Protected Area Planning and Management in the Kullu District of Himachal Pradesh, India: A case study of environmental justice and learning for biodiversity conservation

by

Ariane Dilay

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Clayton H. Riddell Faculty of Environment, Earth, and Resources
Natural Resources Institute
University of Manitoba
Winnipeg

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ABSTRACT

While Protected Areas (PAs) are essential for the preservation of biodiversity, conservation efforts should not impose injustices onto local communities. Using a qualitative case study that included document review, semi-structured interviews, participant observation and thematic analysis, the planning and management of a network of PAs in the Kullu District of Himachal Pradesh, India were examined. The study 1) describes the planning and management approach for PAs in Kullu, 2) explains how the planning and management approach has changed since the declaration of the first national park in 1984, 3) evaluates the integration of the four attributes of environmental justice (distributive, procedural, recognitional and restorative) in PA planning and management, and 4) identifies learning outcomes for those involved in or affected by PAs in the Kullu District and relates such outcomes to environmental justice. Overall, the data reveal that the planning and management of PAs in Kullu operates under an Exclusive Model that restricts local people from accessing and utilizing natural resources within PAs, while also excluding them from participating in planning and management activities. In terms of environmental justice, the data show that there is an uneven distribution of benefits from PAs and inequitable restrictions on resource use, a lack of early and ongoing consultation with locally affected communities, and uneven and inadequate compensation for loss of traditional rights. One important learning outcome identified by forest officers is a movement away from the practice of forced displacement of people. Although this suggests a transition toward a more inclusive model, much work remains to advance environmental justice in PA planning and management in the Kullu District. The data also indicate that inclusivity and advancement of environmental justice in PA planning and management could be achieved through: collaborative knowledge exchange between forest officers and community members; opportunities for community members to participate in planning and management activities; and the recognition of marginalized members of society in PA planning.

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Chapter 1: Introduction

1.1 Background

Since the creation of the world's first national park in 1872, the planning and management of protected areas (PAs) has been dominated by an exclusive approach, that limits and regulates land use by resource users both local and external to the area. Often this creates conflict with existing uses by displacing people and their long-standing means of livelihood (S. M. Andrade & R. Rhodes, 2012). The intent of most PAs is and has been to conserve and/or enhance biodiversity through graduated levels of regulation of which those for national parks generally are the most stringent. Approximately 14.7% of the Earth's land surface and 10% of oceans fall under PA designation (IUCN, 2016). Despite the positive intent of PAs, their designation, planning and management may create conflict, especially so when existing uses are not considered and existing users are excluded from participation. In addition, exclusion of indigenous uses may be contrary to biodiversity goals (Schuster, Germain, Bennett, Reo, & Arcese, 2019) and lack of local participation may generate hostility and opposition to conservation efforts (e.g., S. M. Andrade & R. Rhodes, 2012).

Such has been the case in India, where a long history of exclusion and restrictions associated with PAs have fostered resistance among local communities to some conservation programs (A. Mukherjee, 2009). Conflicts over access to land and natural resources spurred by the development of PAs continue to emerge especially between rural populations and their supporters, and various levels of governments across the country (A. Mukherjee, 2009). As of April 2020, there are 870 PAs in India divided into five categories: national parks, wildlife sanctuaries, conservation reserves, community reserves and marine protected areas, covering approximately 5% of the country ("Protected Areas of India," 2019). This study is situated in the Kullu District of Himachal Pradesh in northern India where there is currently one notified national park, two proposed national parks that are in the process of settlement of local forest rights before receiving legal notification, six wildlife sanctuaries, as well as several nature parks.

As alluded to above, issues of environmental justice are inherently embedded in the designation, planning and management of national parks and other PAs for the purpose of biodiversity conservation. The concept of environmental justice emerged in the United States in the 1980's as a response to the "environmental racism" felt in marginalized communities that experienced environmental degradation at disproportionate rates (Hart, 2014). For example, minority and racialized urban neighbourhoods were often the sites of landfills and toxic and hazardous wastes that adversely affected their health and living conditions (Hart, 2014). As a result, early attributes of environmental justice focused mainly on equity in the distribution of environmental risks (Dahlberg, Rohde, & Sandell, 2019; Schlosberg, 2004; Trubek, 1980). Further interpretation and analysis of environmental justice expanded on distributive justice to include equitable distribution of benefits of development rather than focusing solely on environmental harms, and began to introduce ideas of procedural and recognitional justice (Jenkins & Strategist, 2018; Motupalli, 2018; Schlosberg, 2004). Most recently, a fourth attribute of environmental justice emerged: restorative justice, emphasizing the importance of remediating adverse environmental and social impacts (Jenkins & Strategist, 2018; Motupalli, 2018). While relationships between environmental justice and sustainable development have been frequently discussed in literature (e.g., Agyeman, Bullard, & Evans, 2003), the role of environmental justice in conservation efforts and PAs generally requires further examination.

As the numbers and populations of wildlife species around the world continue to decline, the need to protect and conserve more land and organisms remains a top global priority (IUCN, 2016). PAs are seen as a means to address this priority. Planning and management of new and existing PAs is continuously evolving in an attempt to reconcile conservation goals with needs and aspirations across scales from local to the regional and beyond. Learning from previous experiences and shortcomings in the establishment of PAs could help to improve PA planning and management and advance environmental justice in conservation efforts. For example, in a study of marine protected areas in the Philippines and Indonesia, Nelson et al. (2019) discovered that participatory learning opportunities for PA practitioners and local resource users resulted in capacity building and collaborative partnerships based on trust and respect to be developed between local communities and PA managers. Enhancing learning opportunities and outcomes

for communities and organizations involved in conservation has been deemed good practice for improving conservation results (Clark, 2002).

Learning – and the study of learning – has become an increasingly important topic in the field of natural resources and environmental management (NREM). Learning is seen as a powerful tool for dealing with 'wicked' problems of such intricacy and magnitude as issues of global sustainability and NREM (Diduck, 2010; Rittel & Webber, 1973). NREM challenges are also seen as fruitful grounds for the study and advancement of learning theories because of their complexity, uncertainty and diversity of stakeholders involved (Gerlak, Heikkila, Smolinski, Huitema, & Armitage, 2018; Suškevičs, Hahn, Rodela, Macura, & Pahl-Wostl, 2018). Several learning conceptualizations have emerged over the years and the most commonly studied are transformative, social and policy learning (Suškevičs et al., 2018). Although the study of learning in NREM has become more mainstream over the years, recent studies shed light on the lack of coherence in the learning literature and the dire need for clear and consistent terminology, especially when describing learning concepts and their outcomes (Gerlak et al., 2018; Suškevičs et al., 2018).

Examining the learning experiences and outcomes of actors involved in PA planning and management has the potential for advancing environmental justice in conservation efforts, which could help to harmonize conservation goals and community interests. Further research on learning and environmental justice in a conservation setting is needed to better understand this relationship and its potential for conflict resolution in PAs.

1.2 Purpose and objectives

Environmental justice and learning are both increasingly used as frameworks for analyzing the effectiveness and success of conservation efforts such as national parks and other PAs (Braun & Clarke, 2006; Dahlberg et al., 2019; Hart, 2014; Sinclair, Collins, & Spaling, 2011). Nonetheless, the relationships between learning and environmental justice within conservation efforts deserve further examination especially in regard to their potential for conflict resolution in PAs. Thus, the purpose of the study was to examine if learning by PA practitioners and local resource users through the planning and management of PAs can help to advance environmental justice within

conservation efforts to help reconcile conservation goals with community needs and aspirations. The field research was carried out in the Kullu District, Himachal Pradesh, India.

The research objectives were to:

1) Describe the planning and management approach of protected areas in the Kullu District;
2) Analyze how the planning and management approach of protected areas in Kullu has changed since the establishment of the state's first national park there in 1984;
3) Evaluate the integration of the four attributes of environmental justice – distributive, procedural, restorative, and recognitional – in the planning and management of PAs in the Kullu District; and
4) Identify learning opportunities and outcomes for individuals, communities, organizations and others involved in or affected by PAs in Kullu and relate such opportunities and outcomes to environmental justice.

1.3 Summary of methods

The research followed a qualitative case study strategy of inquiry (Creswell, 2014). Influenced by constructivist and transformative worldviews, the research was designed to include perspectives of marginalized sectors of society and address issues of inequality and oppression. The planning and management of a network of PAs in the Kullu District was selected as the focus of the research due to longstanding conflict between conservation interests and existing land uses in the region. In addition, prior research in the region and on the GHNP, including that of Natural Resources Institute (NRI) personnel, has produced baseline data and established a network of local connections that assisted in the research (e.g., Davidson-Hunt, 1995; Mckay, 2001).

The research included the review and analysis of previous research conducted in the area as secondary data sources. In support of the document review, several qualitative methods of data collection were utilized in the field, including semi-structured interviews and participant observation. A thematic analysis of interview data, using the qualitative data analysis software package NVivo, was used to code for major themes both drawn from secondary and primary data

sources, and to analyze and report on commonalities, contrasts and patterns in those themes (Braun & Clarke, 2006). The methods are described in Chapter 3.

Some limitations of the research included weather and road conditions that prevented access to some remote villages (Photo 1), which reduced the possibility for data triangulation in some cases. Cultural and linguistic differences brought challenges to the collection and interpretation of interview data. As well, the regional context of the research may result in low transferability to other PAs around the globe. Further challenges and steps taken to overcome such challenges are described in Chapter 3.



Photo 1: Village Pulga near the proposed Khirganga National Park made inaccessible by snow

1.4 Significance of the study

The study provides a regional narrative of the planning and management of the network of PAs in the Kullu District through the interconnected themes of environmental justice and learning. As such, the research adds empirical data to the body of knowledge about environmental justice and learning in NREM in the context of local acceptability of and involvement in biodiversity conservation efforts. The results of the research could help to improve PA planning and management and reduce conflict in conservation efforts by contributing to the understanding of the role of participant learning in the development and management of PAs. Further, the research

should contribute to the development of learning theory and practice in NREM and specifically in the pursuit of environmental justice. As suggested by several scholars, there is a growing need to investigate participants' learning experiences and outcomes to improve natural resources management decision-making (e.g., Diduck, Sinclair, Hostetler, & Fitzpatrick, 2012). In addition to shedding light on learning experiences and outcomes, the research also discusses power dynamics and other barriers to learning, which also reveal sources of environmental injustice in PAs. Overall, evidence from this empirical case study could be used to improve the management and planning of PAs generally in a way that facilitates learning and better addresses issues of environmental justice.

1.5 Organization of the thesis

The thesis is organized into seven chapters. Following this introductory chapter, Chapter Two addresses the current literature on the topics canvassed above. The literature review begins with a background on PAs and PA planning and management. This section is further divided into a review of existing approaches of PA planning and management, PA planning and management in an Indian context, and finally a description of conflict in PAs in India. The next section introduces the concept of environmental justice and its historical trajectory, followed by a discussion on environmental justice in biodiversity conservation. The last section of Chapter Two introduces learning conceptualizations, then links these with conservation efforts and PAs and introduces learning as a tool for advancing environmental justice. Chapter Three provides a detailed description of the study area, as well as an account of the specific data collection methods used in the field and methods for data analysis. In Chapter Four, the first part of the results dealing with the planning and management approach of PAs in Kullu are presented, which include a complete description of the PAs in the study area. Subsequent results that deal with environmental justice and learning are presented in Chapters Five and Six, respectively. Chapter Seven wraps up the discussion and presents conclusions and recommendations.

