

Zero poaching and social sustainability in protected areas

A study of Chitwan National Park, Nepal

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Preface

This thesis, while not a culmination of the transformation of my worldview, is one footstep towards a path where I've had to painstakingly pick my allegiance on a subject that is fundamental to the preservation of nature. It has its roots in the mind of an adolescent fascinated and bewildered by the diversity of life on this planet, and the ingenuity and perseverance of wildlife to thrive across landscapes scarred by human intervention. It was this reverence towards the natural world that placed a moral urgency in my conscience to learn and engage with the subject matter in academia, drown myself in courses across the biological sciences, but more importantly, take sheer joy in surrounding myself in a microcosm within which I felt satisfied. However, this innocence also projected my naiveté in constructing an imagined reality where people and wildlife could thrive in a pleasant equilibrium, where both sides could harmoniously live, die, and evolve. I failed to realize that this bubble was permeable, that agents and forces outside this contracted realm were pitting the survival of people against the resource needs of wildlife.

Only when I began my first phase of life outside the walls of academia did this alternative narrative take a brutal form. As an environmental officer for the Government of Nepal, I was mainly responsible for assessing the environmental impact assessment of large hydropower projects, ensuring that international developers adhered to the country's wildlife and natural resource management plans. I made the conscious decision to distance myself from the 'social', or aspects of reconstruction and development that necessitated tradeoffs between the needs of local communities and the sanctity of the natural. I hoped to place myself back into the safe space of my academic upbringing within the confines of international development, a sector that necessitates the cooperation between multiple subject matters; and while I initially felt secure in my ideals of a romantic wilderness, visiting proposed development sites fractured this singular perception. Listening to local communities, breathing their distinctive cultures and way of life, and nesting myself in their households turned into a watershed experience. It was here that I realized that my original desire to preserve intrinsic nature would have to involve deceiving these people, convincing them that their mode of living was incompatible with Nepal's development goals, and indeed, with larger values of environmentalism.

The focus on Chitwan National Park and zero poaching is an apotheosis of my personal transition to make amends, to showcase how the impassioned drive to preserve biodiversity – which may originate from innocence as much as ignorance – could be detrimental to the survival of the members of our own species. While I still admire the people who shaped my enchantment towards natural history, I've recognized that this tunnel vision may light the flames rather than subside them. The persistence to reach specific biodiversity goals is becoming a utilitarian affair, with ultimate preservation justifying even the most violent means of exclusion and appropriation. I have picked a side, and I've attempted to immerse myself in their rivulets and streams, and pastures and forests, to create a narrative that needs to be acknowledged and considered to unite us rather than divide. My rhetoric is impassioned, but not born out of scorn towards the conservationists who have made immense efforts to preserve both people and the planet. It is impassioned because it has to be, especially when smaller communities have historically struggled to find a voice in academia.

I hope you take these considerations in mind when reading the following pages.

Abstract:

Protected areas (PAs) embody a historical legacy of value contestation and human exclusion. While the rise of community-based conservation in the 1980s sought to reconfigure this mechanism by running a counter narrative arguing that biodiversity conservation and development were mutually reinforcing objectives, exclusionary PAs continue to maintain a strong position in the conservation discourse. The militarization of PAs as a response to the rise in global poaching has allowed state and non-state conservation agencies to wield extensive power as a moral imperative to preserve iconic species. This undertaking is notable in the recent “zero-poaching” campaign, which aims to shut all incidences of illicit mega-fauna poaching within national parks. Supported by prominent conservation groups, the campaign has been able to garner momentum after Nepal, one of its member countries, declared four non-consecutive years of zero poaching in its PAs. While conservation groups in Nepal repeatedly stress that they work in tandem with local groups in park buffer zones to deter wildlife crime and support community development, the mechanisms of these social transformations are less evident in the campaigns’ media reports, and their modes of operation less scrutinized. Drawing on concepts developed from Antonio Gramsci’s studies on cultural hegemony, I review the historical development of anti-poaching from its roots in England in the 18th century to its internationalization in the mid twentieth century. The modern turn towards heightened militarization as a win-win solution for conservation and development is specifically studied within the context of Nepal’s Chitwan National Park (CNP), which has been globally recognized as a model for species protection after achieving successive years of zero poaching. I apply a document analysis to test the extent to which CNP adheres to zero poaching’s objective of local participation and inclusive development. Both state and non-state organizations have utilized the mass media to promote the idea of community-led conservation, but the park’s five year management plan reveals that it fails to fully incorporate guidelines from the zero poaching toolkit. Zero poaching marks a turn within international conservation to mainstream an anti-poaching strategy that follows on sustainability’s criteria of transdisciplinary research, mainly by promoting a management technique that aims to account for different value systems, views and interests of stakeholders across the supply chain of wildlife crime. However, to turn into a counter-hegemonic force in conservation, it needs to become a reactionary agent against the old framing of human-wildlife conflict and poaching that still inhibits holistic social sustainability in its target regions.

Keywords: zero poaching, fortress conservation, Chitwan, Gramsci

Word count: 13 937

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1 Introduction

“To congratulate oneself on one’s warm commitment to the environment, or to peace, or to the oppressed, and think no more is a profound moral fault.”

Robert Conquest, *Reflections on a Ravaged Century*

Protected areas (PAs) are not value-free spatial constructs designed as a purely scientific enterprise to conserve biodiversity. The historical development of large conservation zones shows that they were bound to a singular vision of an idealized nature and represented a struggle to (re)claim the “wilderness”: a historically and culturally specific understanding of human-nature relationships (Cronon, 1996). Though the significance of the growing scientific consensus of a biodiversity crisis (Kolbert, 2014; Pievani, 2014; Amato and DeSalle, 2012; Barnosky et al., 2011) has been marked as a major contributor to the expansion of PAs, some scholars have argued that the reliance on this form of ‘objective’ consensus has tended to conceal or downplay the potential problems between wildlife and local communities when projects are practically implemented (Igoe, 2004; Brockington, 2002). Whether it be national parks, wildlife refuges, or biosphere reserves, they argue that PAs were established to justify the scientific and moral superiority of one vision of nature conservation, and that separating human settlements from these landscapes was a necessity to preserve biodiversity (De Bont, 2015; Dowie, 2009; Cronon, 1996; Igoe, 2004; Brockington, 2002).

While the rise of community-based conservation in the 1980s sought to reconfigure this mechanism by running a counter narrative which argued that biodiversity conservation and local development were mutually beneficial and reinforcing objectives (Corson, 2010), exclusionary national parks continue to maintain a strong position in the conservation discourse, as evidenced by the exponential rise in large protected areas: “between 1900 and 1949, fewer than 600 protected areas were established but between 1950 and 1999 the number grew to nearly 3000, of which 1300 were established just in the 1970s...At the end of the century, more than 25,000 protected areas had been established” (King, 2010, p. 15). Duffy, St. John, Büscher, and Brockington (2015) argue that the

advocates of ‘fortress conservation’¹ (Brockington, 2002) are increasingly espousing a military rhetoric to curb the war against biodiversity, and wielding their large donor funds to transform landscapes to fit their image of an idyllic nature. Simlai (2015) adds that the militarization of PAs to curb wildlife crime is transforming “the ground upon which conservation projects operate” (p. 39). Therefore, it is crucial to assess the efficacy of militarized PAs in bridging the gap between conservation targets and the welfare of local communities, since several scholars have claimed this divide to be the fundamental problem of fortress conservation (Büscher, 2016; De Bont, 2015; Godfrey, 2013; Brockington and Scholfield, 2010; Dowie, 2009; Kalamandeen and Gillson, 2007; Neumann, 2004; Brockington, 2002).

The push for heightened enforcement and militarization is also notable in the recent “zero poaching” campaign, which aims to shut all incidences of illicit mega-fauna poaching within national parks (Zero Poaching, 2015c). Supported by prominent conservation groups including the Worldwide Fund for Nature (WWF) and the International Union for the Conservation of Nature (IUCN), the campaign has been able to garner momentum after Nepal, one of its member countries, declared four non-consecutive years of zero poaching in its national parks (WWF, 2016c). Zero poaching advocates in Nepal have repeatedly stressed that they work in tandem with local communities to deter wildlife crime and support community development. However, the mechanisms of these social transformations have been less scrutinized, with both national and international coverage focusing on its primary objective of reducing the poaching of threatened species. (WWF 2016c; IUCN, 2014; Global Tiger Initiative, 2014; Neme, 2014; Rauniyar, 2014).

Since zero poaching has pressed an agenda that claims to overturn “an isolated focus on the symptoms of [human-wildlife] conflict and a lack of coherent long-term direction” (TX2, 2016, p. 16) within conservation, this thesis seeks to determine whether this vision has truly materialized. A critical insight is necessary to uncover whether zero poaching provides a more holistic and inclusive approach to PA management, or, as some political ecologists claim, it is simply another instance where the narrative of integrated conservation and development (ICDP) has been used to cement fortress conservation (Pochet, 2014; Snijders, 2014; Godfrey, 2013; Fletcher, 2012; MacDonald, 2010; Igoe, Neves, and Brockington, 2010).

¹ Fortress conservation is a protected area management approach that seeks to preserve threatened PAs through the eviction of people who have traditionally relied on these environments to sustain their livelihoods.

This thesis will therefore seek to uncover whether zero poaching has the potential to overcome the drawbacks of fortress conservation, which scholars claim has historically imposed a singular, western ideal of biodiversity protection that undermines the rights of local communities living around PAs (De Bont, 2015; Dowie, 2009; Igoe, 2004; Brockington, 2002; Cronon, 1996). Nepal's Chitwan National Park (CNP) provides an ideal case to test these assertions, because it has been lauded by several non-state conservation agencies as a PA that has successfully incorporated both environmental and social levers to achieve community-led anti-poaching activities (WWF, 2016c; Zero Poaching, 2015c; Global Tiger Initiative, 2014; IUCN, 2014; Neme, 2014).

Drawing on concepts developed from Antonio Gramsci's studies on cultural hegemony, I review the historical development of fortress conservation and anti-poaching from its roots in England in the 18th century to its internationalization in the mid twentieth century. Gramsci's ideas will allow me to trace the creation of a particular vision of wildlife and its threats, and place human-wildlife conflict and anti-poaching within a historical movement. This will offer the possibility to determine how these themes were entrenched in the conservation agenda, and whether they are integral to zero poaching's initiatives.

I expand on this historical insight through a narrative case study of CNP, and utilize a document analysis to assess the implications of zero poaching on its goals of achieving social sustainability. The document analysis focuses on zero poaching's management strategy that attempts to account for the wider drivers of poaching and solutions beyond strict enforcement. The CNP Management Plan 2013-2105 is then compared with the zero poaching policy documents to test the extent to which it has incorporated its themes and strategies of social and local benefit. The thesis will ultimately look at the potential of zero poaching to become a genuine lever in achieving social sustainability, or if it will continue to promote "enclose-and-exclude conservationism" (De Bont, 2015, p. 216).

2 Situating the research

2.1 Plight of the sixth extinction

"Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals directly follows. There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved."

Charles Darwin, *On the Origin of Species*

It is reasonable to assume that Darwin's evocations on nature would have deviated from this exaltation had he experienced and acquired knowledge of the catastrophic decline of flora and fauna since the twentieth century. It is increasingly clear that *homo sapiens* has become the driving evolutionary force on the planet, and mounting evidence suggests that the uniformitarian assumptions about the gradual death of species (Kolbert, 2014) cannot account for the "irreversible fractures in evolution" (Pievani, 2014, p. 87) that are being witnessed today. Scientists are confident that the surge in paleontological information along with improved estimations of the background extinction rate, points towards a new biological epoch that is taking form similar to the Big Five mass extinctions (Ceballos et al., 2015; McCallum, 2015; Pievani, 2014; Barnosky et al., 2011). The growing consensus is that a "perfect storm" (Barnosky et al., 2011) of conditions – intensive ecological stressors, rapid climate change, and elevated concentrations of atmospheric carbon dioxide – attributable to increasing anthropogenic stress (Ceballos et al, 2015; Pievani, 2014; Wilson, 2010) is likely to lead to the collapse of around half of all bird and mammal species by the next two centuries (Amato and DeSalle, 2012). Current research on biodiversity loss is sobering, and points that the magnitude of extinctions has "exploded since 1980, with losses about 71-297 times larger than during the K-Pg [Cretaceous-Paleogene extinction] event" (McCallum, 2015, p. 2498).

However one chooses to classify this age, as a "biodiversity crisis" or the "sixth extinction", it is unified by the recognition that human beings have made significant alterations to the world's ecosystems. It is a time when we need to carefully reflect on the fact that this new extinction event is erasing both our physical and cultural needs as a species (Ceballos et al., 2015).

2.2 Human-wildlife conflict as the driver

Conservation biology has outlined the major anthropogenic causes of biodiversity loss around the HIPPO model, and the growing consensus is that habitat fragmentation [H] is the leading factor in species decline (Haddad et al., 2015; Matthews, Cottee-Jones, and Whittaker, 2014; Rybicki and Hanski, 2013; Butchart, 2011; Krauss et al., 2010; Wilson, 2010). Funds are being channeled into directives that aim to shelter these spaces of biodiversity from certain anthropogenic intrusions, and there is a growing claim that current investments are insufficient in overcoming the loss of species (Amamoto and DeSalle, 2012; MacDonald, 2010). Butchart et al. (2010) argue that ICDPs have yet to curb the rate of biodiversity loss in the sixth extinction. They argue that the Convention on Biological Diversity's 2010 target of significantly reducing biodiversity loss has been unanimously underachieved, with 31 indicators showing a decline "with no significant recent reductions in rate, whereas indicators of pressures...showed increases." (Butchart et al., 2010, p. 1164). All the while,

bilateral biodiversity related assistance by OECD members reached \$5.6 billion per year in the period 2010-12 (OECD, 2014).

