say the protected areas works or do not work based on the designed objectives and indicators status in a specified time period. In other words, protected areas may be thought not to work if not benefiting the partners and stakeholders around them. What is lacking? This is difficult to say but again it depends on specific protected area and their performance depends on who is assessing it, for example if I talk about Gombe National Park, which is also a protected area I can easily say It has worked to some extend though not 100%. Some of the biodiversity are not carefully monitored to assess their abundance with time. This is the challenge to our park but might be applying in many of the protected areas as well. Similarly, we have a number of protected areas lacking capacity for doing monitoring and evaluation of their biodiversity. Also if you ask the same questions to villages living adjacent to the Park, those who benefited are likely to say the protected area is the best while those without support are likely to say not good at all.

Informant 2: My answer assumes that "protected areas" are areas formally designated by the appropriate government agency following a legal framework. Many protected areas work quite well. When they do not work well a variety of things might be lacking: a) funding, b) clear demarcation of borders, c) lack of enforcement of regulations/laws, d) lack of administrative capacity, e) lack of effective engagement with local human communities, and f) corruption by protected area staff, local government, or national level government.

Informant 3: Obviously some work much better than others. In some places enforcement is lacking, or other government/institutional support. In some places there is not buy-in, or is even opposition from local residents.

Informant 4 (transcribed notes): In many countries it is local involvement and engagement—diversity national—tiger reserves in India are strictly protected—protected areas that are thouroughly affected by humans—more local control is unwelcome—circumstances whereby more local control seems to benefit the local regimes—comparative studies—George Holmes: published global review

6. Based on question 3, how are conservation movements going to change in the next decades?

Informant 1: We witness some signs showing that the next decades are likely to have conservation initiatives addressing most difficult and serious challenges. I imagine the current challenges emanating from human population increase, overuse of natural resources such as trees, animals, and land, climate change impacts, economic and political instabilities; all these

are likely to impact the conservation initiatives. Current economic instabilities in some countries, severe weather conditions emanating from climate change complications are already impacting biodiversity and calling for changes in the way we do conservation business. Habitat loss, catastrophic events; flooding, drought conditions, earthquakes seem to be increasing in frequency and likely causing confusion and impacting conservation initiatives now and will call for wisdom and careful planning in conservation initiatives.

Informant 2: One major shift (that is already occurring) is focusing on mitigating the effects of climate change. I also find this to be a challenging question to answer since there is already a myriad of conservation initiate types.

Informant 3: Some very successful models involve working with indigenous residents to help them exploit natural resources in ways that do not harm the preserved areas, and sometimes setting aside separate conservation areas alongside these dual-use areas. I think we will see more of this. Also, there is an increased recognition of the importance of helping to preserve and foster nature in areas that are already somewhat transformed by human use. This will also increase. Beyond the emphasis on "pure" protected areas devoid of all human activity, the need to expand and foster and protect "urban nature" and dual use areas will be increasingly recognized.

Informant 4 (transcribed notes): Climate change—fast and worse than we actually realize—conservation is always dealing with environmental change—"business as usual"—it matters—"it's a game changer and the games already been changed" Not convinced they will change—western based are going to become more powerful—and there'll be more philanthropists who will want to put their earnings --more and more movements in local and social movements—urban pressures and urban metabolism for a path there—Climate change—fast and worse than we actually realize—conservation is always dealing with environmental change—"business as usual"—it matters—"it's a game changer and the games already been changed"

7. How can conservation initiatives change to benefit both humans and general ecosystems more?

Informant 1: Relatively the best conservation initiatives are those planned to benefit both humans and biodiversity in the given ecosystems. Sometimes this is complicated in the way people evaluate the benefits, there are cases when an ecosystem such as protected forest in a certain area may be evaluated as not benefiting the local people because people are not getting direct benefits such as getting opportunity to harvest wood, animals, mushroom or honey; while at the same time the forest is the only source of the streams used in villages, increasing rainfall in the region and the hiding places for most animals hunted in their land outside the protected areas. When addressing the benefits, one may forget to realize the ecosystem services available to communities which may not be remembered.

Informant 2: A few personal biases – 1) many conservation initiatives already do a very good job of benefiting both people and ecosystems. 2) what is often lacking is sufficient funding that allows a more holistic approach to address needs of all stakeholders (so more funding is important), and 3) Make sure that in country scientists and agencies have leadership roles in

conservation initiatives (too often, people from a handful of countries – USA, England, Germany, Japan, and China – are in charge of conservation initiatives in other countries and this lends itself to colonialist/imperialist relationships

Informant 3: See answers to 4 and 6 above.

Informant 4 (transcribed notes): Enlightened ones (like Kalpriviksh orgo Ashish Kotheri champion local forms of conservation—alternatives to those Tanzania British reserves, most more just than natural pro, Paige West from Papua New Guinea)—currently you've got compensation-> shows it grows inadequate impoverished—Madagar Prurj—militarization of conservation—a fight against poaching—violence with violence

8. Do you think community government is the best way to include local people in conservation efforts? If not, what would be better?

Informant 1: Community governance is very important in negative or positive performance of conservation goals. This means in order for conservation goals to be met one should always consider governance and good leadership as key factor in success of conservation initiatives. Poor governance in villages, local communities lead to ill-conservation in most areas. Therefore, as one plans for conservation initiatives have to plan also how to work with the surrounding local community leadership. We have had experiences where working conservation initiatives seemed to work best under certain period and not the other due to differences in leadership and governance.

Informant 2: It simply depends on the community government – Boulder is good at supporting local conservationist goals; some ranching and mining communities surrounding protected areas (Yellowstone and Grand Canyon as two examples) are harmful towards conservation goals.

Informant 3: In many cases it not only helps but is essential.

Informant 4 (transcribed notes): Yes—important caviates—oppression-> does not result in benefit and in the most legitimate voice—stakeholder problems—community government with some sort of oversight—fund, books, or if the community isn't doing the right job

9. What biases typically occur in the various conservation movements?

Informant 1: Conservation movement involves many themes and approaches and now this involves many people with diverse backgrounds, implementors may have biased interests, agenda and plans. These differences may influence their choices, criteria, and thinking. Bad enough there is no single school of thought in conservation that all should follow although nations may have guidelines, regulations, policies to guide conservation initiatives. There are some guidelines for best practices from IUCN which could be followed in handling and dealing with certain animal species and groups of species e.g. best practices in habituation of great apes. This is done in order to reduce different approaches and biased methods that may be detrimental to the survival of chimpanzees or other great ape species. One's background, experience, education and even area of origin and culture can be the

source of biases in his thinking. However, it is good that most of the conservation initiatives are not one man's show or designed by one person, in JGI we have group work and more people involved as we decide on conservation strategies, objectives or themes during the planning of conservation initiatives. Other biases in conservation may emanate from donor agent sources who may be willing to contribute in conservation of certain species and leave others. However, the good news is if given money to save chimpanzees baboons, vervets and other monkeys may benefit as well.

Informant 2: I do not think there is a single conservation movement so cannot answer this questions as presently phrased. But there are biases in any human endeavor and I have noted biases above.

Informant 3: There is a strain of traditional or purist conservation that regards all human influence in protected areas as a compromise to be fought or avoided. There is also a more pragmatic strain (one might say more realistic) that seeks to integrate human needs and responsible human activities into the confines of protected areas.