Chapter 2: Protected Areas, Environmental Justice and Learning

2.1 Introduction

According to the IUCN (2016), "a protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values". PAs include national parks, nature reserves, community conserved areas, wilderness areas, marine protected areas, and others, and are ascribed specific restrictions and limitations based on their designation and management plan (Dearden & Bennett, 2015). A management plan is the document that guides the management of PAs, for which there are universal guidelines published by the IUCN. However, it is also encouraged that they be tailored to the local context. Recognizing how PAs became a widely used method for protecting biodiversity and how management plans are created are important steps in understanding why PAs often induce conflict.

As conflict in PAs tends to be rooted in the incompatibility of interests of the various actors involved or affected, evaluating how components of environmental justice are considered in PA planning and management is essential. To scrutinize biodiversity conservation efforts in PAs through an environmental justice framework may shed light on points of contention and contribute to conflict resolution.

Finally, action-oriented learning can be described as a process of utilizing information to alter one's response to a changing environment and to identify errors and correct them (Clark, 2002). This type of learning can be understood as a feedback loop where one must realize that undesired outcomes cannot be corrected without changing one's behaviour and that developing new methods of handling a situation and acquiring different perspectives on a problem can change that outcome (Clark, 2002). Action-oriented learning concepts have become increasingly popular in the biodiversity conservation discourse as learning from past experiences has been identified as a way to improve the effectiveness of such efforts.

This chapter begins by describing the history of PAs generally from a time when lands were set aside for resource use and hunting to the more contemporary legal protection of areas for the conservation of biodiversity. The chapter then describes planning and management frameworks for PAs from a global standpoint followed by an overview of the planning and management approach of PAs in the Kullu District and concludes with examples of past, current and on-going conflict in PAs globally and specific to the Kullu District. The second section of the chapter outlines the evolution of environmental justice and its four attributes, followed by the introduction of environmental justice as a component of biodiversity conservation, and more specifically in PAs. The next section of this chapter introduces learning conceptualizations and their implications for NREM and environmental justice. The chapter concludes with a description of the conceptual framework that was used to guide the analysis portion of the research.

2.2 Protected Areas

2.2.1 History of PAs

The global history of PAs begins over 2,000 years ago in India where land would be set aside by royal decree for the protection of natural resources (Phillips, 2004). In Europe, the protection of hunting grounds for the rich had been practiced for more than a thousand years (Moore, 2020). Additionally, the protection of sacred areas was a common practice globally for traditional and Indigenous communities (Moore, 2020). The first true national park (Yellowstone) protected under United States law was established in 1872 for the benefit and enjoyment of people (Moore, 2020; Phillips, 2004). The emergence of the Yellowstone National Park, and many others after it, gave rise to the Exclusive Model of PA planning and management, which dominated the conservation movement for the next century (Ghate, 2003; Mckay, 2001). An alternate model, known as the Inclusive Model, appeared in the 1960's and 1970's mainly in Western Europe where very few large areas of 'untouched' environment existed (Mckay, 2001). The two models, further described below, represent two very different worldviews on human-nature interactions, resulting in strikingly different planning and management approaches.

The Exclusive Model is centred on the decoupling of conservation goals from the interests of local communities and adopts an anti-participatory approach to PA planning and management (Ghate, 2003). This approach can lead to the forced displacement of communities and denial of their traditional rights to exploit land and natural resources found inside PA boundaries (Ghate, 2003; Mckay, 2001; Moore, 2020). Under this model, traditional and customary livelihood practices are typically considered detrimental to the environment and thus antagonistic to conservation goals. Strict legal or policy frameworks of exclusion and restrictions are often adopted under the Exclusive Model, which continues to dominate in a number of PAs around the world (Ifeoluwa Adewumi, Funck, Nguyen, & Usui, 2019; Ghate, 2003; Mckay, 2001; Walsh, 2018). Although this model could likely remain suitable for remote locations where there are few local populations using minimal resources, alternative approaches that allow the amalgamation of humans and wilderness are necessary in places where humans depend on their natural surrounding for survival and livelihood needs (Ghate, 2003; Mckay, 2001; Walsh, 2018). It also has been argued that the practices of migratory pastoralists are analogous to wild herbivores' movement through landscapes and bring similar benefits to plant communities and ecosystems (e.g. Yilmaz, Zogib, Urivelarrea, & Caglayan, 2019).

The Inclusive Model of PA planning and management is grounded in an understanding that the interests of local communities may be pivotal to the conservation movement. Supporters of this model argue that the needs and values of local peoples living within PAs, or external resource users that depend on resources found within PAs, should take precedence in conservation efforts (Ghate, 2003; Locke et al., 2016; Mckay, 2001; Thomas & Middleton, 2003). PAs that focus on landscape conservation and respect longstanding land tenure and resource use by human populations are preferred under the Inclusive Model over areas of wildlife protection that remove communities and restrict resource use (Borrini-Feyerabend, Johnston, & Pansky, 2006). This model recognizes that even pristine environments are often used by local people and have materialized from historical patterns of human settlement in the area (Colchester, 1994; Mckay, 2001; Walsh, 2018).

Today, support for the Inclusive Model continues to expand. More participatory approaches to conservation, in which the role of local communities in the planning and management of PAs are enhanced, are increasingly advocated for (Bajracharya, Gurung, &

Basnet, 2007; Kohler & Brondizio, 2017; S. M. Andrade & R. Rhodes, 2012; Wells & McShane, 2004). This model even goes to show support for local use of natural resources by suggesting that traditional livelihood practices actually improve and maintain the quality and quantity of biodiversity in and around PAs (Mckay, 2001; A. Mukherjee, 2009). As a result, the model pursues the inclusion of local-level institutions in planning and management and embraces the perspective that local communities are the most suitable managers of their local environment (Locke et al., 2016). Finally, several scholars have noted the importance of involving different stakeholder groups in PA planning and management for the multiple benefits of increasing knowledge sharing, enhancing pluralistic skills, and offering more socially acceptable decision-making (Locke et al., 2016; A. Mukherjee, 2009; Ormsby & Bhagwat, 2010).

2.2.2 History of PAs in India

Wildlife management in India is closely linked to forest management because of the high dependency of human populations on forest products, whether it be for subsistence or cash-based, which inevitably brings humans and wildlife in close contact (Mckay, 2001). During British colonial times, the Government Forest Act (1865) later replaced by the Indian Forest Act (1878), which brought all forests not privately owned under the control of the Himachal Pradesh (HP) Forest Department or the Revenue Department (Kumar et al., 2020; Mckay, 2001). The nationalization of forests in India was followed by the system of forest classification, each class with a different level of rights allotted to local villagers (Mckay, 2001). The classes include: Reserved Forests, typically in remote areas where there are limited to no rights; Demarcated Protected Forests, typically in remote areas with valuable timber species where some rights are admitted; and Undemarcated Protected Forests, generally close to habitation where local people can obtain forest product, graze their animals and practice agriculture (Kumar et al., 2020; Mckay, 2001).

In the late 1880's, following the classification of forests across India, the process of settlement of rights began (Kumar et al., 2020; Mckay, 2001). Rather than terminating forest rights, which was common in many parts of the country, the process of settlement of rights in the Kullu District resulted in the acceptance and formalization of local forest rights (Mckay, 2001). In the Anderson Settlement Report (1886), most forest areas were placed under the protected

status rather than the reserve status, which allowed for the practice of local rights to continue. The recognition that local people were dependent on forest products and resources was an important reason why the settlement process was much different in Kullu than the rest of India. Under the protected status, villagers were still allotted significant rights to use forest products and pastures within the forests, which included livestock grazing, collecting timber, grass, leaves, manure, fuelwood, charcoal and agriculture (Mckay, 2001). The provision of such forest rights has hindered conservation efforts in parts of India, including GHNP in the Kullu District.

Along with the process of settlement of forest rights in India came restrictions on local use of forest products. If local use of forests was found not sustainable or became detrimental to conservation goals, the government reserved the right to revoke local rights that had been established during the settlement process (Mckay, 2001). The overall settlement process resulted in the formalization of individual rights, acquisition of land by the state, and establishment of local use rules and restrictions (Mckay, 2001). The forest settlement process, which resulted in a breakdown of existing systems of collective forest management, along with the newly established state dominance over forest management remain key to PA planning and management today.

During colonial and pre-colonial times, PAs mainly served as hunting reserves for Emperors and Maharajas (Kumar et al., 2020). In 1936, the Jim Corbett National Park (formerly known as Hailey National Park) was the first national park to be established in the country. Edward James Corbett, a former British Officer from Nainital in the Kumaon District of Uttarakhand in India was a hunter who had killed many tigers and leopards in the region between the years 1907 to 1938 (Sharma, 2014). The big cats were considered enemies of the villagers due to several attacks on local people and thus, the cats were hunted and killed to prevent human-wildlife conflicts. After investigating the reason for the abundance of fatal attacks, Jim Corbett discovered that shrinking habitat, food scarcity and bullet wounds were the primary reasons for tigers preying on humans (Sharma, 2014). The hunter became a conservationist and established the national park for the protection of tigers and their habitat in hopes of reducing human-wildlife conflict.

In the 1970's, the dramatic decline in the tiger population of India caused the prime minister at the time, Indira Gandhi, to launch the "Tiger Project" (Kumar et al., 2020). The project involved the establishment of nine tiger reserves patrolled by guards and the forced relocation of entire villages outside park boundaries (Kumar et al., 2020). The success of the project was demonstrated by a drastic increase in tiger numbers and their prey (Kumar et al., 2020). As of 2019, there are approximately 870 PAs in India including 104 national parks, 551 wildlife sanctuaries, 88 conservation reserves, and 127 community reserves (Kumar et al., 2020). While PAs in India were originally established to protect biodiversity, they have now expanded to consider socioeconomics and community development needs. Although the approach to planning and managing PAs in India has evolved, there remains significant challenges to the effective planning and management of PAs in the country (e.g., Chhatre & Saberwal, 2006; Karanth & Nepal, 2012; Zeeshan, Prusty, & Azeez, 2017).