Chen (2016) argues that one important factor that has made conservation achievements sporadic is the fact that conservation biology continues in large parts to support and implement technical fixes to resolve conflicts between humans and wildlife. Fencing, habitat modification, relocating affected communities, lethal control, sterilization, and the removal of problem animals are some common approaches used to resolve human-wildlife conflict (Dickman, 2010). Perhaps more significantly, the focus on technical fixes in protecting biodiversity has also had an impact on how state and non-state conservation organizations perceive the relationship between wildlife and local communities living in proximity to PAs. Dickman (2010) argues that “despite most people citing direct wildlife damage as the reason for their antagonism towards wildlife, the causes of conflict are often complex and deep-seated, and a broader approach must be utilized in order to ameliorate such conflict fully in the long-term” (p. 459).

Developing a universal definition of human-wildlife conflict is difficult. The thematic analysis of the phrase in peer-reviewed journals indicates that the type of wildlife species, developmental stage of the study region, and the property rights around PAs are significant factors that determine whether this human-nature nexus embodies the term “conflict” (Peterson, Birckhead, Leong, Peterson, and Peterson, 2010). Despite these varied predilections, Redpath, Bhatia and Young (2015) state that one significant motif can be unearthed: the human antagonist vs. the innocent wild species. According to Challender and MacMillan (2014), it is this contracted understanding of the issue that tends to create a “marked dichotomy between globally defined conservation strategies” (p. 486) and the social realities at the sites of intervention.

Dowie (2009) and Brockington (2002) claim that the long-standing discourse of fortress conservation created the human antagonist to take a specific, local form that embodied a set of archaic environmental values. Recent examples from protected area management indicate that this singular notion is still prevalent (Benjaminsen, Goldman, Minwary, and Maganga, 2016; Evans and Adams, 2016; Campbell and Verissimo, 2015; Piermattei, 2013), and the failure by conservation biologists to carefully examine local situations before deciding on effective mitigation strategies can have far-reaching consequences for both the preservation of wildlife and the success of community-based conservation. By increasingly treating species as innocent victims of violence (Simlai; 2015; Campbell and Verissimo, 2015; Duffy, 2014; Piermattei, 2013), the human-wildlife conflict construct seems to

have inculcated the conservation and development agenda with a version of events that continuously serves to exclude local communities from their landscapes, and create a “wilderness” haven strategically sold as the only solution to curb the crisis of the sixth extinction. However, a meta-analysis of 55 published case studies from developing countries showed that “local community participation in the PA [protected area] decision-making process was the only variable that was significantly related to the level of compliance with PA policies” (Andrade and Rhodes, 2012, p. 14).

This expression of human-wildlife conflict is visible across contested spaces of “enclose-and-exclude conservationism” (De Bont, 2015, p. 216). In Laikipia, which holds the second highest abundance of wildlife in Kenya, Evans and Adams (2016) argue that elephant fences have transformed nature-society relations by reducing the socio-political complexity of the landscape into a simplified account of livestock farmers as a threat to elephant populations. Long-standing issues of property rights and access to resources were dismissed, and it became increasingly clear that elephant fences were set up to secure large ranches and exclude pastoralist groups from free movement (Evans and Adams, 2016). As they retaliated by damaging the fences, these actions only fuelled the idea that they posed a threat to the elephants: a conflict seemed imminent (Evans and Adams, 2016). At the Monti Sibillini National Park in Italy, local farmers and shepherds who were directly involved in land-use practices were gradually pushed aside by the park’s administration to construct an area symbolizing a “universalistic conception of the environment as the heritage of humankind” (Piermattei, 2013, p. 311). The farmer’s frustration took a forceful shape when park rangers discovered a wolf’s head hanging on a road sign to the park, further justifying the creation of the PA as a site of national interest (Piermattei, 2013).

Whether it crystallized in South Africa (Büscher, 2016; Snijders, 2014), Mozambique (Schuetze, 2015; Witter, 2013), Tanzania (Benjaminsen, Goldman, Minwary, and Maganga, 2016; Dowie, 2009), the Galapagos (Quiroga, 2009), Italy (Piermattei, 2013), or India (Simlai, 2015), the projections of human-nature relationships as a conflict between the two entities tended to conceal the underlying human-human tensions that ended up being materialized in the form of aggression towards wildlife (Redpath et al., 2013). In all these cases, influential actors used a “terministic screen” (Peterson et al., 2010, p. 74) to emphasize particular elements over others, and it is this interpretation of reality that is often the cause of conflict rather than the blanket conclusion that the competition for resources between locals and wildlife is the driving cause for alarm.

2.3 Anti-poaching, militarization of conservation, and the ignorance of drivers

The failure to properly identify the complexities of the human-wildlife conflict nexus can also be uncovered in the operations of global conservation's anti-poaching campaigns. Similar to the technical fixes that are predominant within the human-wildlife conflict discourse, the anti-poaching campaign's current approach is heavily reliant on law enforcement, which is validated on its call for a war on poaching (Challender and MacMillan, 2014; Duffy, 2014). With the aim of protecting keystone and umbrella species from a growing network of underground poaching cartels – which have capitalized on the large financial gains from wildlife trade, a sum that in 2014 ranged between US\$8 and US\$10 billion per annum (UNODC, 2014) – the anti-poaching campaign has rampantly called for the mobilization of military assistance to increase oversight in PAs (Duffy, St. John, Büscher, and Brockington, 2015; Duffy, 2014).

Shoot-to-kill approaches are becoming increasingly justified on the grounds that the risk of death for poachers is outweighed by the economic benefits of trading animal parts, which means that “the only way to protect endangered species is to dramatically raise the cost of poaching by being willing to shoot suspected poachers on sight” (Messer, 2010, p. 2339). By grounding the war on poaching “in ethical concerns and western perceptions of the killing of animals” (Challender and MacMillan, 2014, p. 485), conservationists seem to have unwittingly given moral authority to park rangers and absolved them from criminal liability (Duffy, 2014; White, 2013; Leakey, 2001). The militaristic tone taken up by conservation groups and state agencies to curb a particular version of human-wildlife conflict looks to have strengthened the justifications for fortress conservation (Büscher, 2016; Campbell and Verissimo, 2015; Redpath, Young, and Bhatia, 2015). This can have severe consequences, because several individuals killed end up being impoverished smallholder farmers whose former grounds were assimilated into the national parks system (Duffy, St. John, Büscher, and Lunstrum, 2014).

Yet, for all the investments in strengthening military interventions in PAs, poaching is still increasing:

“Despite historical investment in anti-poaching and the commitment of US\$113.8 million by tiger range states to directly tackle poaching over the first five years of the Global Tiger Recovery programme, which aims to double the number of wild tigers globally by 2022, tiger populations are continuing to decline” (Challender and MacMillan, 2014, p. 485).

This raises an important question: Does the strict focus on enforcement and regulation ignore deep-seated social drivers that might lock people into the cycle of poaching? A closer examination of poaching – which predominantly takes place in the poorest regions of the world – shows that it is more than a strict enforcement problem, but rather the end result of socio-economic and historical factors. Abject poverty, inadequate institutional support, irregular and minimal benefits to local communities, poor governance regimes, and the high profits associated with wildlife trade are significant factors that continue to fuel global poaching (Chen, 2016; Kideghesho, 2016; Challender and MacMillan, 2014; Dowie, 2009). In their study of the Katu ethnic group in Vietnam, MacMillan and Nguyen (2013) noted that that farmers were locked into the illegal trapping of threatened species because of low food prices for their agricultural harvests. Also of importance is the fact that poachers are willing to use violence and intimidation to coerce local people into poaching and smuggling wildlife (Challender and MacMillan, 2014). The strict focus of the anti-poaching campaign on the supply-side of illegal wildlife trade has also ignored demand-side drivers that undermine the protection of threatened species. Chen (2016) argues that supply-side anti-poaching policies have had a weakened response in comparison to their large investments because of the *snob effect*, or the desire and demand for rare animal parts.

The ideals of ICDPs espoused by environmental groups could be greatly undermined because the integration of “green militarization” into the human-wildlife conflict discourse has the potential to label local groups and their push for resources as a war against biodiversity (Duffy, 2014; Quiroga, 2009; Neumann, 2004). The persistence of PAs is becoming highly dependent on external funding, technology, and expertise, and may open up new pathways for states and multilateral institutions to mold a grounded reality that is inconsistent with their discursive claims of holistic conservation and development (Snijders, 2014; Igoe and Brockington, 2007). Evans and Adams (2016) argue that conservation territories now reflect “the exercise of power and the control of space, people, and nature” (p. 215). Snijders (2014) concludes that local groups are being excluded from the ‘discursive spaces’ where the production and contestation of narratives occur.

More importantly, the presentation of the biodiversity crisis under poaching and human-wildlife conflict may conceal the historical legacy of these complexities and reduce the potential for progressive local development. The origin and motivation of poaching, with its links to poverty and wider regional and global dynamics, seems to be ignored for a discourse that places a moral urgency on the protection of certain species (Simlai, 2015; Campbell and Verissimo, 2015). Although

conservation groups make claims of democracy and participation, a gap could exist between rhetoric and action.

3 Objectives

3.1 Research question and thesis rationale

This thesis will look at the implications of zero poaching on local community development, and be guided by the following research question:

1. Can zero poaching become a genuine lever to achieve social sustainability?

As highlighted in section 2.3, it is increasingly evident that “implementing sustained and determined enforcement action to protect highly valued CITES-listed species, especially enforcing trade bans, is not inherently effective” (Challender and MacMillan, 2014, p. 487). The lack of focus on perceptions of risk and social influences can reduce the efficacy of conservation programmes, especially their goals of attaining holistic social development. A rudimentary conceptualization of human-wildlife conflict can struggle to recognize these intricacies, and it is precisely by undermining social realities and focusing on biodiversity goals that many conservationists and their partners continue to uphold fortress conservation as the solution to preserve threatened species (Challender and MacMillan, 2014). Since the history of conservation has been mired by the clash between balancing strict conservation goals and community development, the research question will allow me to closely scrutinize the mechanisms of zero poaching and its practical implications in Nepal’s Chitwan National Park (CNP), which has been lauded by conservationists for bridging environmental and social needs. If a deeper insight was to reveal the contrary, then the growing institutionalization of zero poaching across biodiversity hotspots would mean that ICDPs supported by conservation NGOs under the rubric of sustainable development are likely to encounter the same pitfalls as their fortress predecessors.

The main research question will also be complemented by the following sub-question:

- 2. Have the historical justifications for fortress conservation been institutionalized in zero poaching and its target regions?*

The current representation of the threat to biodiversity is a culmination of three centuries of exclusion, control, marginalization, and the construction of a particular “wilderness” idea. It is crucial to understand the recurrent nature of this idea; whether it has created a particular version of the

poacher and generalized these claims, and the specific interests that the model of fortress conservation has served since its official birth as Yellowstone National Park in 1872. The ignorance of this “multi decade history of global conservation” (Godfrey, 2013, p. 381) could perpetuate the unverified assumption of local communities and their relationship to the natural world and institutionalize fortress conservation, when in fact a more decentralized approach to anti-poaching might be more effective.

3.2 Theoretical underpinning

The elements of zero poaching and its practical actions in Chitwan will be studied applying the theoretical insights of Antonio Gramsci, because his ideas will help generate a historical pattern of the means by which the “supremacy of a social group manifests itself” (Gramsci, 2014, p. 57). More importantly, Gramsci recognized the fact that by first exercising intellectual and moral leadership, a social group could in turn “liquidate” (Gramsci, 2014, p. 57) rival groups and absorb them within the apparatus of the intellectual, moral, and political hegemony. He argued that civil society – in the context of the thesis, NGOs and intellectuals that advocated for fortress conservation – strategically rationalized the intellectual and coercive functions of the state, thereby producing a condition of “moral and political passivity” (Patnaik, 2012, p. 580) that brought the public under a collective pressure to accept their modes of action. Deviating from the purely coercive base/superstructure relationship that was the central motif of Marxist thinking, Gramsci (2014) saw that a “social group can, and indeed must, already lead before winning governmental power” (p. 206) and manufacturing consent. It is this “non-deterministic yet structurally grounded foundation” (Moolakkattu, 2009, p. 439) that will help illuminate whether fortress conservation and the narrow formulation of human-wildlife conflict is predominant in Nepal’s zero poaching vision, and subsequently in the public discourse.

Patnaik (2012) argues that Gramsci was cognizant of the fact that “an institution of power, to start with, must be critically examined from the inside rather than from the outside of its domain” (p. 578). The growth of civil society in the 1980s had offered an alternative development pathway, yet by the end of the 1990s scholars argued that it “empowered the NGO personnel and leaders but not the poor” (McSweeney, 2014, p. 277). McSweeney (2014) argues that many NGOs simply saw local communities as beneficiaries of aid and passive subjects, rather than active agents in developing a unified governance regime. Gramsci’s (2014) writings on the “accrediting” (p. 194) ability of civil

society will help me uncover the “urban-ideological unity”² (Gramsci, 2014, p. 91) of zero poaching and its supporters, the ways in which it adheres to particular vision of biodiversity protection, and the extent to which the campaign has utilized the mass media to form an “ethico-political sphere”³ (Gramsci, 2014, p. 190) that relates anti-poaching with military intervention. This will help us better understand whether zero poaching can truly provide a long-term pathway for inclusive development and wildlife protection, or if it has unintentionally justified the need for the creation of more fortress parks to save biodiversity, thereby cementing it as the main hegemonic apparatus of international conservation.

Gramsci can help expose the mechanisms that are productive of the “surface phenomena” (Alvesson and Sköldbberg, 2010, p. 40) in the conservation agenda, and offers the opportunity to find new ways to impose a conservation design that is more representative of local development and wildlife preservation. This quest to unearth the possibility of collective agency to modify the fortress and change the way we perceive human-wildlife conflict is precisely what Roy Bhaskar would later term a feature of the “transformational model of social action” (Benton and Craib, 2010, p. 133). Gramsci can aid us in finding precisely those pathways that eliminate the constraining elements rooted in mainstream accounts of human-wildlife conflict.