2.2.3 Planning and management frameworks of PAs

Planning is a crucial step in ensuring PA management is done appropriately. A management plan is a document that describes the management objectives and how to achieve them, the purpose of the PA and its valued resources, and provides a framework for day-to-day operations as a tool to guide PA managers (Dearden & Bennett, 2015; Thomas & Middleton, 2003). Based on IUCN's publication of "Guidelines for Management Planning of Protected Areas", the four universal steps in creating a management plan begins with the formulation of a clear and precise conservation statement or objective followed by a pragmatic action plan for achieving the set goals; the next step involves developing a monitoring process to measure performance and achievements, and finally, describing the corrective actions needed to ensure goals are met (Thomas & Middleton, 2003). In addition, Thomas & Middleton (2003) argue that it is important for the management planning process to remain iterative such that the management plan is first drafted, implemented, then monitored, and that monitoring results are used to revise the management plan. In this feedback loop, lessons learned from implementation of the plan may help its modification and improvement. Finally, the importance of plans to remain flexible and adaptable to unpredicted outcomes that may arise is stressed (Locke et al., 2016; Thomas & Middleton, 2003).

Management plans from several countries point to the building blocks suggested by the IUCN. For example, in Nepal, management plans are described as means for managers to establish their conservation goals and develop strategies to achieve them, while incorporating monitoring as a way to measure success and failures to continuously improve management practices (Poudel, 2011). In Ukraine, the management of PAs requires planners to identify priorities and needs for action in a proposed park and to develop a 10-year strategy, which is reviewed every five years based on success and failures (Jungmeier & Prots, 2017). In Ontario, Canada, the management plan of a PA involves setting a purpose, developing a 20-year vision for the PA, identifying values, pressures and actions required to manage these, describing monitoring measures, and using monitoring results to ensure the adjustment and improvement of management plans (Ontario Ministry of Natural Resources, 2009). Although management plans often follow the IUCN's recommendations, the on-site management practices in PAs often differ from the prescribed plans.

In IUCN's guidelines on management planning, Thomas and Middleton (2003) argue that PA management plans should: i) be a process rather than a single event, ii) be concerned with the future, iii) be designed for problem-solving and encourage discussion, iv) follow a systematic approach, v) include the value judgments of concerned parties, vi) take a holistic approach, and vii) must remain flexible and adaptable to changing conditions. Although management plans can be drafted with consideration of the key features mentioned above, problems often arise during planning and again during implementation of the plans. These typically include lack of staff, funds and equipment to accomplish the prescribed management practices, lack of local support for conservation efforts, external pressures to exploit and develop land in the suggested PA, and limited communication with the public and other stakeholders (Locke et al., 2016; Thomas & Middleton, 2003). The adoption of an Inclusive Model that involves communities in conservation efforts has the potential to overcome such obstacles, especially the lack of local support. Drawing further from the Inclusive Model, adopting a holistic, participatory and inclusive approach has been recommended as best practice for building local support and enhancing the effectiveness of conservation efforts (Dahlberg et al., 2019; Hart, 2014; Thomas & Middleton, 2003). The management plan for the GHNP, developed by the wildlife branch of the

HP Forest Department, has been used as a model for the planning and management of other PAs in the Kullu District.

2.2.4 Conflicts in PAs

It is not surprising that the longstanding history of removal and exclusion of local communities and other resource users from PAs has been cause of retaliation and hostility toward conservation efforts globally. Access to land and resources and conflicting interests regarding the use of such land and resources are hotly debated topics worldwide. Resistance against PAs appeared with the first designation of the Yellowstone National Park because of the forced displacement of local people (A. Mukherjee, 2009). In addition, revenue collected from visitors to the park went to state agencies at the cost of the livelihood needs of local communities (A. Mukherjee, 2009). Mukherjee (2009) explains that conflict in conservation efforts often comes from sources of power such as institutional, coercive and invisible. The invisible power refers to the socio-political structure of society, which imposes social norms and sanctions on certain individuals, and this is often the source of conservation conflicts (A. Mukherjee, 2009). Marginalized sectors of society are typically forced into the role of recipients of environmental degradation, and the development of PAs is no exception to this.

Conflict in PAs can materialize within or among communities, with local or national governments, and can involve developers or organizations that have discrepant interests in the conservation area (Martin et al., 2016; A. Mukherjee, 2009). Conflict occurs in many forms, from violent protests to peaceful tension, and often stems from feelings of hopelessness and frustration (A. Mukherjee, 2009). When the conservation restrictions of a PA interfere with the livelihood needs of a community, such as the need to graze livestock, collect firewood or harvest medicinal plants, disputes are likely to erupt (Martin et al., 2016). For example, in South Africa PAs tend to be surrounded by poor communities who highly depend on livestock grazing, fuelwood collecting and plant harvesting. When local residents are denied access into PAs and resource use is restricted, violent disputes can erupt between local resource users and conservation officers (Thondhlana & Cundill, 2017). In other parts of southern and eastern Africa, fences around PAs (e.g. Liwonde National Park in Malawi and Queen Elizabeth National Park in Uganda) have prevented certain communities from accessing water resources, which has

resulted in opposition movements to form against conservation efforts, including vandalism to park gates and fences (Pekor et al., 2019)

Human-wildlife conflicts can also contribute to negative feelings toward conservation. As discussed earlier, the Jim Corbett National Park – India's first national park – was in fact established to prevent tiger attacks in local communities, however, many rural communities will associate an increase in wildlife and wildlife conflict with the presence of national parks and other PAs. Fatal tiger attacks on humans and livestock has long occurred in many other countries including Nepal where negative perception of wildlife in rural communities has also led to the killing of tigers (Battharai & Fischer, 2019). This further reveals the importance of involving local communities in conservation efforts to provide locals the opportunities to learn about the benefits of preserving biodiversity and for park managers to understand about local concerns. Discrepancy between local, regional, national and global interests in biodiversity conservation are cause of contention worldwide, but conflict in a certain PA will certainly be specific to its locality.

2.3 Environmental Justice

2.3.1 Environmental Justice framework

Environmental justice entered the academic discussion in the 1980's as a result of the recognition that marginalized sectors of society, typically people of color and the poor, were burdened with environmental injustices (Trubek, 1980). At that time, environmental injustices (e.g. being the common recipient of air pollution or water contamination) were associated with environmental racism and racialization that stemmed from systemic and institutionalized oppression (Hart, 2014).

Early approaches to environmental justice focused almost exclusively on fair treatment and equity in the distribution of environmental risk (Schlosberg, 2013; Trubek, 1980). Over the years, it became increasingly apparent that social and environmental injustices were inextricably linked, i.e., a stable ecosystem and healthy environment were viewed as necessary prerequisites to the functioning of a community (Schlosberg, 2013). In addition, as climate change increases the risk of environmental disasters and extreme weather events, those sectors of society who are

already on the receiving end of environmental injustices, will inevitably experience those impacts at a greater intensity, further stressing the urgency to enhance environmental justice around the world.

Since the 1980's, several scholars have debated the traditional meanings of environmental justice and expanded its scope to include three important attributes (Schlosberg, 2004; Williams & Mawdsley, 2006): (i) distributive justice, which accounts for the equity in the distribution of environmental risk and benefits of development, (ii) recognitional justice, which highlights the need to recognize the diversity of participants and experiences within affected communities, and (iii) procedural justice, which notes the salience in creating opportunities for local people to participate in environmental policy and decision-making (Dilay, Diduck, & Patel, 2019; Schlosberg, 2004). The emergence of recognitional justice in the literature came as Indigenous perspectives of human-nature relations began to be included and valued in the environmental justice debate (Schlosberg, 2013), around the same time that more pluralistic and participatory approaches to advancing environmental justice were being embraced. In response to the many challenges that individuals face in attempts to access the court system to seek justice or to participate in environmental policy making, procedural justice emerged with the goal of minimizing those obstacles (Schlosberg, 2013).

Most recently, environmental justice practitioners and scholars have begun to shed light on the importance of restorative justice, which refers to the extent to which adverse environmental and social impacts are remedied (Dilay et al., 2019; Jenkins & Strategist, 2018; Motupalli, 2018). Analyzing how the four attributes of environmental justice are considered in the development of PAs could contribute significantly to park-related conflict resolution. Relevant issues include how the negative and positive impacts of PAs are distributed, how the variety of interests are incorporated into PA planning and management, how the various actors and their interests are included in PA decision-making, and how negative impacts of PAs are remedied.

2.3.2 Environmental justice in PAs

Environmental injustices have been imposed by conservation efforts since the colonial era. As previously discussed, the Exclusive Model of PA planning has caused the forced displacement of people and the denial of their rights to the land and natural resources while providing them very few of the PA's benefits (e.g., Ghate, 2003; Mckay, 2001; Walsh, 2018; Zeeshan, Prusty, & Azeez, 2017). This exclusion can have a variety of negative impacts including economic oppression if compensation for the loss of resources is not adequate, a loss of culture, tradition and identity associated with the loss of land and resources, and a potential loss of ownership and ancestral rights (Hart, 2014). As described by Hart (2014) PAs can be viewed as "microcosms" of society having the ability to mirror societal inequalities and injustices.

For the last few decades, a global shift from the exclusive planning and management approach of PAs toward a new model of enhanced democracy, environmental justice and involvement of local people, has occurred (Dahlberg et al., 2019). Since the 1970's, ideas of equity and rights have been part of global conservation discussion (Martin et al., 2016). The Convention on Biological Diversity, which resulted from the first 'Earth Summit' in 1992, has three goals: biodiversity conservation, sustainable use of biodiversity, and fair and equitable distribution of the benefits of biodiversity (Martin et al., 2016). Later in 2010, the Nagoya Protocol also aimed for the benefit sharing of natural resources while highlighting the salient role of Indigenous and traditional knowledge in conservation (Martin et al., 2016).

Although the involvement of local people in PA planning and management has been increasingly embraced by conservationists worldwide and the consideration of human rights has been added to overall policy making, the multifunctionality of PAs continue to create diverse expectations and aspirations for the areas, which impedes the willingness of conservationists to fully engage with communities (Dahlberg et al., 2019). PAs continue to be built primarily for the enjoyment of pristine landscapes and wilderness experiences by the rich, while the traditional, cultural and historical values of local people are ignored (Dahlberg et al., 2019; Kohler & Brondizio, 2017). Considering the attributes of environmental justice in PA planning and management could help to acknowledge conflicts of interest and promote transparency and participatory resolution. Not only is improving environmental justice ethically desirable in

conservation efforts, but it is also instrumental as conflict tends to reduce the effectiveness of conservation efforts (Martin et al., 2016).

Although all four attributes of environmental justice are highly salient in conservation efforts, Martin et al. (2016) argue that recognitional justice is crucial to, but most often ignored in, conservation conflict resolution. The authors argue that recognitional injustices are commonly felt in PAs because their spatial and cultural diversity tends to leave some groups marginalized and management plans are often influenced by universal guidelines that may be culturally inappropriate for the local context (Martin et al., 2016). In addition, the global dominant blueprint for planning and managing PAs tends to cause a misassumption that local lifestyles are damaging to the environment (Martin et al., 2016). My research examined all four attributes of environmental justice in PA planning and management, including aspects of recognitional justice.