3.3 Methodology

3.3.1 Narrative case study

“The intellectual’s error consists in believing that one can know without understanding and even more without feeling and being impassioned...in other words that the intellectual can be an intellectual (and not a pure pedant) if distinct and separate from the nation-people, that is, without feeling the elementary passions of the people, understanding them and therefore explaining and justifying them in the particular historical situation and connecting them dialectically to the laws of history and to a superior conception of the world, scientifically and coherently elaborated – i.e. knowledge” (Gramsci, 1971, p. 418)

² According to Guido Liguori, Gramsci uses the term “ideology” in the pejorative sense throughout the Prison Notebooks. The urban-ideological unity refers to a system of ideas generated by a specific social stratum born in urban centers. It is characterized by a particular consciousness and culture, which is diffused into the public imagination as a matter-of-fact. For more insight on Gramsci’s terminology, check Luido, G. (2015). Ideologies and conceptions of the world. In *Gramsci's pathway* (pp. 65-84). doi:10.1163/9789004303690

³ The ethico-political sphere is the converge between a specific conceptualization of world order propogated by institutions and actors in poltical power, which universalizes a singular mode of thinking and acceptance of practices.

Hegemony is more than simple dominance, but rather “a dynamic process of clashes between different social forces operating within a particular immanent and historical movement” (McSweeney, 2014, p. 276). Contextual knowledge serves an important pathway to uncover the nature of fortress conservation and its association with anti-poaching, and provides a more grounded and nuanced understanding of the issues that still undermine the inclusive development pathways sponsored by anti-poaching advocates. Gramsci (2014) understood the importance of specificities and how particular conditions of a region shaped the effectiveness of governments. Looking into the zero poaching initiative within Nepal and an historical insight into PAs will allow me to critically examine whether the environmental universalism adopted by fortress conservation can be fully realized and complemented along with community-based development.

The strength of case study research lies in the fact it can yield significant information about a particular phenomenon that has been accepted as general principle. For Flyvbjerg (2006), a case study has the potential to falsify an unquestioned proposition and “in this way have general significance and stimulate further investigations and theory building” (p. 228). He argues that good case narratives offer substantive depth in comparison quantitative methodologies that have the advantage of large samples (Flyvbjerg, 2006). CNP has become a paradigmatic model for zero-poaching, and a critical assessment of this “practical prototype of scientific work” (Flyvbjerg, 2006, p. 232) will allow me to uncover the taken-for-granted assumptions about growing militarization as a win-win solution for both conservation and development.

Chitwan’s park governance and authority was greatly transformed when the Smithsonian Institution (SI) granted WWF \$38,000 to explore the potential of studying tigers using radio tracking in 1967 (WWF, 2014a; Benson, 2012). This novel approach was originally applied in Yellowstone by conservation biologists to monitor the movement of grizzly bears, and in doing so redefined the territorial scope of wildlife management in the park (Benson, 2012). Radio tracking provided scientists with the technology to map the migratory range of animals, and the SI scientists’ involvement in Chitwan provided park officials the power of a new management tool. Inaugurated as a national park in 1973 covering 544 km², CNP’s extent was increased to 932 km² in 1977 (GoN, 2015, p.1), and allowed the Department of National Parks and Wildlife Conservation (DNPWC) to expand its territorial reach at the behest of local communities whose agricultural development in the region was seen as a threat to the park’s management (Benson, 2012). The influence of an international conservation ethic in enlarging Chitwan cannot be understated, and it is this transition – both spatial and ideological – that will be scrutinized in the thesis. More specifically, it will allow me to compare

the public affirmations towards Chitwan's conservation success with its historical formulation, determining whether the ideas of exclusivity that were integral to its expansion and wildlife management techniques can be detected in both the zero poaching publications as well as the parks five year management plan (see section 3.3.2 and section 6).

While Gramsci is more known as a social theorist than a scholar of epistemology, he acknowledges the importance of the temporal dimension in critical research, which is necessary to understand the status quo:

“It is not enough to know the ensemble of relations as they exist at any given time as a given system. They must be known genetically, in the movement of their formation. For each individual is the synthesis not only of existing relations, but of the history of these relations. He is a precis of the past” (Gramsci, 1971, p. 353)

A narrative case study, which is “the intensive examination of an individual unit” (Brandell and Varkas, 2011, p. 295) will serve to first trace the historical undercurrent of a western, global environmentalism shaped by an idealistic, human-free perception of the wild. By looking into this specific movement of the “wilderness” idea across time and space, I hope to demonstrate both the covert and overt mechanisms by which an influential set of actors were able to justify a specific form of fortress conservation, while universalizing a particular image of the antagonist: the local poacher. The narrative case study complements Gramsci's theoretical insights because it is conducive to this constructivist worldview, that all of our understandings are “imbedded in social and interpersonal contexts” (Brandell and Varkas, 2011, p. 4) Applying this approach in the thesis will help me uncover the ways in which the anti-poaching campaign has imposed its specific understanding of human-nature relationships within the conservation discourse.

3.3.2 Document analysis

The thesis will have a particular focus on Nepal's Chitwan National Park (CNP) and its adoption of the zero poaching objectives applying a document analysis. Documents are presented as social facts, which are in turn shared and used in socially organized ways (Bowen, 2009). As part of the case study, analyzing documents pertaining to CNP's zero poaching achievements will enable me to develop a stronger understanding of the park's conservation priorities, and gain a deeper insight into its strategy to promote the inclusive development of local communities. The document analysis should provide an addition to the existing knowledge base on zero poaching, and open other points

of inquiry regarding its potential to fix many of the issues that have mired traditional anti-poaching strategies (see section 2.3).

Firstly, I will critically examine media reports – one arm of civil society – on Nepal’s anti-poaching initiatives in CNP to determine whether it plays a substantial role in creating a narrative which downplays community development while justifying the growing militarization of national parks to preserve wildlife. This is an important part of the analysis, because while the media may operate without compulsory obligations, it may nevertheless “exert a collective pressure and obtain objective results in the form of an evolution of customs, ways of thinking and acting, morality, etc.”(Gramsci, 2014, p. 242). I use two English dailies, *Kathmandu Post* and *Himalayan Times*, as the main sources to assess the media’s projection of Nepal’s zero poaching success. I used the search engine embedded in the websites of both *Kathmandu Post* and *Himalayan Times* to retrieve a preliminary list of articles using the keywords “zero poaching” AND “Chitwan”. These specific search words were used for two reasons: a. To exclude conservation initiatives reported in articles that did not specifically mention zero poaching, and b. To focus on articles pertaining to CNP, since zero poaching as a strategy is being mainstreamed into other national parks in Nepal, most notably Bardia National Park and the greater Terai Arc Landscape. The initial search result from the *Kathmandu Post* delivered 82 returns, and *Himalayan Times* produced 16 articles. To provide insight into more recent developments on zero poaching initiatives in Nepal, I chose to specifically look into newspaper articles published between 2014 and April 2016. Also, some of the articles were repeated in both newspapers since they were borrowed from larger news agencies such as Reuters or the Associated Press, which meant reducing the number of articles to avoid any redundancies. While the search terms allowed me to gauge the representation of Chitwan’s zero poaching initiatives in the press, the main objective was to closely read these articles and determine what aspects of zero poaching are being favorably commended in the media, and whether certain elements are being under-represented despite zero poaching’s proclamation of inclusive community-led conservation.

Additionally, I will analyze institutional and policy documents published by the Government of Nepal (GoN) as well as selective publications from the Zero Poaching Toolkit. This will help me reveal the reach of fortress conservation’s intellectual hegemony on a recent development within PA management. More importantly, these documents will be used to assess the extent of CNP’s militarization, its adherence to zero poaching, whether its mechanisms follow a sustainable management strategy as mentioned by its advocates, and the practicability of zero poaching in its targeted PAs. These themes are contextualized and discussed in Section 6. The Chitwan National Park

and its Buffer zone: Management Plan 2013-2017 (CMP) serves as the main source to uncover the policy and governance mechanisms in the park. Published by the Government of Nepal (GoN) in collaboration with DNPWC, it is a five-year management plan that sets out conservation and development objectives and the pathways to achieve their respective goals. Furthermore, the document states that it aligns to the TX2 goal of doubling tiger populations by 2020, which makes it an ideal document for assessing the institutionalization of mandates found in the zero poaching toolkit. The toolkit is a platform that provides policy makers and governing conservation institutions guidelines and assessment checklists for zero poaching's six arms, or areas of operation: assessment, cooperation, community, capacity, prosecution, and technology. Each of these sectors in turn has documents written in collaboration with state and non-state conservation and wildlife crime authorities to set certain benchmarks to curb poaching and working in tandem with national development goals. Since the thesis is focused on zero poaching's social arms rather than its enforcement divisions, the document analysis is based on publications that fall under the arms of *cooperation*, *capacity*, and *community*, as well as the overall *assessment* documents that unite each of these individual units. The documents for each arm were chosen based on one important criterion: whether they were original publications from the zero poaching toolkit. This is because many of the publications also happen to be secondary sources gathered from partner organizations. Since I strive to assess the extent to which zero poaching provides a new pathway for conservation and development, I chose documents that were published under its guidelines.

The following is a list of documents selected for the analysis:

1. TX2 Annual Report 2015 (TX2, 2016)
2. SAFE SYSTEMS: Revolutionizing Human Wildlife Conflict (Safe Systems, 2015)
3. Zero Poaching: Vision-Mission-Strategy (Zero Poaching, 2015a)
4. Developing an Approach to Community-based Crime Prevention (Zero Poaching, 2015b)
5. Wildlife and Forest Crime Analytic Tool (Zero Poaching, 2012)
6. Zero Poaching Toolkit [www.zeropoaching.org] (Zero Poaching, 2015c)
7. Chitwan National Park and its Buffer zone: Management Plan 2013-2017 (GoN, 2015)

Rather than simply counting the number of times particular key terms such as “social sustainability” or “inclusive development” were mentioned, I read each of these documents in-depth to uncover how they apply these elements in the context of their policy directives and governance regimes. My aim is to reveal any latent understandings that may prove essential in determining potential drawbacks in zero poaching's mandates, and offer a route whereby it can fully liberate itself from the

historical faults that have been found in fortress conservation and its specific understanding of poaching and human-wildlife conflict.

3.3.3 Limitations

Since the focus of the thesis is on the impact of zero poaching on local welfare and community-based conservation, papers were selected that directly referred to three of zero poaching's development arms: *community*, *cooperation*, and *capacity*. Thus, the toolkit's arms of *prosecution* and *technology* were omitted because they largely dealt with legal prosecution frameworks, international cooperation and technological advancements to curb wildlife crime. This meant excluding certain segments within these publications that may have referred back to community-led conservation. Likewise, the sources used to assess Nepal's zero poaching coverage in the mass media were only drawn from two national newspapers, both of which are English dailies, thus omitting Nepali language newspapers. Although I draw on international media reports on Nepal's zero poaching targets, these are mainly used to highlight the recognition the country has received, rather than an actual analysis of its image within the national press. The document analysis is subject to my particular reading and interpretation of the policy and press documents, and I acknowledge that it may be subject to biased selectivity of certain parts over others. Finally, the research could have benefited from actual first-hand interviews and observations of local communities in and around the buffer zone of CNP. I have attempted to recoup this limitation by drawing on recent scholarly articles on local participation and community development in CNP, and the perceptions of human-wildlife conflict in the region.

3.4 Implications for sustainability

Along with environmental protection and economic prosperity, social development forms one of the three reinforcing pillars of sustainability (United Nations, 2005). Thus, zero poaching's success in curbing wildlife crime also needs to be assessed on the extent to which it has democratically engaged stakeholders in creating a collaborative research environment, "where scientists and local experts not only exchange relevant information but jointly generate...knowledge on the basis of their scientific as well as local expertise" (Mielke, Vermaßen, Ellenbeck, Milan, and Jaeger, 2016, p. 75). What is required is the absence of coercion and the possibility for local communities to transform knowledge "by working on solutions with their own set of resources and motivations" (Mielke et al., 2016, p. 72). The democratization of expertise from knowledge to action is critical to holistic sustainability, because the foundations of a sustainable system of protected areas can only be realized through the recognition and active participation of important social actors as "a means to improve the

interconnection and exchange processes between science and politics, alas the science-policy interface” (Mielke et al., 2016, p. 75).

Fortress conservation has become a *sustainability impasse* (Jerneck and Olsson, 2011), where a singular scientific framing and its subsequent policy recommendations and actions deter progress and fails to achieve true stakeholder dialogue. Human-wildlife conflict needs to be analytically reframed, because as the thesis will illumine, the dominant diffusion of the local antagonist has detrimental social implications for the transdisciplinary ambition of sustainability science. Fischer et al. (2007) argue that “to understand the biophysical world requires science; to conceptualize our role within this world requires the humanities; and to reach sustainability requires both” (p. 623). Sustainability practitioners need to seek “alternative values and institutions” (Fischer et al., 2007, p. 623) for ICDPs, because there seems to be a gap between the best practices it advocates and the realities on the ground. As Brandt et al. (2013) state, “knowledge is interchanged, but empowerment is rare” (p. 6). Problem feeding is an integral aspect of sustainability science collaboration (Thoren and Persson, 2013), and this requires a long-term vision of both environmental and social objectives. I hope this thesis reveals the “incomplete solutions and/or undesirable consequences” (Jerneck and Olsson, 2011, p. 268) of the current framing of zero poaching, and points towards the foundational and longer-term issues that need to be at the forefront of a transdisciplinary approach to biodiversity loss.

4 The Narrative of the fortress

Narratives tend to predicate many of our understandings of people and places (Slater, 1996). Ideas rarely transpire in isolation, and their seemingly spontaneous births are in fact a historical product of consensus and tension, of the struggle to impose and establish one worldview over another. The global diffusion of fortress conservation may have substantially magnified in the twentieth century, and their current justification – the need to avert a biodiversity crisis – a viewpoint delivered under recently determined scientific information; but its spatial configuration of exclusivity (Igoe, 2004) follows from a tradition that can be traced to the parliamentary enclosures that transformed human-nature relationships in England in the 18th and 19th centuries.

4.1 Planting the seed: Enclosures and Romanticism

The enclosure movement was driven by an economic impetus to “replace common property systems, of open fields and pastures, with a private property system, where fences and walls separated individual fields and pastures” (Igoe, 2004, p. 79). Common property systems were seen as inefficient

networks that failed to deliver agricultural surplus to manufacturing cities. Lobbyists in parliament argued that this was an obstacle to national progress, and that the creation of modern agrarian institutions required a revolution in England's rural institutions (Igoe 2004; Allen, 1992). While the economic discords surrounding enclosures is still ongoing, what is less argued against is the evidence that these conversions drastically altered the relationship of rural people to their land (Fairlie, 2009; Dyer, 2006; Olwig, 1996; Allen, 1992).

As marshlands and wetlands were drained, and woodlands privatized and subjected to intensive use and coppicing (Dyer, 2006), rural England experienced the creation of two distinct landscapes: a. commercial farms, and b. estates (Igoe, 2004). It was the estates, those landscapes "ruled by recreation and contemplation" (Igoe, 2004, p. 81), which brought into the cultural imagination the question, manifested physically, concerning the separation of humans and nature. While the deer parks of medieval Europe were already testament to the physical representation of the power of the aristocratic elite in controlling access to land and environmental resources (Jones, 2012), estates formed during parliamentary enclosures added a pleasing prospect to the formulation, and constructed the appreciation of scenic beauty as a "mark of aristocratic distinction" (Igoe, 2004, p. 82).

This idea formed a key element of Romanticism, with paintings projecting mythical landscapes devoid of the rural poor [Figure 1] (Igoe, 2004). Although less forthright than the exclusion of the estates, the romantic affinity for 'their' natures was justified on the grounds that the poor were not refined enough to appreciate and contemplate the wild (Cronon, 1996). This disposition for the "wilderness" was in direct opposition to increasing urbanization across Europe, and Romanticism's growing appreciation of nature gradually took the form of primitivism, a belief that outlined that a society's general well-being required it to escape the overly refined and civilized modern cities for the bounties of the wild (Cronon, 1996; Stankey, 1989).



Figure 1. *River Scene of the Wye*, Thomas Jones [1742-1803] (ART UK, 2016). Portraits of idyllic vistas were a hallmark of Romantic art, and characterized by the grandiosity of the natural landscape devoid of significant human encroachment.

The most prominent resistance to this landscape of exclusion, the poaching wars of 1760 to 1914 (Igoe, 2004), serves as an omen to the conflicts arising under the current discourse “human-wildlife conflict”. The incompatibility between subsistence hunting and sport hunting would form a recurring theme in the evolution of fortress conservation in both the United States and colonial Africa. Once again, we will witness the progression and perpetuation of a particular “wilderness” idea that would justify exclusion, and strategically create a particular image of the poacher.

4.2 The birth of the fortress: American frontierism and bourgeois environmentalism

“We need the tonic of wildness...At the same time that we are earnest to explore and learn all things, we require that all things be mysterious and unexplorable, that land and sea be indefinitely wild, unsurveyed and unfathomed by us because unfathomable. We can never have enough of nature.”

Henry David Thoreau, *Walden: Or, Life in the Woods*

Published in 1854, *Walden* encapsulated the emerging *zeitgeist* of American naturalism in the 19th century. Twenty years later, this intellectual drive would formally manifest itself in the physical embodiment of Yellowstone National Park, cementing wilderness fortresses in the American imagination, and progressively being championed as a model for PAs worldwide.

When enclosures severed off the commons from public use, and with the remaining pool of resources being rapidly exploited, Europeans landing on the eastern seaboard did so with the hope of discovering a bounty of natural wealth (Igoe, 2004). Indeed, the first wave of new settlers saw the New England forests and its coastal waters as an unending stock waiting to be capitalized. This *pioneering process* viewed wild country through a strict utilitarian spectacle: “trees became lumber, prairies farms...The pioneers’ self-conceived mission was to bring these things to pass” (Nash, 2001, p. 31). Coastal expansion of the pioneering process was justified under *manifest destiny*, the idea that American settlers were presented this vast expanse of resources by Providence to develop their self-governing democracy (Cronon, 1996). What was discarded was the growing recognition that this

'untouched' nature was in fact maintained by the continent's numerous indigenous groups (Igoe, 2004; Cronon, 1996), but manifest destiny meant that the destruction and expulsion of these communities was a necessary means to accomplish America's god-given history.

As manifest destiny wreaked havoc on the American landscape, the enclosure ideas of nature began penetrating the aristocracy of the United States. In patterns mimicking the ones in Europe, the appreciation of the wilderness began in the cities, amongst a class of individuals that embraced Romanticism's ideas of primitivism and the picturesque (Nash, 2001). These individuals successfully implanted the doctrine of the *sublime* onto the American landscape to characterize it as an environment of sacred serenity (Cronon, 1996). Natural monuments were valued with deeply religious metaphors and idealized as sites that needed to be preserved (Nash, 2001; Cronon, 1996), but this alone could not account for the rise of preservationism.

Influential figures such as Frederick Law Olmsted, John Muir, and Ansel Adams argued that the remaining wilderness areas needed protection, because they represented the last vestiges of a country that was birthed through the exploitation of these very landscapes – they would stand as memories of a distant past for the post-frontier world. Much like the English elite before them, these ideologues maintained that America's native population did not hold the same conservation values as their educated, urban counterparts, and portrayed indigenous groups as adversaries of the wild (Igoe, 2004). Olmsted reinforced enclosure ideas by stating that the "power of the scenery to affect men is, in a large way, proportionate to the degree in which their taste has been cultivated" (Nash, 2001, p. 106). In his iconic photographs of Yosemite [Figure 2], Ansel Adams consciously removed any trace of Native Americans, and only focused on the grandness of the country's natural heritage (Dowie, 2009; Cronon, 1996). John Muir, who later founded the Sierra Club in 1892, was forthright when stating that Native Americans did not belong in the continent's scenery because they ruined the immaculate beauty of the landscape. For Muir (2010), nothing that was purely wild was unclean, and the Native Americans would dislodge the pleasing prospect of nature.



Figure 2. *Half Dome and Moon*, Ansel Adams (oscarenfotos.com, 2012). Echoing Romanticisms affinity for the wild, Adams' photographs of Yosemite's natural monuments was influential in shaping America's conservation movement. His images presented Yosemite as an untouched wilderness.

The elite passion for the wild ultimately reflected the same urban civilizations that they hoped to escape, and “wilderness” became “an important vehicle for the expression of a peculiarly bourgeois form of anti-modernism” (Cronon, 1996, p. 78). The construction of national parks became an elite enterprise, signaled by the increasing interest in responsible, well-regulated sport hunting and wildlife tourism, which would offer tourists an experience of a fantasy frontier without confronting the unnatural Native Americans. With the cultural imagination solidifying an urban outlook on nature, physical transformations of the landscape sought to turn these musings into reality, and the push for the creation of national parks was associated with cultivating this singular vision of the wild. American preservationism systematically redefined the native Crow, Blackfeet, Shoshone, Snake, and Sheepeater populations as illegal residents within proposed conservation sites, and labeled their ecologically sound subsistence hunting practices as poaching (Jones, 2012). The conflict over hunting was especially pronounced during the creation of Yellowstone National Park. The same class of sport hunters that had systematically reduced the population of bison in turn sought to preserve the last remaining population by banning native hunting in the region, and gradually pushed these communities away from their ancestral lands (Jones, 2012; Igoe, 2004). When Yellowstone was inaugurated on 1 March 1872, it mirrored a distinctly urban nature. The fortress was built by the “imposition of a particular nature aesthetic” (Igoe, 2004, p. 88), one of exclusion and appropriation.

4.3 Imposing the fortress in colonial Africa

It is difficult to ignore the striking similarity of the cultivation of an aristocratic conservationism in colonial Africa with the movement in the United States. While the rationale for local displacement would gradually take a scientific turn, with national parks justified as important edifices to protect biodiversity (Dowie, 2009), it was the “civilizing mission” (Igoe, 2004) at the core of American frontierism (Spence, 1996) which also became a driving force for Africa's colonial administrators to reconsider the way they viewed wildlife. For the colonists, hunting was a birthright, and the

escalation of trophy killings along with growing European settlements led to the extinction of some of Africa's native wildlife species such as the pygmy zebra and the bluebuck antelope (Igoe, 2004). Drawing comparisons to the decimation of the bison population in North America, the first crop of conservationists in Africa argued that the bounty of wildlife they had 'discovered' was rapidly declining, and that there was an urgent need to cordon sections of the wild to protect these harmless creatures (Mackenzie, 1988).

The advice of the conservation advocates fed directly into the colonial mindset by reinforcing the civilizing mission, and this involved having an exceptionally deplorable view of native Africans. They imagined human cultures as a hierarchy, with African hunter-gatherers as the lowest form of human evolution, and European civilization as the pinnacle of development (Dowie, 2009; Neumann, 2002). This dominant ideology supported the false claim that it was the primitive and unchecked hunting techniques of the Africans that was at the root of the conservation dilemma (MacKenzie, 1988), and that sectioning off wildlife from the natives would help preserve their populations. The underlying rhetoric of parliamentary enclosure and the American sublime was reinforced in Africa as the elite sought to hunt in a wilderness that was free from human disturbance. Although stringent rules would forbid hunting within the parks, these areas would later provide "a breeding ground for wildlife that supplied neighboring game control areas" (Igoe, 2004, p. 92), a mutually beneficial condition that still exists between conservation zones and the hunting industry (Ross, 2015).

The transformation of the African landscape would not have been possible without the collection of elite sport hunters and likeminded western environmentalists into prominent conservation organizations that lobbied their respective governments to create these fortresses. The Society for the Preservation of Wild Fauna of the Empire, initially organized to preserve aristocratic game reserves, excluded indigenous Africans from roaming their landscapes and later commissioned the establishment of fortress parks in the Serengeti (Prendergast and Adams, 2003). More importantly, "it created a set of internationally recognized norms and methods - closed seasons, licenses, endangered species lists, and the concept of reserves - as vehicles of conservation whose implementation increasingly required 'expert' input" (Ross, 2015, p. 222). Now operating under the banner of Flora and Fauna International (FFI), it inspired the formation of IUCN and WWF (Flora and Fauna International, 2016). The founders of these organizations ascribed to the established idea of a wilderness that needed to be cordoned off from native groups. In the 1961 Arusha Conference in Tanzania, Kermit Roosevelt Jr., founder of the African Wildlife Foundation and himself a big game hunter, argued that conservation organizations had to permanently establish themselves in the soon

to be independent African nations because the “replacement of European staff by untrained, unqualified men spelled the disaster for game” (Dowie, 2009). In the eyes of these leaders, all prospects of conservation and proper civilization would be lost unless their organizations took control of the regulation of national parks (Gissibl, Höhler and Kupper, 2012). As Mark Dowie (2009) poignantly notes:

“Colonial conservationists... regarded the protection of Africa’s natural heritage to be a moral duty. But for most of them the morality seemed to stop at the border between wildlife and humanity” (p. 41)

5 Chitwan National Park and zero poaching

The following section will focus on two important elements: a.) the way in which zero poaching goals and initiatives in Nepal’s PAs are framed in the mass media and b.) an assessment of the Chitwan Management Plan (CMP) based on a comparison with guidelines provided in the Zero Poaching Toolkit and its corresponding supplementary documents (see section 3.3.2 for list of documents used). Following on from the narrative of fortress conservation and the theoretical entry point for the thesis, the first part of the assessment will allow me to uncover the anti-poaching themes that are most prominent in the public discourse in Nepal, and whether it prioritizes the strict protection of the country’s iconic species over the inclusive development pathway espoused by the advocates of zero poaching. The second part of the assessment will help me determine if zero poaching’s guidelines have been encoded in the CMP, and whether or not its application upholds the decentralized, community-based conservation that is embedded in its mission statement.

However, this section will begin by giving a brief overview of the rationale behind the commemoration of the zero poaching goal, its working strategy, and a selection of some key passages from the zero poaching toolkit that specifically relate to the improvement of human welfare as it is dealt with in its framework of human-wildlife conflict. This will help determine the extent to which zero poaching addresses the “social” pillar of the sustainability, uncover its shortcomings, and check whether CMP upholds the community-based conservation mandates of zero-poaching. These specific points will be elucidated in the discussion (Section 6).

5.1 Zero poaching: A brief overview

“Zero poaching is achieved when there are no detectable traces of poaching activity in an area over a set time period and there is no discernible impact on a species to sustain a stable or increasing population” (Zero Poaching, 2015a, p. 2)

Zero poaching was initially established as a mode of operation to achieve WWF's TX2 goal, which aims "to double the number of wild tigers by 2022" (TX2, 2016). The strategy is based on recognition of the growing conflict between human settlements and tiger populations in regional hotspots, with consequences for both people and wildlife: "Between 1800 and 2009, an estimated 373,000 people were killed by tigers...and over the same period wild tiger populations fell by 97%" (Safe Systems, 2015, p. 2). Also acknowledging that current human-wildlife conflict mitigation methods had two important shortcomings, an isolated focus and a lack of long-term direction (Safe Systems, 2015, p.2), zero poaching is a call for tiger range countries to engage in a paradigm shift of wildlife protection that will "contribute to a single long-term goal for an area: to make it safe – safe for people, assets, wildlife and habitat" (Safe Systems, 2015, p. 3).