The relationship between environmental justice and biodiversity conservation has been explored in few studies (e.g., Martin et al., 2016) but the environmental justice framework has been widely applied to issues of NREM. For example, Chaudhary, McGregor, Houston, & Chettri (2018) studied ecosystem services and forest management from an environmental justice perspective. The authors focused on three attributes of environmental justice: distribution, participation and recognition. To identify how the attributes of environmental justice were considered in forest management, the authors looked at the distribution of forest services (distributive), participation in forest decision-making (procedural), and recognition of the cultural diversity of participants in decision-making processes (recognitional) (Chaudhary et al., 2018). The authors applied the framework to the Mai Pokhari Ramsar site in Nepal, which encompasses two community forests and three villages. The results show uneven access and distribution of ecosystem services across villages, uneven participation in decision-making processes, and underrepresentation of low-income groups in decision-making activities (Chaudhary et al., 2018). The proposed research followed a similar approach while also considering the restorative attribute of environmental justice.

2.4 Learning for NREM

Over the last several decades, learning in and from NREM has been increasingly promoted as an important part of the solution to complex environmental problems. The high uncertainty associated with environmental issues highlights the need for NREM to be adaptive and for NREM actors to learn from experience. Moreover, the great diversity of stakeholders involved in much of NREM, offers potential for inter- and trans- disciplinary knowledge sharing and co-creation as well as collective action (Gerlak et al., 2018). While several learning models or theories have been discussed in the NREM literature, the three most prominent are arguably transformative, social and policy learning (Suškevičs et al., 2018). Others have divided learning theories based on units of analysis and the levels at which learning can occur, such as individual, action group, organization, network and societal learning (Diduck, 2010). While the study of learning has evolved significantly since Lester Milbrath (1989) claimed we should "learn our way out of sustainability challenges", gaps in the literature remain (Gerlak et al., 2018; Milbrath, 1989). Such gaps have been described as lack of universal terminology and definitions when discussing learning concepts, low diversity of case studies, and insufficient analysis of the context in which learning occurs (Diduck, 2010; Gerlak et al., 2018; Suškevičs, Hahn, & Rodela, 2019; Suškevičs et al., 2018).

2.4.1 Learning concepts

Transformative Learning (TL) theory describes a framework for studying adult learning as a mechanism for changing one's perception of the world (Diduck et al., 2012). TL focuses on individual learning and the social processes that can lead to cognitive changes in a person (Diduck et al., 2012). Transformative learning outcomes have been mainly described as changes in a person's attitudes, beliefs and frames of refence (Diduck et al., 2012; Marschke & Sinclair, 2009; Suškevičs et al., 2018; Taylor, Kent, Sinclair, & Diduck, 2012) but also the resulting changes in individual practices and actions (Diduck et al., 2012; Suškevičs et al., 2018)

Social learning was theorized by Albert Bandura to describe the way people learn from one another through observations, imitations and modeling (Bandura, 1977). Today, social learning is understood as "collaborative and multi-loop processes leading to topic-oriented and

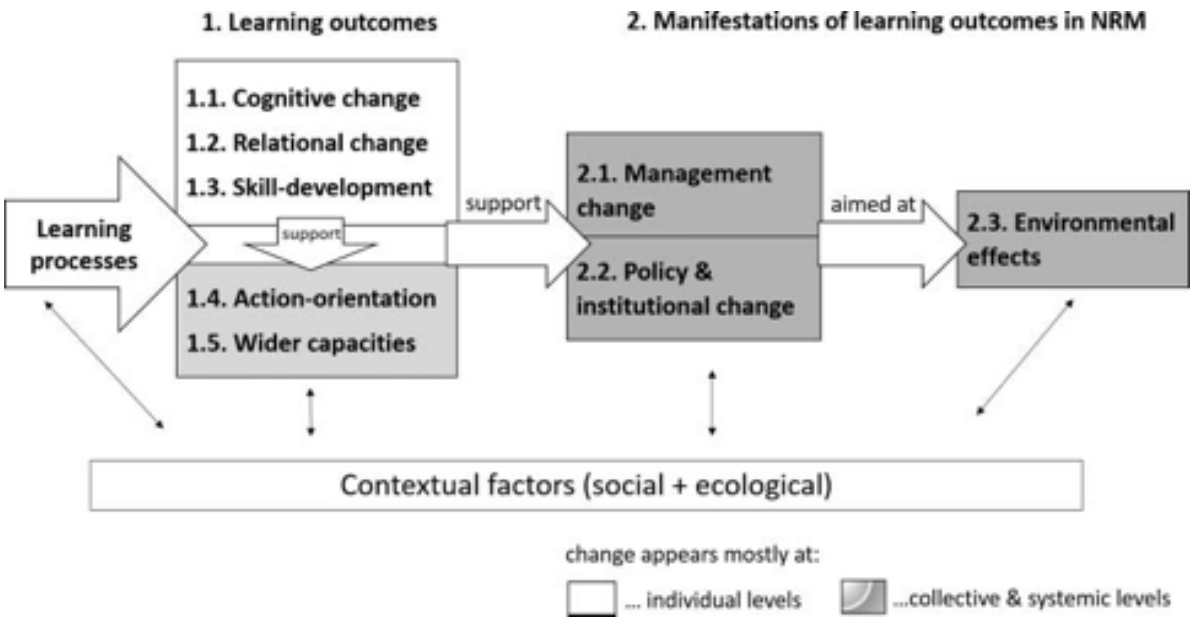
relational outcomes at individual and collective levels (Suškevičs et al., 2018)". In NREM, social learning is discussed as a process of collectively sharing information, deliberating, reflecting and acting for sustainability (Reed et al., 2010).

Finally, policy learning "conceptualizes how policy actors (e.g., state officials or policy networks) learn about organizations, programs and policies" and has most recently gained traction in the learning for NREM research (Gerlak et al., 2018; Suškevičs et al., 2018). Outcomes of policy learning include policy changes at the institutional or organizational level and such learning experiences are typically studied at the level of policy networks and organizations (Gerlak et al., 2018; Suškevičs et al., 2018).

2.4.2 Learning for NREM

In the initial stage of the research, social learning had been selected as the main learning model to guide the research. However, as the research progressed, emerging learning outcomes pointed to individual rather than collective learning and so, the broader concept of learning in NREM was used instead. In 2018, Suskevics and colleagues conducted a qualitative review of 53 articles that studied outcomes of social, transformative and policy learning in NREM. The authors developed a framework (Figure 1) that classifies learning outcomes into five main categories as well as three categories in which learning outcomes are manifested into NREM. The framework also makes note of contextual factors, both social and ecological, and their ability to influence learning processes, outcomes and manifestations.

Figure 1. Taken from Suskevics et al. (2018): A framework to guide analysis of types of learning outcomes and their manifestations in NRM



The first three types of learning outcomes portrayed in the framework (Figure 1) are mainly experienced at the individual level. The first, cognitive change, describes learning new knowledge or acquiring new understandings of phenomena as well as developing shared knowledge between individuals (Muro & Jeffrey, 2012; Pahl-Wostl, 2015; Pahl-Wostl et al., 2007; Suškevičs et al., 2018). The second is relational change, which describes a change in someone's attitude or feelings toward others and/or toward certain topics (Muro & Jeffrey, 2012; Pahl-Wostl, 2015; Pahl-Wostl et al., 2007; Suškevičs et al., 2018). The third individual learning outcome is skill-development, relating to a change in one's ability to resolve conflict or to learn new technical skills (Diduck et al., 2012; Muro & Jeffrey, 2012).

According to the framework, the three individual learning outcomes can support and lead to more collective or systemic level changes. Action-oriented learning outcomes are described as changes in social networks, for example forming committees, with the intention of influencing environmental decision-making (Crona & Parker, 2012; Folke, Hanh, Olsson, & Norberg, 2005; Suškevičs et al., 2018). The fifth and final category of learning outcomes in the framework (Figure 1) is a change in wider capacities, for example, a learning outcome that expands beyond

the intended purpose and reaches other policy topics (Folke et al., 2005; Plummer & Armitage, 2007; Suškevičs et al., 2018).

In their framework, Suškevičs et al. (2018) include three ways in which learning outcomes can be manifested in NREM policies. The first is a change in management, which the authors describe as a change in management decisions and/or management practices with the purpose of achieving certain targets (Borrini-Feyerabend, 1996; Suškevičs et al., 2018). The second is a change in policy and/or institutions, for example, changes in formal agreements or legislation and informal customs or social norms (Paavola, 2007; Suškevičs et al., 2018). Finally, the last manifestation of learning outcomes in NREM described by the authors in the framework (Figure 1) is environmental effects, which is often considered the ultimate goal of learning in NREM. Environmental effects here are described as actual changes in the health of the environment, such as water and air quality as a result of learning (Diduck, 2010; Suškevičs et al., 2018). Suskevic et al.'s (2018) framework represented in Figure 1 has helped guide the analysis of the research data.

2.4.3 Learning for biodiversity conservation

As biodiversity conservation efforts become increasingly critical in the face of climate change and accelerated species extinction, enhancing learning opportunities for individuals and organizations involved in conservation is essential. Not only must we learn, but we must also learn to learn more effectively by actively seeking to correct past errors and understanding the values and behaviours behind conservation actions. Monitoring of management outcomes and revising management plans based on monitoring results have been listed as critical steps for PA planning and management, in part because they create opportunities for learning to occur. Although learning is part of the universal guidelines for PA management plans, some literature suggests that very few conservation organizations actually set learning goals or track their learning outcomes (e.g. Clark, 2002). Barriers to learning can occur within the learning process, such as limitations or conflicts in the interactions and deliberations between stakeholders, and due to contextual factors, such as organizational, political and institutional cultures (e.g. power asymmetries or insufficient time), that may reduce learning capabilities (Suškevičs et al., 2019). Understanding learning processes and contextual factors and identifying learning outcomes of

PA practitioners and communities involved in or affected by PAs can shed light on the effectiveness of learning in PA planning and management.

2.4.4 Learning for environmental justice

The role of learning in the environmental justice context has been studied to some extent (e.g. Balazs & Lubell, 2014; Scandrett et al., 2010) and it is not difficult to comprehend why it is critical to the pursuit of environmental justice. Learning is a key mechanism in which the goals of procedural and distributive environmental justice are incorporated into NREM (Balazs & Lubell, 2014). For example, learning can enhance access to information for stakeholders and expand stakeholder participation toward a more participatory NREM (Balazs & Lubell, 2014). Learning is also salient to recognitional justice in ensuring the opinions and experiences of a diversity of participants are recognized. Finally, learning is also important for restorative justice, where remediation of environmental and social harm can be improved based on past experiences.

As discussed, learning is a critical step in improving NREM policies and practices. According to Wollenburg, Edmunds, Buck, Fox, & Brodt (2001), the improvement of NREM will occur when different stakeholders engage in ongoing discussion and learn from each other's knowledge, interests and actions. Learning in NREM can encourage relationship building between different interest groups as well as capacity building between stakeholders, which are important factors in the advancement of environmental justice. Finally, learning can help to include marginalized sectors of society, incorporate different forms of knowledge to embrace pluralistic approaches to decision-making, and achieve a more shared understanding of environmental issues and solutions (Berkes, 2009; Wollenburg et al., 2001), which can all contribute to the enhancement of environmental justice.