While the primary objective of zero poaching remains in preventing the death of important wild species, it strives to do so "through a strong collaboration of governments, IGOs, NGOs and civil society for the benefit of conserving living natural resources and *securing the future of people who depend on them through the implementation of the six pillars of zero-poaching* [emphasis added]" (Zero Poaching, 2015a, p. 3). Three of these pillars, namely *cooperation, community, and capacity*, specifically focus on involving and incentivizing local communities to become active agents in achieving the targets of zero poaching. More importantly, the zero poaching guidelines seem to move beyond the narrow technical fixes of numerous human-wildlife conflict and anti-poaching initiatives mentioned in Section 2.1.3 by recognizing the complexity of drivers that fuel wildlife crime:

"Wildlife and forest offences can be driven by a variety of factors, including rural poverty, food insecurity, unequal distribution of available agricultural lands, economic interests, legal markets of timber and non-timber products, as well as social upheavals such as war and famine. Engagement in illegal wildlife and forest trade can be a regular source of income for some, a safety net to meet sudden needs for others, and in some cases a lucrative opportunity to gain large profits. *Although actions in the illegal activities are linked (for example, poor farmers that are employed as harvesters and suppliers by traffickers), it is still critical to differentiate between activities driven by need and poverty, and those driven by greed and the lure for high profit* [emphasis added]" (Zero Poaching, 2012, p. 143)

Additionally, zero poaching also addresses an important aspect that tends to be undermined in anti-poaching initiatives: that strong policing and enforcement laws are merely one arm in the quest to preserve biodiversity. The toolkit addresses the fact that enforcement actions need to be

complemented by local development schemes and resource management techniques to create a long-term pathway to conserve species:

“Effective law enforcement, credible penalties and a functional legal system are crucial to control and prevent wildlife and forest crime. *However, the problems of wildlife and forest law enforcement cannot be solved by these mechanisms alone. They must be concurrent with an improvement in natural resource management, industrial restructuring, rural development services and poverty reduction for wildlife and forest-dependent communities* [emphasis added]. A special feature of crimes related to natural resource is that they can arise from underlying problems in resource policy and management and may best be managed as resource problems rather than as matters of criminal law enforcement alone.” (Zero Poaching, 2012, p. 143)”

However, the toolkit is also cognizant of not providing a one-size-fits all strategy to fight against wildlife crime. Acknowledging the heterogeneity of PAs and their governance regimes, zero poaching notes that its community-based conservation crime prevention aims to work with national development goals to “achieve both more immediate and sustained wildlife crime reduction” (Zero Poaching, 2015b, p. 2). The toolkit is open to finding new pathways for species protection, and argues that stakeholders must “continue to pilot developed tools in a variety of contexts, validate new ideas, evaluate existing approaches, and create a streamlined community-based conservation...toolbox....in order to fit their specific conservation situation and needs” (Zero Poaching, 2015b, p. 2). The zero poaching working strategy recognizes that wildlife crime prevention is ultimately a component of broader resource management aims, and maintains that:

“all those involved...from the setting of management objectives for specific resource systems, to the conduct of resource assessments and inventories, to the design and support of regeneration systems and habitat restoration works, and to the specific investigation and pursuit of criminal violators...are components of an enforcement system (Zero Poaching, 2012, p. 67)

It is useful at this juncture to turn towards the media representation of zero poaching and its achievements in Nepal, because it provides a lens to observe the creation of what Gramsci refers to

as an “ethico-political sphere” (Gramsci, 2000, p. 195), which in this context serves to unequivocally relate biodiversity protection with strict military intervention.

5.2 Zero poaching in the media

On the occasion of the first World Wildlife Day on March 3, 2014, IUCN released a press statement that highlighted the need for the persistent, combined, and coordinated effort of state and non-state actors to successfully fight against the perpetrators of biodiversity loss. The statement boasted that “not a single incident of rhino, tiger, or elephant poaching had been recorded in any of the country’s [Nepal] protected areas” (IUCN, 2014, para. 1) over the past year. National Geographic Magazine followed suit with an article that painted Nepal as a country “bucking the worldwide trend” (Neme, 2014, para. 1) in increased poaching, citing how poachers still found ways to kill rhinos in heavily guarded parks in Kenya and South Africa. The article quoted the secretary-general of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), who praised Nepal’s “strong and committed leadership, excellent national collaboration among enforcement entities and with park agencies, *very effective engagement with local communities* [emphasis added], and targeted intelligence-led enforcement actions” (Neme, 2014, para. 6) to curb wildlife crime. The Global Tiger Initiative (2014) was more reverential, arguing that “it is all the more remarkable that the country is making real progress against wildlife criminals in its protected areas” (para. 1) despite Nepal’s numerous development and governance challenges. The Guardian also celebrated the fact that “a surge in the number of endangered rhinos has brought some cheer to earthquake hit Nepal...making the country a global example of how poachers can be defeated” (Rauniyar, 2015, para. 1).

Whether it is espoused by Nepal’s government agencies or its international conservation partners, the triumph of zero poaching was seen as a result of one particular transformation: a zero-tolerance policy for wildlife crime coupled with an increasing military presence in national parks like Chitwan. The Government of Nepal (GoN) granted \$1 million to the Department of National Parks and Wildlife Conservation (DNPWC) and the Department of Forests (DoF) to boost the number of guard posts in CNP and supply necessary equipment to a battalion of 1000 Nepalese army soldiers patrolling the park (Global Tiger Initiative, 2014), and this financial injection has been directly attributed to the increase in Chitwan’s rhino population from 380 in 2006 to 503 in 2015 (GoN, 2015). A former CITES enforcement chief notes that Nepal has “a zero-tolerance attitude to wildlife crime, whereby justice is often swift and harsh...Nepal’s forest law *empowers* [emphasis added] district forest officers and chief wildlife wardens to deal with offender and impose prison sentences of up to 14 or 15 years”

(Nemes, 2014, para. 14). This “streamlined judicial system dealing with the offense and the use of the military” (Rauniyar, 2015, para. 13) is consistently vindicated on the grounds that poaching rings are increasingly becoming violent in their pursuit of the IUCN Red-listed greater one-horned rhinoceros and the Bengal tiger.

This heightened media interest is reflected in news reports showcasing ‘innovative’ technologies that are being tested to combat poaching (Kathmandu Post, 2016a; WWF, 2016a; Ethirajan, 2013), most notably through the intervention of international conservation organizations. Despite the overwhelming success of zero poaching, popular media commented on WWF’s newly designed special drone aircrafts to detect poachers and the illegal felling of trees in Chitwan (Ethirajan, 2013). Additionally, WWF (2016a) initiated a Sniffer Dog Programme in January 2016 to “monitor, detect, and deter poaching” (para. 2) in CNP and protect the country’s “national treasures” (para. 3). The Kathmandu Post (2016a) also reported on \$1.5 million project funded by WWF to install 30 CCTV cameras in CNP, with the park’s Chief Conservation Officer arguing that the decision was made because the park was acting as “a hideout for criminals and drug addicts” (para. 2).

These latest developments reported by the media only represent the tip of a greater political commitment to militarize Chitwan, because Nepal’s government agencies have actively sought the assistance of international conservation groups in intensifying the park’s patrols beyond the timeline of its zero poaching success story. In 2007, *Operation Unicornis* was launched by the DNPWC, WWF-Nepal, NTNC, ZSL and the UK Darwin Initiative to establish an intelligence network that would curb the poaching of the one-horned rhinoceros in Chitwan (WWF, 2008), an “animal that is emblematic to the country” (Thapa et al., 2013). On recognizing Nepal’s year of zero poaching, the Director General of DNPWC stated that the success “shows the national-level commitment to control wildlife crimes in the country” (IUCN, 2014, para. 4). In the same press release, IUCN’s country representative pointed to the creation of the Wildlife Crime Control Committee (WCCC) and its diffusion of power to district level administrations that has made possible the arrest of more than 700 wildlife criminals in 2013 alone (IUCN, 2014). The arrest of Rajkumar Praja in February 2015, wanted for the killing of 20 rhinos from across reserves in Nepal, was seen as a major triumph attributed to the national police force’s ability to “infiltrate national and international networks of poachers in recent times that have helped to combat illegal wildlife trafficking to a larger extent” (The Kathmandu Post, 2015a).

Not only is the reduction in wildlife crime a cause for celebration, but the media is also littered with another pivotal outcome of zero poaching: the economic prosperity of local communities through a

pathway of sustainable development. Working together with GoN, WWF (2014a) boasts of its 400 community-based anti-poaching networks whose inclusive nature empowers local communities in become effective stewards of their environment. Perhaps the single greatest claim of GoN, conservation organizations, and the wildlife tourism sector, is the fact that 50 percent of the gross income of protected areas in Nepal is set aside for local communities living around the buffer zones and participating in anti-poaching activities (GoN, 2015; Neme, 2014; Martin, Martin, and Vigne, 2013). This is best exemplified by the National Geographic Magazine feature on Chitwan's zero poaching, which concludes that the "result is citizens with a strong sense of ownership and commitment to wildlife protection" (Neme, 2014, para. 24). Nepal's conservation actors further corroborate this claim by pointing to internationally funded projects such as *Hariyo Ban* (green forest), whose cross-cutting themes of "gender and social inclusion, livelihood improvement, and governance" (WWF, 2016b, para. 2) has culminated in the handover of 47 buffer zone community forests to local communities, with 15 additional forest patches waiting for review (GoN, 2015). Not only is the coalition of GoN and international conservation organizations satisfied with the transfer of resources, but also actively involved in the tourism and hospitality businesses along national parks. As an example, in the southwest buffer zone of Bardia National Park, households operating homestays for wildlife tourists are trained in cooking, housekeeping, and hospitality through a project co-led by WWF and NTNC, all to provide a "natural setting and a peaceful atmosphere" (Martin, Martin, and Vigne, 2013, p. 71). Increasing the tourist enterprise and conserving biodiversity are seen as mutually reinforcing goals in Nepal, and CNP's historical legacy as the country's first protected area, which suffered a drastic decline in iconic species, seems to have provided its governing interests the added leverage to incisively monitor and mold the actions in the park.

5.3 Cracks in the seam

For all the public affirmation and praise for community-led conservation actions, there are discreet signs suggesting that these comprehensive success stories may be misleading. While the media is swift to celebrate outcomes that portray the state and its partner organizations as exemplars for anti-poaching and sustainable development, a critical reflection on some their reports indicates that it reinforces similar generalizations about local communities that have been prevalent throughout the history of the fortress conservation narrative. News outlets reported that CNP officials had terminated the entry and approved thatch grass collecting period for locals living in its buffer zone, because conservation officers had determined that some individuals had illegally felled *Shorea robusta* trees (Kathmandu Post, 2016; The Himalayan Times, 2016b). While reports on Nepal's zero poaching accolades received detailed accounts of the concerted efforts of both state and non-state

agencies, including extensive interviews with officials who outlined the history of Nepal's conservation efforts, the opinions of the locals residing in the buffer zone - who were all punished by this policy enactment for the actions of a few - were absent from the media.

Similar sentiments can also be detected in the media's rhetoric on law enforcement's anti-poaching initiatives. One report outlined how people from nomadic communities have been involved in poaching for generations, and the recent seizure of animal parts from public and community forests (Shahi, 2016) begs the question of whether this report is critical of the handover to community user groups. The public imagination seems to have been shaped to passively accept the idea that the transfer of buffer zone forests to local communities is itself an action that should be praised as a sustainable pathway, when in fact it doesn't press to uncover the extent to which these communities have the authority to shape conservation. They simply portray international conservation groups and GoN entities as responsible actors in CNP's governance, while ignoring the plight of the buffer zone communities.

Even on the issue of human-wildlife conflict, the press seems to follow on official reports that subtly blame local groups as the main antagonists (Kathmandu Post, 2014), despite the fact that their efforts have led to the restoration of vanishing forests (Gurung, Smith, McDougal, Karki, and Barlow, 2008). The report mentioned, "the number of human deaths increased significantly from an average of 1.2 per year before 1998 to 7.2 per year from 1998 to 2006. The increment in number of deaths of people by animals was contributed to the restoration of forests along the buffer zone areas by local communities" (Kathmandu Post, 2014, para. 6).

Harkening back to the colonial mindset that placed denigrating assumptions about local groups (Section 4), and mirroring the global trends in the perceived solutions to these problems (Section 2.3), the report noted that the primary corrections involved technical fixes such as solar fences that would help avoid "people-animal confrontation" (Kathmandu Post, 2014, para. 8). The most contentious comment on human-wildlife conflict came from CNP's chief warden, who argued that people were largely to blame for the loss of human lives: "animals are animals, but we are human beings. People should know to stay away from animals and save themselves and their crops from the animals" (Kathmandu Post, 2015b, para. 13). This subtly reveals the tensions that continue to exist between local communities and park officials in Chitwan. Yet this critical issue is neglected in the sea of rhetoric that gives universal praise to the state and civil society's efforts in promoting ICDPs.

5.4 Closer examination of CMP

The *Chitwan National Park and its Buffer Zone Management Plan 2013-2017* (CMP) begins with the claim that “numerous interactions and consultation meetings with stakeholders and key organizations, fieldworks and observation, central and local level workshops followed by expert reviews” (GoN, 2015, p. iii) was conducted in delivering the report. Similarly, GoN states that “the plan is based on (*sic*) holistic approach and envisages bottom-up planning process ” (GoN, 2015, p. xviii), and that “it is prepared with the active involvement of buffer zone communities, relevant government agencies, international NGOs, academicians, professionals...social activists, tourist entrepreneurs, community organizations, and other stakeholders” (p. xviii). Despite the claims of inclusivity that are repeatedly mentioned throughout the report, it is difficult to embrace these assertions when a careful reading of the text reveals the contrary. Specifically, one particular group, the buffer zone/local communities, is underrepresented throughout CMP.

If, as GoN claims, that CMP was prepared with the participation of local groups, one would expect to find passages that highlighted their particular concerns regarding access to forest resources, park governance, and human-wildlife conflict, issues that have been mentioned, albeit scarcely, by the local press. The CMP unwittingly discredits the public rhetoric of Chitwan’s public spokespersons that continue to boast of their local participation and inclusive development by stating that the fundamental threat in achieving its objectives is “the traditional resource dependency of local people” (GoN, 2015, p. 20). It further adds that the “availability of inviolate area for wildlife is an issue due to unregulated tourism and resource dependency of local people” (p. 20). While the report later vindicates the eco-tourist industry, not least because of the revenue it generates for Chitwan, it solidifies its criticism towards local communities by signifying that the increase in the buffer zone population from 40,000 to 300,000 in the last 30 years is the main contributing factor for wildlife decline (GoN, 2015).