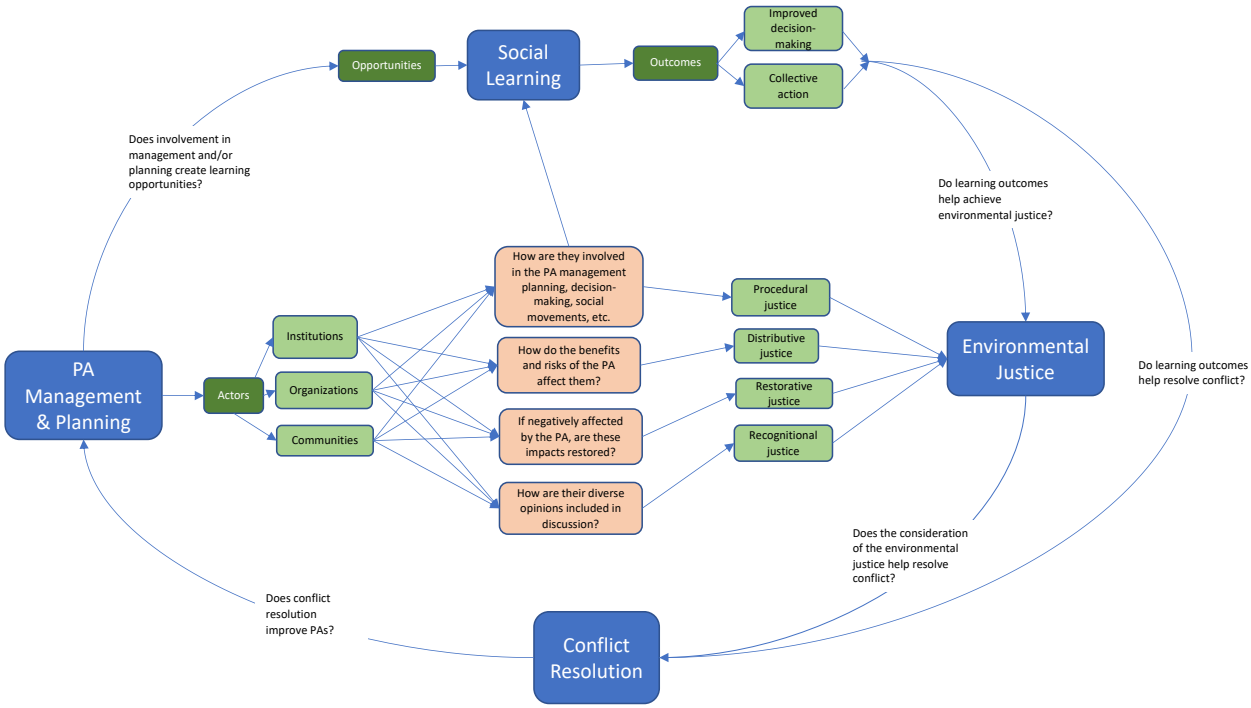
2.5 Conceptual framework and chapter summary

At the start, the research was guided by a conceptual framework (Figure 2) that connects themes from learning, environmental justice, PA planning and management and conflict resolution. Starting from PA planning and management, the framework describes the various actors as institutions, organizations and communities and the individuals that make up these groups. These actors can be involved in and/or affected by PAs in several ways, such as involvement in PA

planning, management, decision-making, social movements, etc. which relate to the procedural attribute of environmental justice. Actors can be positively or negatively impacted by a PA, which relates to distributive justice. If negatively impacted by a PA, restoration or compensation can lead to restorative justice. Finally, inclusion of the diversity of opinions and experiences of the various actors defines recognitional justice. When all four attributes are considered, it is understood that environmental justice can be achieved. The environmental justice components used in this framework have been developed through analysis of environmental movements and policy initiatives by practitioners and scholars such as Jenkins & Strategist (2018), Motupalli (2018) and Schlosberg (2004).

Following the upper arrow from PA planning and management, the research explored how social learning opportunities arose from involvement of actors in PA planning and management or other activities relating to the PA. Ideally, these social learning opportunities would result in social learning outcomes, described broadly by Cundill & Rodela (2012) as improved decision-making and collective action. Continuing along the arrows, the research tried to determine if such learning outcomes can increase environmental justice and/or have the potential for conflict resolution. The research also attempted to understand if enhancing environmental justice can contribute to conflict resolution. Finally, it was thought that conflict resolution between actors involved in and/or affected by PA planning and management might result in an improvement in the planning and management of PAs, which could positively impact the effectiveness of conservation efforts in PAs.

Figure 2. Conceptual Framework: PA planning and management, social learning, environmental justice and conflict resolution



After a few weeks in the field, it was realized that social learning was not an appropriate learning model to focus on and therefore, much of the idealized conceptual framework changed. A revised conceptual framework is discussed in the conclusion in Chapter 7.

Adopting an Inclusive Model to PA planning and management can have tremendous benefits to both communities and conservation. However, as described by the history of PA planning and management worldwide, implementing such an approach has proven incredibly challenging and has yet to become the mainstream approach. Considering the four attributes of environmental justice in the planning and management of PAs can likely enhance the achievability of conservation objectives by harmonizing such goals with community interests and values. To scrutinize the planning and management approach of a network of PAs in India can shed light on how the four attributes of environmental justice can be realized in conservation efforts.

The integration of learning in an environmental justice framework and particularly in a biodiversity conservation context remains an obscure topic that could benefit from further research. Identifying learning outcomes, and how to achieve such outcomes, within the planning and management of a network of PAs could contribute greatly to the improvement of PA planning and management. Exploring such learning outcomes and their manifestation in NREM could help advance environmental justice in conservation efforts, which could result in the mutual improvement of biodiversity conservation efforts, empowerment of communities and enhancement of livelihoods.

Chapter 3: Research Design and Methods

3.1 Introduction

This research took a qualitative case study strategy of inquiry, which allowed for an understanding of individual meaning of human experiences within the complex planning and management of PAs in India (Creswell, 2014). In order to achieve my objectives, I conducted an extensive review of literature and documents throughout my research as well as utilized primary data collection methods such as semi-structured interviews (photo 2) and participant observations. Interview data were analyzed using the qualitative data analysis software NVivo to facilitate the reporting of the research findings. This chapter explains in more detail the research approach starting with a detailed description of the study area.



Photo 2: Semi-structured interview with a research participant

3.2. Study Area

The Kullu District is situated in the Pir Panjal Himalaya of Himachal Pradesh (Figure 3) and encompasses the headwaters of the Beas River, one of the five great rivers from which the Punjab gains its name. The Beas River rises at Beaskhund in Solang Nalla and flows south through the Kullu Valley, the focal corridor of historical and contemporary cultural, social and economic activity in the District. As a high mountain region with complex topography, elevations ranging between 1000m to 6500m a.s.l. and a four-season climate, the area contains a wide variety of microclimatic zones and associated ecosystems giving rise to the substantial biodiversity that forms a basis for the interest in and presence of PAs. In Himachal Pradesh, currently there are five national parks, 26 wildlife sanctuaries and three conservation reserves covering 8,391 km^2. PAs in the Kullu District include: one notified national park (GHNP), two proposed national parks (Inderkilla and Khirganga), six wildlife sanctuaries (Kais, Kanawar, Khokhan, Manali, Sainj and Tirthan) and several nature parks (e.g., Manali, Nehru Pheasantry, Van Vihar, etc.).

Figure 3: Kullu District in the state of Himachal Pradesh, India (Source: Dunne, 2013)



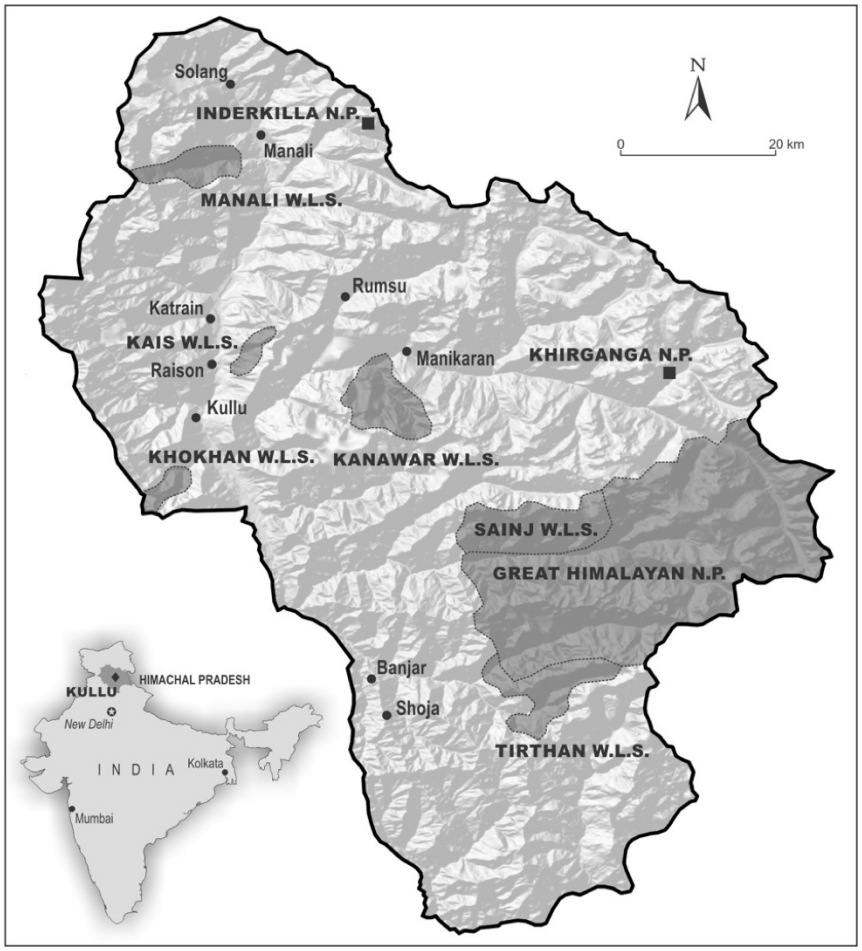
The District, primarily the Kullu Valley, has been inhabited by civil societies for over a millennium. Until the British colonial period, Rajputs formed the most recent landed aristocracy focused in tightly organized settlements and using a village-based system of land and resource management (Harcourt, 1972), elements of which persist to this day. The Kullu Valley also served as part of one of the many Trans-Himalayan trade routes between Tibet and India and *vice versa*. Migratory pastoralists, including the Gaddis and Gujjars from outside the immediate region, established customary summer passage and use rights to high pastures in the Kullu District, Lahaul and Spiti prior to the colonial period. The British colonial revenue and forest settlements of the 1870s and 80s resulted in some but not all of the customary land and resource-use rights being enshrined in law (Davidson-Hunt, 1995), a topic that enters into the later discussion of PAs. This period also saw the arrival of British settlers and holiday travellers in the area and the beginning of a cultural and economic shift (Chetwode, 1972). Many of the settlers were retired from colonial and military service and were attracted by productive land outside the traditional villages and village-use areas, becoming economic and amenity migrants. Some of their descendants remain today. Among the economic activities introduced was the cultivation of apples and other fruits and cash crops. While locally successful, the export of agricultural and horticultural products was hampered by distance and inadequate transport. Nonetheless, it did endow the Kullu District with a reputation for quality products that has been built upon in the past 50 years.

The arrival of motorable roads, beginning in the 1970s, triggered the modern transformation of the Kullu District and Valley, as well as adjacent Lahaul and Spiti. The continuing extension and upgrading of the road network for economic and national security reasons, among others, has been and is both a stimulus for and a product of economic development and social change. Additional factors, such as land reforms in the 1960s and 70s, investment in health care and education by Himachal Pradesh, and widespread electrification have added to development and change (Mehra, 2017). The migratory pastoralists still make their way over Rohtang Pass to the high pastures and they are joined on those roads by heavy vehicles transporting cash crops such as seed potatoes, peas, beans, etc. south through the Kullu Valley to southern markets, as well as tour buses and military convoys making their way to and from Ladakh. Government subsidies, technological changes, and private investment have added to development in the agricultural/horticultural and tourism sectors (Mehra, 2017). Such rapid and pervasive

development and associated infrastructure has brought visible environmental degradation to the area and the need for remediation initiatives (Cole & Sinclair, 2002). Coupled with climate change and variation, these pressures call for added protection of biodiversity and the ecosystem services it provides.

In approximately 150 years, the social and economic character of the Kullu District, and the Kullu Valley in particular, has undergone profound change. From a relatively isolated collection of well-defined villages and associated land and resource use areas, a socially and economically diverse network urban centers with connecting strip settlements along National Highway 3 has emerged. However, elements, specifically caste and gender roles, of the precolonial Pahari culture remain (Davidson-Hunt, 1997) and are relevant to local participation in planning and management of PAs. The dominance of Rajputs, in comparison to lower or Scheduled caste members, in village landholdings, use rights and decision making remains. Also, well-defined gender roles remain very important, with the majority of women taking care of the home, children and livestock, while men earn an income for the family, for example by working in the tourism industry, in the apple orchards or in government offices. Gender roles are also reflected in village governance systems. The presence and participation of women in village committees and in leadership roles has increased since the institution of the Mahila Mandals in 1952 under the Community Development Program and strengthened during Indira Ghandi's time as Prime Minister (Davidson-Hunt, 1997). Nonetheless, men remain the primary decision makers in villages of the Kullu District.

Figure 4: Map of PAs in the Kullu District. The location of the Inderkilla and Khirganga national parks are identified with a dot as their boundaries are not yet finalized. (Source: Map produced by Weldon Hiebert, Geography Department, University of Winnipeg. Inset map of India: *Digital Chart of the World*, Shaded relief: *Courtesy NASA/JPL-Caltech*, Parks and places: mapsofindia.com)



3.3 Social constructivist and transformative paradigms

According to American philosopher Thomas Kuhn (1962), a paradigm refers to the set of concepts and practices that form the basis for a scientific discipline. When a scientific or philosophical revolution that changes that set of concepts and practices occurs, a paradigm shifts (Kuhn, 1962). In scientific research, there exist several philosophical paradigms that can influence and guide the way research is designed and conducted. A social constructivist paradigm is one that sees culture and context as salient building blocks of society. Social

constructivism is based on three notions: (i) reality is constructed through human experiences, (ii) knowledge is socially and culturally developed, and (iii) learning occurs when individuals participate in social activities (Kim et al., 2006). I also believe in the holistic and collaborative nature of this paradigm (see Creswell, 2014), and thus it has guided the development of my proposal and has influenced the way my research was conducted.

Growing up with a teacher, social worker and public interest lawyer in the family has instilled personal values of working for positive social change and giving back to my community. These values guided my undergraduate honours research in Gujarat, India, which focused on understanding local perceptions of environmental justice, industrial development and its impact on livelihood, and participation in social movements and access to the court system. This present research also focuses on people's perceptions and lived experiences surrounding parks planning and management to better understand issues of environmental justice as well as personal and group learning. The research draws from social constructivist ideologies that reality is built from people's lived experiences and interactions in the world (Creswell, 2014). The use of social constructivism allowed participants to share the meaning of their own lived experiences, which resulted in multiple realities emerging from the data and created a more holistic representation of the issue. Finally, understanding how people's interactions influence their meaning of reality is a notion from social constructivism that influenced the learning component of the research.

The transformative paradigm also influenced the way the research was conducted. During my undergraduate honours research in India, I became increasingly aware of the importance of reaching out to marginalized people and ensuring their voices are heard and included in research. The transformative paradigm provides a framework for dealing with issues of oppression, inequality and injustice (Mertens, 2007). While a constructivist worldview is based on the notion that all perspectives are important, in a transformative worldview it is understood that some people have been traditionally excluded from participating in research and describes the potential to advocate for human rights in the research world (Mertens, 2007). Although there was not much opportunity for the research participants to help design the research, I did try to involve marginalized groups during the field research as much as possible and address issues of inequality and oppression in my thesis. Finally, in dissemination of my research results, I

identify opportunities for policy makers to empower local communities in India and particularly those individuals whose voices tend to remain unheard or supressed.

It is important to note that my personal beliefs and background which have shaped my worldviews had an impact on the way my research was conducted and the way my data were interpreted. However, to limit such bias, I always remained aware of the biases I hold, such as my environmentalist and feminist values, and continuously reflected on the way my personal, cultural and historical experiences influenced my interpretation of the research findings.

3.4 Qualitative research approach

Trying to understand individual meaning of human experiences in this world is a product of qualitative research (Creswell, 2014). Undertaking qualitative research entails exploring the meaning of complex social problems through a holistic lens that includes participants' experiences, perceptions and the meaning they ascribe to particular events or issues (Creswell, 2014). Further, as qualitative research tends to be conducted in a natural setting, this approach was most relevant to my research as my intention was to study people in their natural environment. Being on site and immersed in the research context allowed me to gain a deeper understanding of my research participants' personal experiences and their society.

3.5 Case study strategy

A case study strategy of inquiry is a research methodology that focuses on deconstructing a complex real-life phenomenon at a great depth (Noor, 2008). A case can refer to an event, a space, an entity, an individual or a group of individuals, and is intended to focus on a particular issue rather than to look at an entire organization or event (Noor, 2008). Case studies have received some criticism for their lack of generalizability and their apparent lack of scientific rigour and reliability. However, they have been praised for their ability to reveal data that provide an in-depth, holistic understanding of a problem or event, as long as several sources are used to triangulate the data. In addition, by providing ample contextual detail, the research findings could still be compared to other cases and become applicable to other situations. This method was chosen for my research as it is most appropriate for understanding the activities that

occur in the planning and management of the network of PAs in the Kullu District through multiple data sources.

3.5.1 Case study: Network of PAs in the Kullu District

GHNP was originally chosen as the case study for this research due to the persistent contention between conservation objectives and local needs and priorities. Once in the field, it became apparent that two new national parks were in the process of being legally notified and thus, were included in the research. As the research progressed, conducting a regional analysis of the network of PAs in Kullu, including national parks, wildlife sanctuaries (WLS) and nature parks, was recognized as an opportunity to study and analyze the overall planning and management approach of PAs in the area. It was expressed in some informal discussions and interviews that the GHNP is used as a model PA in Kullu and that its planning and management influences the development of planning and management strategies for other PAs in the region, e.g., "*GHNP has paved the way for the future approach of national park management by putting local communities first and empowering them*" (GHNP, forest officer, 5). For this reason, the GHNP has remained the main focus of the research and is used to better understand the overall evolution of the PA planning and management framework in the Kullu District.

Since 1984, the planning and management of GHNP has progressed through a series of events from its legal designation to becoming a UNESCO world heritage site, while being the cause of protest and social movements stemming from local opposition to park restrictions. The historical and ongoing issues in GHNP allowed for an in-depth analysis of a series of complex events in one location over time, such as designation of a national park, displacement of local residents, local social movements, and petitions to national and global organizations. As the main case study of the research, GHNP was used as a point of comparison between planning and management of other PAs in Kullu.

Importantly, in addition to the above, several professors (see photo 3) and students from the University of Manitoba, Natural Resources Institute and Delhi University, Department of Geography have conducted research in the Kullu District and thus, have collected baseline data and developed a network of local connections. This existing network facilitated my ability to

enter into communities and build rapport with my research participants. For these reasons, I did not look at other regions in India for potential case studies. Due to the vastness, complexity, and number of actors involved, my committee and I believed that the GHNP would make for the most intricate case study. Over the course of the research, it was determined that looking at other PAs in Kullu would complement the study of GHNP and allow the research to expand to a regional study, using GHNP as a base of comparison for drawing similarities and contrasts between PAs.



Photo 3: Advisor Dr. John Sinclair (left) and interpreter Mehru Thakur (right) that have worked together for over thirty years

3.6 Data collection and sampling procedures

Over the course of the research, I conducted an extensive review of literature on management and planning frameworks of PAs worldwide, the historical use and management of PAs in Kullu, environmental justice theory and its application to PAs, as well as literature on learning in NREM and specifically in conservation efforts. In addition, I analyzed other secondary sources of data such as government reports, including the management plan for GHNP and other PAs. Outlined below are the data collection and data analysis methods I employed during the four

months I spent in the field and upon my return. A combination of various data collection methods allowed for triangulation of my data, which ensured validity and reliability, two topics that will be discussed following the data analysis section.

3.6.1 Document review

Document review has been ongoing throughout the research process. Government documents have been useful in learning about GHNP and other PAs in India. In addition, the management plans for PAs provided valuable insight into the management practices occurring in parks, although interview data revealed that on-the-ground implementation of the plan differed significantly from the documents. Documentation is an accessible source of secondary data and has helped supplement other forms of data collected in the field.

3.7 Field Research

3.7.1 Semi-structured interviews

The fieldwork portion of the research was undertaken over a four-month period from November 2019 to February 2020. The study employed semi-structured interviews with a diversity of individuals as the primary method of data collection and a few semi-structured interviews were conducted in small group settings (2-4 participants). According to Qu and Dumay (2011) semi-structured interviews are best used when the researcher wants to understand people's perceptions, opinions, feelings and experiences of social phenomena. There are many strengths to interviews such as filling knowledge gaps that other methods cannot attain, exploring complex behaviours and experiences, providing insight into the diversity of opinions and experiences of participants, and perhaps most importantly, they have the ability to empower the research participants (Dunn, 2010). For these reasons, I believe semi-structured interviews were the most appropriate data collection method to achieve my research objectives of understanding people's perceptions of reality in relation to PAs.

I used a combination of closed-and open-ended questions during semi-structured interviews, which were typically followed by a "why" or "how" prompt (Newcomer, Hatry, & Wholey, 2015). The semi-structured interview design allowed flexibility for both the respondent

and me to elaborate on questions and responses. The formulation of each question, outlined in Appendix A, aimed to answer some part of my research objectives. As well, interview schedules were slightly tailored once in the field to reflect the contextual setting of each PA. Each interview lasted anywhere from 10 minutes to an hour and a half.