Another characteristic of CMP is the internal contradiction in its goals and problem formulation, which once again brings into doubt the truth surrounding its adoption of bottom-up management. The report is quick to backtrack on the blame it casts on Chitwan’s indigenous groups by declaring that the park adopts a “strategy of human-wildlife coexistence rather than conflict” (p. 17). Likewise, CMP’s vision statement proclaims that it sets out to “enhance the unique biodiversity of the area with the support of local community (*sic*), which eventually supports for welfare of human beings in perpetuity” (GoN, 2015, p. 21). To achieve this vision, CMP argues that a substantial portion of the park’s budget has been allocated for relief schemes in the buffer zone. However, the

plan's lengthy appendices, which declares its monetary allocations for species-specific conservation schemes and wildlife crime control activities, fails to establish the amount of money set aside for the buffer zone, as well as the purported projects undertaken with the inclusion of local communities. When mentioning the potential "terminal extinction" (GoN, 2015, p. 45) faced by the Bengal tiger, CMP argues that it will "engage with indigenous local communities" (GoN, 2015, p. 45) to keep its zero poaching target of doubling the tiger population in the park by 2022. However, CMP does not elaborate on the extent to which local people have the autonomy to actively shape the park's conservation strategy. This lack of transparency on bottom-up conservation and development projects raises more pressing questions on the actual intentions of CMP and its ideological bias.

The ambiguity that CMP shows in its support for community-led conservation is non-existent when the report moves to detail its praise for both tourism and persistent militarization as the two leading reasons for the park's internationally recognized conservation success story. While CMP acknowledges the construction of 50 security posts across the park core and buffer zone as one of many military interventions that have curbed poaching in Chitwan, it proposes the establishment of "8 more security posts...to cover the gap areas and define and demarcate the area of responsibility at each security post" (GoN, 2015, p. 28). This is despite the report's claim that "there is no poaching case of tigers in the park since the last 10 years" (GoN, 2015, p. 46). CMP subtly casts further blame on local communities as the cause for wildlife decline, stating that the "collective efforts of CNP office and Nepal Army" (GoN, 2015, p. 42) to remove locals from prime rhino habitats led to the increase in rhino population to 544 in 2000. In fact, the objective of "capacity building" (GoN, 2015, p. 40) is restricted to the park's management, with training programmes listed for the chief wardens to the game scouts, and from the battalion commanders to foot soldiers: buffer zone users are invisible here as well. The following passage clearly illuminates the park's preference to increase military intervention:

"The heart and soul of this management plan lies on strengthening the park protection system through a good network of strategically located park security posts, improved basic facilities at security posts, effective and reliable communication and transportation facilities and highly dedicated staff for regular patrolling of the park" (GoN, 2015, p. 26)

6 Discussion

Zero poaching marks a turn within international conservation to mainstream an anti-poaching strategy that follows on sustainability's criteria of transdisciplinary research (Brandt et al., 2013), mainly by promoting a management technique that aims to account for different value systems, views, and interests of stakeholders across the supply chain of wildlife crime. In its recognition of the multiplicity of actors that form the complexities of poaching, the toolkit argues that a "sustainable approach needs to include development-oriented strategies and not law enforcement alone" (Zero Poaching, 2012, p. 146). By supporting the 'people and nature' framework of conservation, which "emphasizes the importance of cultural structures and institutions for developing sustainable and resilient interactions" (Mace, 2014, p. 1559), zero poaching seems to shift away from the strict ideals of fencing nature that is predominant within the discourse of fortress conservation. While the primary objective still remains for a country's "natural capital and iconic species [to] continue well into the 21st century and beyond" (Zero Poaching, 2015c), zero poaching is taking measures to reframe the elements of poaching by "seeking its roots; identifying agents...[and] reaching a fuller understanding of an issue and its drivers" (Jerneck and Olsson, 2011, p. 268):

"Once an animal is killed, its body parts may be sold, even though the prime motive for killing is not trade. This shows that different types of wildlife-threatening actions are related, which makes it difficult to differentiate between baseline causes and effects. It is therefore important to identify and analyse the factors that lead to the killing of protected species. *Especially when commercial gain is not the prime motive, it is crucial to identify contextual and contributory factors that are linked with illegal activities and to address these causes adequately to prevent wildlife crime* [emphasis added]." (Zero Poaching, 2012, p. 153)

A few exceptional cases demonstrate the attempt by park officials in CNP to improve their relationship with local groups and adhere to some of zero poaching's social benefit schemes. In their study of the conservation resettlement programme for Padampur, Dhakal, Nelson and Smith (2011) found that it was the only village out of 26 within the boundaries of CNP that was resettled without forced eviction. They noted that a major achievement of the plan "was incorporating participatory attributes in the planning process that allowed residents to influence the way resettlement would be done and provide for an increased change of well-being post-resettlement" (Dhakal, Nelson, and Smith, 2011, p. 603). The Padampur case highlighted one main reason that locals contest the establishment of national parks, namely that they tend to take away property rights (Wilkie et al.,

2006) without considering their involvement in resettlement plans. Likewise, Dhungana, Savini, Karki, and Bumrungsri (2016) found that park management had made \$93,618 as compensation to local residents for livestock depredation and human deaths by tigers for the period 2007-2014.

However, fundamental issues in the translation of large segments of transdisciplinary knowledge onto the management practice of CNP is a pressing problem that leads to question whether zero poaching can become a counter-hegemonic force within the global conservation movement. As the prior observations indicate (Section 5.2 and 5.4), park management is still reliant on technical and immediate fixes to human-wildlife conflict. Evidence from both the mass media and CMP suggest that zero poaching's orientation and campaigning around the target of doubling wild tiger populations by 2020 is viewed as an end in itself. Igoe, Brockington, and Neves (2010) argue that spectacular media has become a central element of modern civil society, and this tenet is clear in the way in which zero poaching's militarization has been portrayed as the main driver in saving Nepal's iconic species.

Moving beyond the perspective of "statolatry" (Morton, 2009, p. 152), the idea that state influence is only limited to the political arena, Gramsci's writings on civil society allows us to observe the subtle mechanisms by which Nepal's conservation actors have been able to propitiate the public towards the inevitability of strengthening military presence in Chitwan because of the growing threat of poaching. Despite the universal accolades bestowed on Chitwan in achieving zero poaching, government officials and their international conservation partners have used the media to argue that the battle to safeguard the country's most emblematic species is not over. This uncontested acceptance can be read in the local press, which continuously praises CNP's increasing fortifications and justifies these interventions through interviews with park officials and international conservation representatives.

This can have severe consequences by steering action away from factors that have a longer-term impact on species survival. For example, Bhattarai and Kindleman (2013) found that human disturbances in CNP's buffer zone was reducing the number of wild pig, muntjac, sambar deer, and chital populations, important prey for the Bengal tiger. They found that competition between domestic livestock and wild herbivores, which reduced prey numbers in tiger habitats, was "associated with a decline in the rate of reproduction and low population density of tigers" (Bhattarai and Kindleman, 2013, p. 343). In their study of South-East Asian protected areas, Steinmetz, Srirattanaporn, Mor-Tip, and Seuaturien (2014) determined that "increased interactions with park

staff created a new level of trust and understanding that increased support for conservation efforts” (p. 1470), and that the weight of evidence from “four independent lines of enquiry” (p. 1476) pointed to outreach as the main driver in poaching decline. The singular focus of both the media and the CMP towards enforcement has the potential to underplay the importance of community outreach in changing human behavior to incorporate better natural resource management. State and non-state entities have used the media to “raise the great mass of the population to a particular cultural and moral level” (Gramsci, 2014, p. 258), justifying the expansion of Chitwan’s fortress as the only solution to curb poaching levels.

Nepal’s determination to reach the zero poaching target might overlook the structural and governance issues that impede true social emancipation around Chitwan. The park’s short-term fixes will fail to match zero poaching’s long-term targets unless park officials attempt to unearth and transform the fortress ethic that was at the heart of CNP’s construction, and which may still play a critical role in the relationship between local communities and park management. Although the historical enclosure of Chitwan’s wilderness area was not strictly grounded on the overt claims of preserving the last vestiges of an edenic nature, the patterns of development strikingly reflect the exclusionary principles that have characterized the transformation of large swathes of natural landscapes since the birth of fortress conservation.

In 1846, Prime Minister Jung Bahadur Rana, the first leader of the Rana dynasty, an elite group that ruled Nepal and held all ministerial positions under hereditary claims, enclosed Chitwan as a royal hunting reserve (GoN, 2015). A year later, he established sport hunting within the reserve, opened trophy killings of the greater one-horned rhinoceros and Bengal tiger for foreign dignitaries, and passed a stringent law that deemed it a criminal offense if people from the lower castes and other ethnic groups were found hunting for these animals (GoN, 2015; Thapa et al., 2013). Once again we witness the strategic distinction between the *poacher* and the *sport hunter*, and this construct is even warranted in CNP’s *Management Plan 2013-2017* (CMP), which praises the Ranas’ authoritarian regime for protecting Chitwan from potential desecration (GoN, 2015). CMP commends the regime for protecting Chitwan’s wildlife, despite subsequently stating that “as many as 20 tigers, 38 rhinos, 27 leopards, and 15 bears were killed in the valley” (GoN, 2015, p. 8) by just one hunting party. CMP endorsed the significance of this exclusive fortress by arguing that the collapse of wildlife in Chitwan could be directly attributed to the end of the Rana regime, whose hunting “hardly affected the total population” (GoN, 2015, p. 8) of wildlife. Without strong evidence, it seems irrational for an official document to blame the decentralization of absolute power as the primary cause of biodiversity loss.

Differences in underlying ideologies have the potential to cause tension (Mace, 2014), and zero poaching's ideals of community-led conservation may clash with the historically embedded 'community and park management divide' in Chitwan. Gramsci (2000) argued that socio-economic changes are insufficient in producing political changes, but that "they only set the conditions in which such changes become possible" (p. 190). Zero poaching needs to become a reactionary force against the old framing of human-wildlife conflict in Nepal by recognizing that "entire parties and other organizations – economic or otherwise – must be considered as organs of political order, of an investigational and preventive character" (Gramsci, 2014, p. 221). It needs to be more active in promoting a new understanding of human-wildlife relationship within the governance regime of Chitwan in order to create a new ideological terrain that is willing to accommodate new methods of knowledge.

Gramsci (2014) remarked that civil society "operates without 'sanctions' or 'compulsory obligations', but nevertheless exerts a collective pressure and obtains objective results in the form of an evolution of customs, ways of thinking and acting" (p. 242). This collective pressure derives discreetly from park officials and their non-state conservation partners, and creates "not only a unison of economic and political aims, but also intellectual and moral unity...on a 'universal plane'" (Gramsci, 1971, p. 181). For the neo-Gramscian critical theorist Robert Cox (1994), this forms the crucial essence of hegemony: "A form in which dominance is obscured by achieving an appearance of acquiescence...as if it were the natural order of things...It is an internalized coherence which has most probably arisen from an externally imposed order but has been transformed into an intersubjectively constituted reality" (p. 366). Ultimately, zero poaching needs to challenge the hegemony of Chitwan's historical bloc if it hopes to achieve the level of social sustainability that it desires.

7 Conclusion

Framing the biodiversity crisis as a human-wildlife conflict between local settlements and innocent species reduces the complexities of poaching as a simple problem of enforcement, when in fact the rising price of animal parts coupled with growing relative poverty between "areas of supply and centers of demand" (Challender and MacMillan, 2013, p. 484) continues the vicious cycle of biodiversity loss and the scapegoating of local communities. Although reducing species loss through increasing enforcement and militarization seems to have been achieved in CNP, zero poaching still lacks a "clear set of tools required for different process phases or integration of different types of knowledge" (Brandt et al., 2013, p. 7), especially its vision of local development by democratizing conservation management. As the assessment of zero poaching in Nepal shows, science-based policy

interventions only “provide technical solutions to problems that are fundamentally political” (Evans and Adams, 2016, p. 217), which exacerbates the pressure on natural systems, magnitude of conflict, and heightens the repercussions for biodiversity and human well being (Redpath, Bhatia, and Young, 2015).

By continually lauding the protection of species as a consequence of increased militarization of PAs, Nepal’s mass media may be unwittingly creating a public imagination that solely views enforcement as the answer to both conservation and development. Zero poaching has the potential to overturn many of the issues that reduce the efficacy of ICDPs, but it needs to begin by realizing that protected areas “often have complex and contested histories and an institutional inertia that precludes change and flexibility” (Brown, 2003, p. 486). What zero poaching needs to clearly evoke is the fundamental need of inclusivity, and “an awareness not only of the power and depth of edenic thinking but our susceptibility to paradisaal images that speak to our own needs and desires” (Slater, 1996, p. 130). This requires a framework to reveal hidden structures and power relations in its target regions, factors that have been historically built into fortress conservation and which may ultimately undermine its potential to reframe poaching and human-wildlife conflict. Gramsci (2014) noted that “changing socio-economic circumstances do not of themselves ‘produce’ political changes” (p. 190). To raise the pillar of social sustainability, zero poaching must revitalize our collective consciousness to recognize the pitfalls of fortress conservation, and become more active in institutionalizing its aims within the governance regime of its target PAs.