Table 1. Interview participants by protected area and profession

Category of Partici-pants	Description of Participants	GHNP	Inder-killa NP	Khirg-anga NP	Kana-war WLS	Kho-khan WLS	Kais WLS	Manali WLS	General
Forest Officers	Divisional								1
	Range	2		1	1	1	1	1	
	Block	1	1						
	Guards	1	1						
Commu-nity Members	Panchayat	2	2	1	2	1			
	Mahila Mandal	2	3	1	1			2	
	Forest Committee	1		1		1			
	Tourism business	10	9	3			2	3	
	Others	16	2	2		4	6	3	
NGOs	BTCA	1	2						
	SAHARA	2							
Academics	HPU and G.B. Pant Institute								2
Totals:		**38**	**20**	**9**	**4**	**7**	**9**	**9**	**3**
								Total:	**99**

Interviews were conducted with key informants including community members living in villages within or in proximity to a PA, government officials from the HP Forest Department, NGOs and academics. Table 1 below provides the number of people that participated in interviews for this research. Interview participants are categorized by forest officers, including

the divisional forest officer for the wildlife branch, range officers, block officers and forest guards. Community members have been classified as members of the Panchayats (village-level government), members of Mahila Mandals (women's savings and credit groups), members of village forest committees, employees of the tourism business, and other professions such as teachers, contractors and housewives. Members of two NGOs, the Biodiversity and Tourism Community Advancement (BTCA) and the Society for the Advancement of Hill and Rural Areas (SAHARA), were interviewed as well as academics from two separate institutes. The interview participants are also classified by the PA they are involved in or reside near, meaning that the particular PA was the main focus on the interview. There is a total of 99 participants that were interviewed in 74 separate interviews, some individual and some in groups.

Interview participants were all adults of various ages, gender and social standing, representing a diversity of perspectives. However, significantly fewer women were interviewed due to societal barriers in the region limiting how and whether women can participate in such research. Although we often approached women and invited them to participate, several did not want to disclose information because they thought "they didn't know anything", thought the men in the village would be best suited to answer questions, felt uncomfortable talking with me and a male translator, felt supressed from sharing personal information in the presence of men, or perhaps did not trust the research process. In addition, women were often busy with household chores, taking care of children and working in the field, while men were usually available and willing to speak with us.

Participants were selected using a purposeful sampling technique (Berg, 2004) with the selection criteria including: (i) direct involvement, impact or expertise in the planning and management of PAs, (ii) willingness to participate in the research, and (iii) geographic accessibility. Most community members were selected simply by walking through villages and asking those around if they would be willing to take part in the study. The majority of people we approached were interested and only a few denied our request. An interview schedule for each category of participants can be found in *Appendix A*.

The presence of a local translator allowed for interviews to be conducted in the local language with non-English speaking participants. A translator who has worked with NRI

personnel for many years and thus has gained extensive experience in the field was employed for the research. The translator signed a confidentiality oath prior to conducting interviews in order to ensure the privacy and confidentiality of participants. Upon receiving verbal consent from each participant, interviews were recorded with hand-written notes rather than audio recording because the slow pace of the conversation allowed for written notes to suffice and concern that recording devices would present a barrier especially in more remote villages. Each evening or the following day, I transcribed my interview notes while the interview was still fresh in my mind. This allowed me to record personal reflexive notes about each interview, e.g., about the content of the interview, the behaviour of the participant, or the interview setting and how it may have influenced the interview.

Working with a translator brought several challenges, the greatest being the additional layer of interpretation that potentially modified both the questions I asked the participants and the answers they provided. In response to my questions, the translator and research participants often carried out full conversations before the translator translated a few words in English for me. I brought this to his attention on several occasions and was ensured that the discussions did not pertain to the research. To overcome interpretation challenges, I also debriefed with the translator each day where we discussed any shortcomings and verified my interview notes. My translator was well known in some communities, which was both an advantage and a drawback, which I had also experienced during my undergraduate research in India. Working with a translator who was familiar in the region facilitated access into communities and trust-building with my research participants. On the other hand, because the translator was well known to some participants, they may have been hesitant in giving truthful answers to the interview questions. There is also a challenge in working with a male interpreter in India as local women most often do not appear comfortable discussing complex issues in the presence of men, which can make it difficult to obtain women's perspectives.

3.7.2 Participant observation



Photo 4: Conservation awareness program at a school in Prini village

Participant observation was used throughout the four-month period in India to gain a deeper understanding of social dynamics, power relations, and the role of those involved in or impacted by the planning and management of PAs. Participant observation is a qualitative research method where the researcher observes a group of individuals to record interactions and actions amongst participants. The researcher may observe from a distance and/or immerse themselves within the group and record subjective experiences (Richie & Lewis, 2003). I adopted both methods on separate occasions; some events I observed from afar including a conservation awareness program hosted by an NGO (photo 4) and several cultural/religious gatherings, and some events I was immersed in, including a Mahila Mandal meeting, daily livelihood practices of local communities, and interactions between forest officers and local people. While observing such activity, I recorded observations relating to participation levels, interactions between and within various groups of people, leadership skills, to name a few. These observations were recorded through field notes in a participant observation guide (Table 2) and with photographs. No identifying factors are used in the thesis to protect participant confidentiality.

Table 2. Participant observation guide

Site location	Date	Start time	End time
	Observations		Reflective notes
Event type:			
Participants:			
Activities:			
Behaviours (physical and verbal):			
Mood of participants:			

3.8 Data analysis

A thematic analysis of interview data, using the qualitative data analysis software package NVivo, was used to code for major themes, drawn both from the literature and emergent in the data, and to analyze and report commonalities, contrasts and patterns in those themes (see Braun & Clarke, 2006). Some themes that emerged from the literature helped to guide the analysis. For example, from the literature on PA planning and management, major themes included the features of inclusive and exclusive PAs. Taken from the literature on environmental justice, the four attributes of environmental justice were used as major themes: distributive (e.g., distribution of risks and benefits of PA planning and management), procedural (e.g., participation in planning, management and decision-making of PAs and involvement in opposition), recognitional (e.g., recognition of cultural differences and diversity of opinions and experiences) and restorative (e.g., restoration or compensation for loss of livelihood). Further, the literature points to uneven access to resources, uneven participation, underrepresentation of marginalized sectors of society and inadequate compensation as recurrent themes in the environmental justice debate (Chaudhary et al., 2018; Dilay et al., 2019). From the learning literature, some major themes that helped to guide the analysis are the categories of learning outcomes and manifestations in NREM described by Suskevics et al.'s (2018) framework, as well as themes of participatory and collaborative learning opportunities.

Throughout chapters 4-6, findings from interviews are occasionally presented using the terms ‘few’, ‘many’ and ‘most’ to give the reader an idea of the number of participants that expressed a particular theme. If only mentioned by one or two respondents, the exact number of respondents is specified. The term ‘few’ refers to more than two participants up to a limit of 49% of total participant who supported a certain point. The term ‘many’ refers to between 50% and 79% of total participants and the term ‘most’ refers to more than 80% of total participants mentioned a certain point. These terms indicate the level of support for a particular theme rather than to represent its importance. In qualitative research, a finding identified by only one participant can still be profound.

3.9 Ensuring validity and reliability

To be able to influence decision-makers and for other researchers to be able to build on published research results, the data presented must be valid and reliable. Throughout the entire research process I used various techniques to ensure the validity, dependability and trustworthiness of my research. Authors such as Creswell (2014), Elo et al. (2014), Richards, (2005) and Shenton (2004) have published several steps to guide researchers in enhancing the validity and reliability of their research. The following steps were taken during the data collection, analysis and reporting phases of my research:

Triangulation: Collecting data on a specified topic or subject from multiple sources increases the validity and reliability of the data collected, interpreted and presented. For this research, three data collection methods (document review, semi-structured interviews and participant observations) were utilized. In addition, the data pertaining to a specified topic were collected from a variety of participants with differing perspectives, increasing the validity of those data.

Member checking: To ensure interview data were recorded accurately, I verified my interview notes with the participant and translator after each interview. I also debriefed with the translator after each day of interviews to discuss shortcomings and to review my interview notes.

Rich descriptions: It can be challenging to generalize case study research results to other contexts. However, by providing thick, rich contextual information I believe readers will be able

to determine if the results are transferable to another context. In qualitative research, explicit contextual descriptions may permit readers to tentatively transpose research results to other cases.

Peer scrutiny: My thesis committee and advisor have had opportunities to read my research and provide feedback and bring fresh perspectives into the research. Peer scrutiny often is used in qualitative research to further support the validity of the results.

Reflection on bias: As previously mentioned, qualitative research is naturally subjective as the researcher's beliefs, values, worldviews and pre-existing knowledge create bias in the interpretation of the data. By conducting continuous self-reflections, I remained aware of my biases and openly discuss in my thesis, how they shaped the research. Sharing such information can help the readers better evaluate research results (Watt, 2007). While in the field, I recorded daily reflections in a journal to document my assumptions and behaviour that may have been impacting the research. Examining my journal entries retrospectively during data analysis also became an important tool for stimulating my memory of the field research.

Chapter 4: Protected Area planning and management in the Kullu District

4.1 Introduction

As noted above, while the original intent of the research was to focus on a single PA in Kullu, the GHNP, it became apparent while in the field that the Kullu District was undergoing an aggressive push to increase the total area of protected land in the District with two new National Parks in the making. For this reason, the focus of the research shifted from a single case study to a regional analysis of PAs. In this chapter, the description and background information of each PA in the study area is provided as well as a general description of nature parks, which are not recognized as PAs but are seen by some as having a conservation purpose. Next, a table from IUCN describing key differences between PA planning and management under an Exclusive Model and under an Inclusive Model is used to demonstrate where the PA framework in Kullu is situated between the two models. The next section discusses interview results that pertain to planning and management challenges identified by study participants followed by a discussion on planning and management improvement opportunities as expressed by research participants. The chapter concludes by discussing how the planning and management approach of PAs in Kullu has changed over the years and how concepts of environmental justice and learning can shed light on the strengths and weaknesses of the approach.

4.2 PAs in the Kullu District

4.2.1 Great Himalayan National Park, and Sainj & Tirthan Wildlife Sanctuaries

As the only legally notified national park in the Kullu District to date, GHNP has a long, controversial history. In 1984, an intent to create GHNP was communicated by the state government of Himachal Pradesh while the area was used for the livelihood needs of 11,000 villagers living within the 5 kilometre radius of the proposed park (Saberwal & Chhatre, 2001). Families cultivated land, grazed their sheep and goats, harvested medicinal herbs to be sold to the pharmaceutical industry, and collected mushrooms to sell to the western European market (Saberwal & Chhatre, 2001). As well, many nomadic and semi-nomadic pastoralists, mainly

water buffalo herders known as *Gujjars* and goat and sheep herders known as *Gaddis*, also depended on resources from inside GHNP boundaries for livelihood (Davidson-Hunt, 1995; Mckay, 2001).