8 References

- Allen, R. C. (1992). Introduction. In *Enclosure and the yeoman* (pp. 1-21). Oxford, Great Britain: Clarendon Press.
- Alvesson, M., & Sköldbberg, K. (2010). (Post-)positivism, social constructivism, critical realism: The reference points in the philosophy of science. In *Reflexive methodology: New vistas for qualitative research* (2nd ed., pp. 15-52). London: SAGE.
- Amato, G., & Desalle, R. (2012). Assessing biodiversity funding during the sixth extinction. *BioEssays*, 34(8), 658–660. <http://doi.org/10.1002/bies.201200048>
- Andrade, G. S., & Rhodes, J. R. (2012). Protected areas and local communities: An inevitable partnership toward successful conservation strategies? *Ecology and Society*, 17(4), 14-30. doi:10.5751/es-05216-170414
- ART UK. (2016). River Scene of the Wye, Thomas Jones. Retrieved from http://artuk.org/discover/artworks/river-scene-of-the-wye-178148/search/actor:jones-thomas-17421803/page/2/view_as/grid
- Barnosky, A. D., Matzke, N., Tomiya, S., Wogan, G. O. U., Swartz, B., Quental, T. B., ... Ferrer, E. A. (2011). Has the Earth’s sixth mass extinction already arrived? *Nature*, 471(7336), 51–57. <http://doi.org/10.1038/nature09678>

- Benjaminsen, T. A., Goldman, M. J., Minwary, M. Y., & Maganga, F. P. (2013). Wildlife Management in Tanzania: State Control, Rent Seeking and Community Resistance. *Development and Change*, 44(5), 1087–1109. <http://doi.org/10.1111/dech.12055>
- Benton, T., & Craig, I. (2010). Critical realism and the social sciences. In *Philosophy of social science: The philosophical foundations of social thought* (2nd ed., pp. 120-141). New York: Palgrave.
- Bhattarai, B. P., & Kindlmann, P. (2013). Effect of human disturbance on the prey of tiger in the Chitwan National Park – Implications for park management. *Journal of Environmental Management*, 131, 343-350. doi:10.1016/j.jenvman.2013.10.005
- Bixler, R. P., Dell’ Angelo, J., Mfuno, O., & Hassan Roba, H. (2015). The political ecology of participatory conservation : institutions and discourse. *Journal of Political Ecology*, 22, 164–182.
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40. doi:10.3316/qj0902027
- Brandell, J. R., & Varkas, T. (2011). Narrative case studies. In *The handbook of social work research methods* (pp. 294-307). Retrieved from <http://methods.sagepub.com.ludwig.lub.lu.se/base/download/BookChapter/the-handbook-of-social-work-research-methods/n16.xml>
- Brandt, P., Ernst, A., Gralla, F., Luederitz, C., Lang, D. J., Newig, J., ... Von Wehrden, H. (2013). A review of transdisciplinary research in sustainability science. *Ecological Economics*, 92, 1-15. doi: 10.1016/j.ecolecon.2013.04.008
- Brockington, D., & Scholfield, K. (2010). The conservationist mode of production and conservation NGOs in sub-Saharan Africa. *Antipode*, 42(3), 551–575. <http://doi.org/10.1111/j.1467-8330.2010.00763.x>
- Brockington, D. (2002). *Fortress conservation: The preservation of the Mkomazi Game Reserve, Tanzania*. Bloomington, IN: Indiana University Press.
- Brown, K. (2003). Integrating conservation and development: A case of institutional misfit. *Frontiers in Ecology and the Environment*, 1(9), 479–487. [http://doi.org/10.1890/1540-9295\(2003\)001\[0479:ICADAC\]2.0.CO;2](http://doi.org/10.1890/1540-9295(2003)001[0479:ICADAC]2.0.CO;2)
- Büscher, B. (2016). Reassessing fortress conservation? New media and the politics of distinction in Kruger National Park. *Annals of the American Association of Geographers*, 106(1), 114–129. <http://doi.org/10.1080/00045608.2015.1095061>
- Butchart, S. H. M. (2011). Global biodiversity : Indicators of recent declines. *Science*, 1164(May), 1164–1169. <http://doi.org/10.1126/science.1187512>
- Campbell, B., & Veríssimo, D. (2015). Black stork down: Military discourses in bird conservation in Malta. *Human Ecology*, 43, 79–92. <http://doi.org/10.1007/s10745-015-9724-6>
<http://doi.org/10.1111/anti.12093>
- Ceballos, G., Ehrlich, P. R., Barnosky, A. D., García, A., Pringle, R. M., & Palmer, T. M. (2015). Accelerated modern human – induced species losses: Entering the sixth mass extinction. *Sciences Advances*, 1(e1400253), 1–5. <http://doi.org/10.1126/sciadv.1400253>
- Challender, D. W., & MacMillan, D. C. (2014). Poaching is more than an enforcement problem. *Conservation Letters*, 7(5), 484-494. doi:10.1111/conl.12082
- Chen, F. (2015). Poachers and snobs: Demand for rarity and the effects of antipoaching policies. *Conservation Letters*, 9(1), 65-69. doi:10.1111/conl.12181
- Conquest, R. (2000). *Reflections on a ravaged century*. New York: Norton.
- Corson, C. (2010). Shifting environmental governance in a neoliberal world: US AID for conservation. *Antipode*, 42(3), 576–602. <http://doi.org/10.1111/j.1467-8330.2010.00764.x>
- Cox, R. (1994). The forum: Hegemony and social change. *Mershon International Studies Review*, 38(2), 366-367. doi:10.2307/222747

- Cox, R. (2007). The international in evolution. *Millennium: Journal of International Studies*, 35(3), 513-527. doi: 10.1177/03058298070350030901
- Cronon, W. (1996). *Uncommon ground: Rethinking the human place in nature*. New York: W.W. Norton & Co.
- Darwin, C. (2009). *On the origin of species: By means of natural selection* (6th ed.). Waiheke Island, New Zealand: Floating Press.
- De Bont, R. (2015). "Primitives" and protected areas: International conservation and the "naturalization" of indigenous people, ca. 1910-1975. *Journal of the History of Ideas*, 76(2), 215–237.
- Dhakal, N. P., Nelson, K. C., & Smith, J. L. (2011). Resident well-being in conservation resettlement: The case of Padampur in the Royal Chitwan National Park, Nepal. *Society & Natural Resources*, 24(6), 597-615. doi:10.1080/08941921003709633
- Dhungana, R., Savini, T., Karki, J. B., & Bumrungsri, S. (2016). Mitigating human-tiger conflict: An assessment of compensation payments and tiger removals in Chitwan National Park, Nepal. *Tropical Conservation Science*, 9(2), 776-787. Retrieved from http://tropicalconservationscience.mongabay.com/content/v9/tcs_v9i2_776-787_Dhungana.pdf
- Dickman, A. J. (2010). Complexities of conflict: The importance of considering social factors for effectively resolving human-wildlife conflict. *Animal Conservation*, 13(5), 458-466. doi:10.1111/j.1469-1795.2010.00368.x
- Dowie, M. (2009). *Conservation refugees: The hundred-year conflict between global conservation and native peoples*. Cambridge, MA: MIT Press.
- Duffy, R., St. John, F. A. V., Büscher, B., & Brockington, D. (2015). The militarization of anti-poaching: undermining long term goals? *Environmental Conservation*, 42(4), 345–348. <http://doi.org/10.1017/S0376892915000119>
- Duffy, R. (2014). Waging a war to save biodiversity: The rise of militarized conservation. *International Affairs*, 90(4), 819–834. <http://doi.org/10.1111/1468-2346.12142>
- Dyer, C. (2006). Conflict in the landscape: the enclosure movement in England, 1220–1349. *Landscape History*, 28(1), 21–33. <http://doi.org/10.1080/01433768.2006.10594578>
- Ethirajan, A. (2013, April 9). Nepal's rhino hunters become the hunted. Retrieved from <http://www.bbc.com/news/world-asia-22030392>
- Evans, L. A., & Adams, W. M. (2016). Fencing elephants: The hidden politics of wildlife fencing in Laikipia, Kenya. *Land Use Policy*, 51, 215–228. <http://doi.org/10.1016/j.landusepol.2015.11.008>
- Fairlie, S. (2009). A short history of enclosure in Britain. Retrieved from <http://www.thelandmagazine.org.uk/articles/short-history-enclosure-britain>
- Fischer, J., Manning, A. D., Steffen, W., Rose, D. B., Daniell, K., Felton, A., ... Wade, A. (2007). Mind the sustainability gap. *Trends in Ecology and Evolution*, 22(12), 621-624. doi:10.1016/j.tree.2007.08.016
- Fletcher, R. (2012). Using the master's tools? Neoliberal conservation and the evasion of inequality. *Development and Change*, 43(1), 295–317. <http://doi.org/10.1111/j.1467-7660.2011.01751.x>
- Flora and Fauna International. (2016). Our history | Fauna & Flora International. Retrieved from <http://www.fauna-flora.org/about/our-history/>
- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, 12(2), 219-245. doi: 10.1177/1077800405284363
- Gissibl, B., Höhler, S., & Kupper, P. (2012). *Civilizing nature: National parks in global historical perspective*. New York: Berghahn Books.
- Global Tiger Initiative. (2014, March 11). Against All Odds, Nepal Emerges as a Potential Wildlife Conservation Success Story. Retrieved from

- <http://globaltigerinitiative.org/2014/03/against-all-odds-nepal-emerges-as-a-potential-wildlife-conservation-success-story/>
- Godfrey, E. (2013). Peanut butter salvation: The replayed assumptions of “community” – conservation in Zambia. *Journal of Contemporary African Studies*, 31(3), 380–398. <http://doi.org/10.1080/02589001.2013.804245>
- GoN = Government of Nepal. (2015). *Chitwan National Park and its buffer zone: Management plan 2013-2017*. Retrieved from http://www.chitwannationalpark.gov.np/index.php/news/doc_download/28-management-plan-printed
- Gramsci, A. (1971). *Selections from the prison notebooks of Antonio Gramsci*. London, United Kingdom: Lawrence & Wishart.
- Gramsci, A. (2000). *The Gramsci reader: Selected writings, 1916-1935*. Retrieved from <http://ouleft.org/wp-content/uploads/gramsci-reader.pdf>
- Gramsci, A. (2014). *Antonio gramsci: Selections from the prison notebooks*. New York, NY: International Publishers.
- Gurung, B., Smith, J. L., McDougal, C., Karki, J. B., & Barlow, A. (2008). Factors associated with human-killing tigers in Chitwan National Park, Nepal. *Biological Conservation*, 141(12), 3069-3078. doi:10.1016/j.biocon.2008.09.013
- Haddad, N. M., Brudvig, L. A., Clobert, J., Davies, K. F., Gonzalez, A., Holt, R. D., ... Townshend, J. R. (2015). Habitat fragmentation and its lasting impact on Earth’s ecosystems. *Science Advances*, 1(2), e1500052–e1500052. <http://doi.org/10.1126/sciadv.1500052>
- Igoe, J., & Brockington, D. (2007). Neoliberal conservation : A brief introduction. *Conservation and Society*, 5(4), 432–449.
- Igoe, J., Neves, K., & Brockington, D. (2010). A spectacular eco-tour around the historic bloc: Theorising the convergence of biodiversity conservation and capitalist expansion. *Antipode*, 42(3), 486–512. <http://doi.org/10.1111/j.1467-8330.2010.00761.x>
- Igoe, J. (2004). Fortress conservation: A social history of national parks. In *Conservation and globalization: A study of the national parks and indigenous communities from East Africa to South Dakota* (pp. 69-102). Belmont, CA: Thomson/Wadsworth.
- IUCN = International Union for Conservation of Nature. (2014, March 14). IUCN - Nepal celebrates ‘zero poaching year’ for rhino, tiger and elephant. Retrieved from http://www.iucn.org/knowledge/focus/reaching_conservation_goals/?14555/Nepal-celebrates-zero-poaching-year-for-rhino-tiger-and-elephant
- Jerneck, A., & Olsson, L. (2011). Breaking out of sustainability impasses: How to apply frame analysis, reframing and transition theory to global health challenges. *Environmental Innovation and Societal Transitions*, 1(2), 255-271. doi: 10.1016/j.eist.2011.10.005
- Jones, K. (2012). Unpacking Yellowstone: The American national park in global perspective. In *Civilizing nature: National parks in global historical perspective* (pp. 31-49). New York: Berghahn Books.
- Kalamandeen, M., & Gillson, L. (2007). Demything “wilderness”: Implications for protected area designation and management. *Biodiversity and Conservation*, 16(1), 165–182. <http://doi.org/10.1007/s10531-006-9122-x>
- Kathmandu Post. (2014, October 24). Human-wildlife conflict a threat to conservation efforts: Experts. *Kathmandu Post*. Retrieved from <http://kathmandupost.ekantipur.com/news/2014-10-24/human-wildlife-conflict-a-threat-to-conservation-efforts-experts.html>
- Kathmandu Post. (2015a, May 5). 3rd zero poaching yr of rhinos observed. *Kathmandu Post*. Retrieved from <http://kathmandupost.ekantipur.com/news/2015-05-05/3rd-zero-poaching-yr-of-rhinos-observed.html>

- Kathmandu Post. (2015b, April 5). At what cost? *Kathmandu Post*. Retrieved from <http://kathmandupost.ekantipur.com/printedition/news/2015-04-03/at-what-cost.html>
- Kathmandu Post. (2016a, January 27). CCTV cameras to be installed in CNP area. *Kathmandu Post*. Retrieved from <http://kathmandupost.ekantipur.com/news/2016-01-27/cctv-cameras-to-be-installed-in-cnp-area.html>
- Kathmandu Post. (2016b, January 23). Locals barred from entering national park. *Kathmandu Post*. Retrieved from <http://kathmandupost.ekantipur.com/news/2016-01-23/locals-barrred-from-entering-national-park.html>
- Kathmandu Post. (2016c, March 3). Rhino translocation resumes after 13 yrs. *Kathmandu Post*.
- Kideghesho, J. R. (2016). Reversing the trend of wildlife crime in Tanzania: Challenges and opportunities. *Biodiversity Conservation*, 25(3), 427-449. doi:10.1007/s10531-016-1069-y
- King, B. (2010). Conservation Geographies in Sub-Saharan Africa: The Politics of National Parks, Community Conservation and Peace Parks. *Geography Compass*, 4(1), 14–27. <http://doi.org/10.1111/j.1749-8198.2009.00288.x>
- Kolbert, E. (2014). *The sixth extinction: An unnatural history*. New York: Picador.
- Krauss, J., Bommarco, R., Guardiola, M., Heikkinen, R. K., Helm, A., Kuussaari, M., ... Steffan-Dewenter, I. (2010). Habitat fragmentation causes immediate and time-delayed biodiversity loss at different trophic levels. *Ecology Letters*, 13(5), 597–605. <http://doi.org/10.1111/j.1461-0248.2010.01457.x>
- Kupper, P. (2012). Translating Yellowstone: Early European national parks, weltnaturschutz and the Swiss model. In *Civilizing nature: National parks in global historical perspective*(pp. 123-139). New York, NY: Berghahn Books.
- Lunstrum, E. (2014). Green Militarization: Anti-poaching efforts and the spatial contours of Kruger National Park. *Annals of the Association of American Geographers*, 104(4), 816–832. <http://doi.org/10.1080/00045608.2014.912545>
- MacDonald, K. I. (2010). The devil is in the (bio)diversity: Private sector “engagement” and the restructuring of biodiversity conservation. *Antipode*, 42(3), 513–550. <http://doi.org/10.1111/j.1467-8330.2010.00762.x>
- Mace, G. M. (2014). Whose conservation? *Science*, 345(6204), 1558-1560. doi:10.1126/science.1254704
- MacKenzie, J. M. (1988). *The empire of nature: Hunting, conservation, and British imperialism*. Manchester, Great Britain: Manchester University Press.
- MacMillan, D. C., & Nguyen, Q. A. (2013). Factors influencing the illegal harvest of wildlife by trapping and snaring among the Katu ethnic group in Vietnam. *Oryx*, 48(2), 304-312. doi:10.1017/s0030605312001445
- Martin, E., Martin, C., & Vigne, L. (2013). Successful reduction in rhino poaching in Nepal. *Pachyderm*, 54, 66-73. Retrieved from <http://www.pachydermjournal.org/index.php/pachy/article/view/321>
- Matthews, T. J., Cottee-Jones, H. E., & Whittaker, R. J. (2014). Habitat fragmentation and the species-area relationship: A focus on total species richness obscures the impact of habitat loss on habitat specialists. *Diversity and Distributions*, 20(10), 1136–1146. <http://doi.org/10.1111/ddi.12227>
- McCallum, M. L. (2015). Vertebrate biodiversity losses point to a sixth mass extinction. *Biodiversity and Conservation*, 24(10), 2497–2519. <http://doi.org/10.1007/s10531-015-0940-6>
- McSweeney, J. (2014). The absence of class: Critical development, NGOs and the misuse of Gramsci's concept of counter-hegemony. *Progress in Development Studies*, 14(3), 275-285. doi:10.1177/1464993414521339

- Messer, K. D. (2010). Protecting endangered species: When are shoot-on-sight policies the only viable option to stop poaching? *Ecological Economics*, 69(12), 2334-2340. doi:10.1016/j.ecolecon.2010.06.017
- Mielke, J., Vermaßen, H., Ellenbeck, S., Milan, B. F., & Jaeger, C. (2016). Stakeholder involvement in sustainability science—A critical view. *Energy Research & Social Science*, 17, 71-81. doi:10.1016/j.erss.2016.04.001
- Moolakkattu, J. S. (2009). Robert W. Cox and critical theory of international relations. *International Studies*, 46(4), 439-456. doi:10.1177/002088171004600404
- Morton, A. D. (2011). Social forces in the struggle over hegemony. In *Rethinking Gramsci* (pp. 147-166). Milton Park, Abingdon: Routledge.
- Muir, J. (2010). *My first summer in the Sierra*. New York, NY: Feather Trail.
- Nash, R. (2001). *Wilderness and the American mind* (4th ed.). New Haven, CT: Yale University Press.
- Neme, L. (2014, March 12). Good News for Animals in Nepal: A Full Year Without Poaching. Retrieved from <http://news.nationalgeographic.com/news/2014/03/140312-nepal-chitwan-national-park-wildlife-poaching-world/>
- Neumann, R. P. (2002). *Imposing wilderness: Struggles over livelihood and nature preservation in Africa* (2nd ed.). Berkeley, CA: University of California Press.
- Neumann, R. P. (2004). Moral and discursive geographies in the war for biodiversity in Africa. *Political Geography*, 23(7), 813–837. <http://doi.org/10.1016/j.polgeo.2004.05.011>
- OECD = Organization for Economic Co-operation and Development. (2014). Official development assistance for biodiversity. Retrieved from <https://www.cbd.int/financial/cop12event/oecd-oda.pdf>
- Olwig, K. (1996). Reinventing common nature: Yosemite and Mount Rushmore - A meandering tale of double nature. In *Uncommon ground: Rethinking the human place in nature* (pp. 379-408). New York: W.W. Norton & Co.
- Oscarenfotos. (2012). *Half Dome and moon, Yosemite Valley, Ansel Adams* [Photograph]. Retrieved from <https://oscarenfotos.files.wordpress.com/2013/02/ansel-adams-half-dome-and-moon-yosemite-valley-ca-circa-1950-painting-artwork-print.jpeg>
- Patnaik, A. (2012). The contemporary significance of Gramsci's critique of civil society. *The Journal of Labor and Society*, 15(4), 577-588. doi:10.1111/wusa.12005
- Peterson, M. N., Birckhead, J. L., Leong, K., Peterson, M. J., & Peterson, T. R. (2010). Rearticulating the myth of human-wildlife conflict. *Conservation Letters*, 3(2), 74–82. <http://doi.org/10.1111/j.1755-263X.2010.00099.x>
- Piermattei, S. (2013). Local farmers vs. environmental universalism: Conflicts over nature conservation in the parco nazionale dei monti sibillini, Italy. *Journal of Political Ecology*, 20, 306–317. Retrieved from <http://www.scopus.com/inward/record.url?eid=2-s2.0-84896912925&partnerID=40&md5=c3c9770767dcd24ab54fe2a2c476906e>
- Pievani, T. (2014). The sixth mass extinction: Anthropocene and the human impact on biodiversity. *Rendiconti Lincei*, 25(1), 85–93. <http://doi.org/10.1007/s12210-013-0258-9>
- Pochet, F. (2014). Discourse analysis of nature conservation policies in Africa: A Beninese case study. *EchoGeo*, 29, 2–15.
- Prendergast, D. K., & Adams, W. M. (2003). Colonial wildlife conservation and the origins of the Society for the Preservation of the Wild Fauna of the Empire (1903–1914). *Oryx*, 37(02), 251–260. <http://doi.org/10.1017/S0030605303000425>
- Quiroga, D. (2009). Crafting nature : the Galapagos and the making and unmaking of a “ natural laboratory .” *Journal of Political Ecology*, 16, 123–140.
- Rashkow, E. D. (2014). Idealizing inhabited wilderness: A revision to the history of indigenous peoples and national Parks. *History Compass*, 12(10), 818–832. <http://doi.org/10.1111/hic3.12190>

- Rauniyar, I. (2015, May 16). Nepal's rhino numbers rise steadily thanks to anti-poaching measures. Retrieved from <http://www.theguardian.com/environment/2015/may/16/nepals-rhino-numbers-rise-steadily-thanks-to-anti-poaching-measures>
- Redpath, S. M., Bhatia, S., & Young, J. (2015). Tilting at wildlife: reconsidering human–wildlife conflict. *Oryx*, 49(2), 222–225. <http://doi.org/10.1017/S0030605314000799>
- Redpath, S. M., Young, J., Evely, A., Adams, W. M., Sutherland, W. J., Whitehouse, A., ... Gutiérrez, R. J. (2013). Understanding and managing conservation conflicts. *Trends in Ecology and Evolution*, 28(2), 100–109. <http://doi.org/10.1016/j.tree.2012.08.021>
- Ross, C. (2015). Tropical nature as global patrimoine: Imperialism and international nature protection in the early Twentieth century. *Past and Present*, 226(10), 214–239. <http://doi.org/10.1093/pastj/gtu019>
- Rybicki, J., & Hanski, I. (2013). Species-area relationships and extinctions caused by habitat loss and fragmentation. *Ecology Letters*, 16(SUPPL.1), 27–38. <http://doi.org/10.1111/ele.12065>
<http://doi.org/10.1080/14616688.2015.1116599>
- Safe Systems = WWF Tigers Alive Initiative. (2015). *Safe systems: Revolutionizing human wildlife conflict*. Retrieved from http://www.zeropoaching.org/pdfs/HWC_concept_note.pdf
<http://doi.org/10.1111/j.1755-263X.2009.00079.x>
- Schuetze, C. (2015). Narrative Fortresses: Crisis narratives and conflict in the conservation of Mount Gorongosa, Mozambique. *Conservation and Society*, 13(2), 141. <http://doi.org/10.4103/0972-4923.164193>
- Shahi, P. (2016, February 12). Poaching still a major threat to tigers. *Kathmandu Post*. Retrieved from <http://kathmandupost.ekantipur.com/printedition/news/2016-02-12/poaching-still-a-major-threat-to-tigers.html>
- Simlai, T. (2015). Global rise of green militarisation. *Economic and Political Weekly*, I(50), 39–44.
- Slater, C. (1996). Amazonia as edenic narrative. In *Uncommon ground: Toward reinventing nature* (pp. 91-113). New York: W.W. Norton & Co.
- Snijders, D. (2014). Wildlife policy matters: Inclusion and exclusion by means of organisational and discursive boundaries. *Journal of Contemporary African Studies*, 32(2), 173–189. <http://doi.org/10.1080/09637494.2014.937163>
- Spence, M. (1996). Dispossessing the wilderness: Yosemite Indians and the national park ideal, 1864-1930. *Pacific Historical Review*, 65(1), 27–59. <http://doi.org/10.2307/3640826>
- Squire, C., Andrews, M., & Tamboukou, M. (2013). *Doing Narrative Research*. (C. Squire, M. Andrews, & M. Tamboukou, Eds.) *Doing Narrative Research* (Second). London: Sage Publications.
- Stankey, G. H. (1989). Linking parks to people: The key to effective management. *Society & Natural Resources*, 2(1), 245-250. doi:10.1080/08941928909380689
- Steinmetz, R., Srirattaporn, S., Mor-Tip, J., & Seuaturien, N. (2014). Can community outreach alleviate poaching pressure and recover wildlife in South-East Asian protected areas? *Journal of Applied Ecology*, 51(6), 1469-1478. doi:10.1111/1365-2664.12239
- Thapa, K., Nepal, S., Thapa, G., Bhatta, S. R., & Wikramanayake, E. (2013). Past, present and future conservation of the greater one-horned rhinoceros *Rhinoceros unicornis* in Nepal. *Oryx*, 47(3), 345-351. doi:10.1017/s0030605311001670
- The Himalayan Times. (2016a, February 29). Country's wildlife tourism sector in peril, say entrepreneurs. *The Himalayan Times*. Retrieved from <https://thehimalayantimes.com/business/countrys-wildlife-tourism-sector-in-peril-say-entrepreneurs/>
- The Himalayan Times. (2016b, January 23). Locals barred from entering national park. *The Himalayan Times*. Retrieved from <https://thehimalayantimes.com/nepal/locals-barrred-from-entering-national-park/>
- Thoreau, H. D. (2013). *Walden*. Las Vegas, NV: Empire Books.

- Thoren, H., & Persson, J. (2013). The philosophy of interdisciplinarity: Sustainability science and problem-feeding. *Journal for General Philosophy of Science*, *44*, 337-355. doi:10.1007/s10838-013-9233-5
- TX2 = WWF Tigers Alive Initiative. (2016). *TX2 annual report 2015*. Retrieved from Worldwide Fund for Nature website: <http://tigers.panda.org/reports/annual-report-2015/>
- United Nations. (2005). *2005 world summit outcome*. Retrieved from <http://www.un.org/womenwatch/ods/A-RES-60-1-E.pdf>
- UNODC = United Nations Office on Drugs and Crime. (2014, May 13). Wildlife crime worth USD 8-10 billion annually, ranking it alongside human trafficking, arms and drug dealing in terms of profits: UNODC chief. Retrieved from <https://www.unodc.org/unodc/en/frontpage/2014/May/wildlife-crime-worth-8-10-billion-annually.html>
- White, N. (2013). The “white gold of jihad”: violence, legitimisation and contestation in anti-poaching strategies. *Journal of Political Ecology*, *21*, 452–474.
- Wilkie, D. S., Morelli, G. A., Demmer, J., Starkey, M., Telfer, P., & Steil, M. (2006). Parks and people: Assessing the human welfare effects of establishing protected areas for biodiversity conservation. *Conservation Biology*, *20*(1), 247-249. doi:10.1111/j.1523-1739.2005.00291.x
- Witter, R. (2013). Elephant-induced displacement and the power of choice: moral narratives about resettlement in Mozambique’s Limpopo National Park. *Conservation and Society*, *11*(4), 406–416. <http://doi.org/10.4103/0972-4923.125756>
- WWF = Worldwide Fund for Nature. (2008, July). A promising future for rhino's in Nepal's Chitwan National Park. *Focus*, *30*(4), 1-8. Retrieved from http://wwf.worldwildlife.org/site/DocServer/FOCUS_JulAug08.pdf?docID=721
- WWF = Worldwide Fund for Nature. (2014). History of Nepal conservation: Small country, big impact. *World Wildlife Magazine*. Retrieved from <https://www.worldwildlife.org/magazine/issues/winter-2014/articles/history-of-nepal-conservation>
- WWF = Worldwide Fund for Nature. (2016a, January 15). Two more Sniffer Dogs added in Chitwan National Park. Retrieved from http://wwf.panda.org/wwf_news/?259710/Two-more-Sniffer-Dogs-added-in-Chitwan-National-Park
- WWF = Worldwide Fund for Nature. (2016b). Hariyo Ban: What we do. Retrieved from http://www.wwfnepal.org/hariyobanprogram/what_we_do/
- WWF = Worldwide Fund for Nature. (2016c, May 2). No rhinos poached in Nepal for past two years. Retrieved from http://wwf.panda.org/wwf_news/?266870/No-rhinos-poached-in-Nepal-for-past-two-years
- Zero Poaching. (2015a). *WWF and zero poaching: Vision. Mission. Strategy*. Retrieved from Worldwide Fund for Nature website: <http://tigers.panda.org/reports/zero-poaching/>
- Zero Poaching. (2015b). Developing an approach to community-based crime prevention. Retrieved from <http://www.zeropoaching.org/pdfs/Community-based-crime%20prevention-strategies.pdf>
- Zero Poaching. (2015c). *Zero poaching toolkit*. Retrieved from <http://www.zeropoaching.org/>
- Zero Poaching = United Nations Office on Drugs and Crime. (2012). *Wildlife and forest crime analytic toolkit*. Retrieved from http://www.zeropoaching.org/pdfs/Wildlife_and_Forest_Crime_Analytic_Toolkit.pdf