Timber and non-timber forest resources and services have been used in the Kullu District from pre-colonial time to the present. Early in the British colonial period in the mid-19th century, management, including regulation of harvesting and reforestation, of the timber resources in particular became necessary due to increasing demand driven in large part by the expansion of the rail system throughout India. As well, in the 1960's expansion of commercial agriculture and horticulture began to transform the local economy, a product in part of the extension and upgrading of the road network into and within the Kullu District. As population pressures increased, in part due to the large-scale migration of labourers, the demand for more forest products including medicinal herbs and mushrooms intensified. In the 1980's, extensive surveys by the Himachal Wildlife Project determined that human pressures on the forests were causing plant decline, soil erosion and affecting wildlife and so an area in the upper Beas region where population was sparse and human impact had been minimal was selected for establishing GHNP (Srivatsava, 2010). The intent of the national park was to limit access and restrict resource use in the area to protect, sustain and propagate wildlife, under the Wildlife Protection Act (1972) ("The official website of Great Himalayan National Park | A UNESCO World Heritage," n.d.).

During 1994-1999, the World Bank initiated a 'Conservation of Biodiversity Project' where 16 village eco-development committees were formed with the purpose of involving local people in conservation efforts. During that time, the 'Biodiversity Conservation Society' was registered as an organization with shared responsibility over management of GHNP. In 1999, GHNP received its final notification under the Wildlife Protection Act, which prohibited all human activities inside park boundaries. At that time, compensation was awarded to local villagers whose traditional forest rights were recorded in the Anderson Settlement Report (1886). However, before receiving final notification, a portion of the park was removed from the designation to allow for the Parvati Hydel Power Project, a new hydro dam and diversion, that was constructed in the area (Chhatre, Lakhanpal, & Prasanna, 2017; Saberwal & Chhatre, 2001). The realization that local livelihoods could be sacrificed to protect biodiversity, but that biodiversity could then be sacrificed for hydro development, caused a public outrage in

communities surrounding GHNP. Local opposition in the form of protests and demonstrations erupted in the area as a result (Saberwal & Chhatre, 2001).

In 2010, a proposal to merge the Sainj and Tirthan Wildlife Sanctuaries with GHNP was brought forward to expand the network of PAs in the region. Later that year, the state government of Himachal Pradesh sent a proposal to the United Nations Education, Scientific and Cultural Organization (UNESCO) to award GHNP with World Heritage status for its exceptional biodiversity, while ignoring the values and interests of local communities and their contribution to the ecology of GHNP. This provoked local peoples once again who submitted a petition demanding that the status also include cultural heritage (Chhatre et al., 2017). In 2014, UNESCO accepted GHNP as a World Heritage site for its biodiversity but failed to recognize the cultural heritage aspect. In fear that the UNESCO designation would further restrict human activity within park boundaries, local activists continued to protest against the designation (Chhatre et al., 2017). Finally, UNESCO ordered state agencies to resolve community rights issues in GHNP conservation area, which led to the state's decision to allow communities access to cultural heritage sites within the area (Chhatre et al., 2017). Although some level of access has been granted, resource use is still highly restricted for local communities and the interests of migratory and nomadic pastoralists have yet to be considered.

GHNP covers an area of 754.4 km^2 with a buffer zone adjacent to its western boundary that covers 265.5 square km of land ("The official website of Great Himalayan National Park | A UNESCO World Heritage," n.d.). This ecozone is inhabited by an estimated 16,000 people and approximately 2,300 households over roughly 160 villages ("The official website of Great Himalayan National Park | A UNESCO World Heritage," n.d.). As many of the villages surrounding GHNP are remote and remain inaccessible by road, harvesting fuelwood from the forest is still the primary method of heating the home, grazing sheep and cattle remains an important livelihood requirement, and visiting sacred sites within the forest is still widely practiced by local forest dwellers. The conservation area of GHNP also includes the Sainj WLS attached to the north-western portion of the park, in which the three villages of Shangar, Shakti and Maraur are located, and the Tirthan WLS, an uninhabited portion of the conservation area located on the south-western border of the park. The northern boundary of GHNP is contiguous with the newly proposed Khirganga National Park, which would add another 710 km^2 of

protected land to the area. As well, the north-eastern boundary of GHNP is contiguous with the existing Pin Valley National Park (another 675 km^2).

The GHNP conservation area experiences four distinct seasons: spring from April until June, summer/monsoon from July until September, autumn from October until November, and winters from December until March. Rainfall is abundant during the monsoon season, but otherwise precipitation is moderate. Snow is uncommon at lower elevation but the higher mountainous peaks and ridges can receive snowfalls of more than 2 meters. Temperatures in the GHNP conservation area range from -10C in the winter to +40C in the summer. Due to its varied microclimates, GHNP is home to an abundance of species of flora and fauna endemic to the region. It is estimated that the park hosts more than 830 plant species, 31 mammal species, 209 bird species – including Himachal Pradesh's state bird the *Jujuran* (Western Tragopan) – 12 reptile species, 9 amphibian species and 125 insect species ("The official website of Great Himalayan National Park | A UNESCO World Heritage," n.d.). At higher altitudes, animals such as blue sheep, snow leopard, musk deer and Himalayan brown bear are present. Due to its wide variety of species and their short habitat range, GHNP has been listed as the conservation area of highest importance in all of the western Himalaya ("The official website of Great Himalayan National Park | A UNESCO World Heritage," n.d.). As the only legally notified national park in the Kullu District, GHNP has been the focus of most of the conflict over conservation efforts in the area. However, it seems that over time conflict as subsided in the region as no research participant expressed being involved in any ongoing disputes.

4.2.2 Khirganga National Park

The Khirganga National Park, covering 710 km^2 of the Parvati River watershed, was established in 2010 but has yet to receive final notification under the Wildlife Protection Act (1972). It is located adjacent to the north-western boundary of GHNP (Map 2) and the intent is to merge the two parks into a contiguous 1,464 km^2 of protected area that the Wildlife Department claims would facilitate management activities. According to the Wildlife Department, there are no villages located within the park boundaries and villagers surrounding the park (photos 5-6) who currently depend on natural resources found within its boundaries will receive compensation or

be provided with alternate lands. Similar to GHNP, the park is home to many species endemic to the region.





Photo 5: Tosh Village, the village closest to the proposed Khirganga National Park and accessible by road

Photo 6: Also Tosh village

4.2.3 Inderkilla National Park

The Inderkilla National Park, also established in 2010 but currently awaiting final notification, covers an area of 104 km^2. Located near the Hampta Pass, a popular "snow point" near Manali, Inderkilla National Park is home to a variety of endangered species of plants and animals endemic to the region. Mammals such as brown and black bear, leopards and a variety of mountain deer can be found here as well as several rare bird species like the Monal and Kaleej. Although the government states that there are no villages located inside park boundaries, several villages (e.g. Prini, Shuru and Sethan) near the proposed park entrance rely on park resources for livelihood and/or operate tourism activities in the area (see photo 7). A German company 'GIZ', with the help of local tourism agency 'Sunshine Himalaya Adventures', has been responsible for

developing an ecotourism plan for the area surrounding Inderkilla National Park, with the goal of involving local people in ecotourism activities to reduce their dependencies on park resources.



Photo 7: A research participant working near the proposed Inderkilla NP from the village of Prini

4.2.4 Kanawar Wildlife Sanctuary

The Kanawar WLS (photo 8) is located near the town of Manikaran, a hot springs and pilgrimage site frequented by locals and domestic tourists. The Kanawar WLS was established in 1954 and covers 60.7 km^2 of forested land. A mixture of temperate deciduous forest, mixed coniferous forest, alpine dry pastures and alpine dry shrubs are found within the boundaries of the WLS (Unknown, 2019). In addition, rare birds such as the Western Tragopan, Cheer Pheasants and White Cheeked Tit may be found here. Several other species of animals and birds endemic to the region can be seen from inside the Kanawar WLS and the park is well known for its efforts to preserve the endangered Himalayan Tahr.



Photo 8: A sign at the entrance of the Kanawar WLS

4.2.5 Kais Wildlife Sanctuary

The Kais WLS is located about 16 km from the city of Kullu and belongs to the Kais Nala watershed (Map 2). The sanctuary covers 14.2 km^2 in the Parvati Valley. The Kais WLS was first established in 1933 under the guidelines of the Punjab Wild Birds and Animals Protection Act, as the area was still part of Punjab at that time. The WLS was later legally notified under Himachal Pradesh legislation in 1954. The primary goal of declaring this protected area was to preserve endangered species such as Pheasants and Musk Deer and today, the sanctuary is home to Barking and Musk Deer, Hyena, Himalayan Tahr, Snow Leopard, and Monals, amongst others.

4.2.6 Khokhan Wildlife Sanctuary

Also notified in 1954, the Khokhan WLS is located near Khokhan village at about 19 km from the town of Kullu. According to the Himachal Pradesh state government website, 28 villages are

located within the boundaries of the sanctuary and depend upon its natural resources to meet some livelihood needs. Similar to the other WLS in the Kullu District, the Khokhan WLS is home to many rare and endangered species of plants and animals endemic to the region with its most popular attractions being the Himalayan Black Bear and the Himalayan Tahr. Other tourist attractions exist near the Khokhan WLS including the Raghunath Temple and the Sultapur Palace, which bring many domestic tourists to the area.

4.2.7 Manali WLS

The Manali WLS (photo 9-10) is located only 2 km from the town of Manali and covers an area of 31.8 km^2. The area was legally declared a WLS in 1954, along with the other WLSs in the District. The sanctuary contains forests composed of Deodar, Kail, Horse Chestnut, Walnut and Maple. Home to an array of species, the Manali WLS is most known for its populations of Musk deer, Snow leopards, Monal, Brown bear and Ibex. The WLS is used for ecotourism purposes such as trekking and camping in the summer months and is easily accessible by walk from the town of Manali.





Photo 9: Interpreter Mehru hiking toward the entrance of the Manali Sanctuary

Photo 10: The entrance gate to the Manali Sanctuary

4.2.8 Nature Parks

In recent years, nature parks have become increasingly popular in the Kullu District, especially in and around Manali town. Three nature parks are open in Manali, including the Manali nature park (photo 12-13), the Van Vihar nature park and the Nehru Pheasantry (photo 11,14). A fourth nature park is currently under construction near the village of Goshal, located about 5 km from Manali town, and several others are found in the Kullu District. These nature parks exist mostly for recreational purposes, providing forested areas within urban centres for locals and tourists to escape the hustle and bustle of Manali and Kullu. These parks are also part of the conservation movement in Himachal Pradesh as they aim to educate visitors about the importance of protecting the environment. For example, the Nehru Pheasantry hosts a Pheasant breeding program while raising public awareness of the endangered species. In addition, each nature park displays several signs that display conservation messages (photo 11) to prevent littering and pollution and that communicate the importance of protecting trees, animals and birds. Finally, since these nature parks are fenced, they also prevent encroachment into the forest by local people and/or outsiders looking to develop the land.





Photo 11: A sign in the Nehru Pheasantry Nature Park in Manali

Photo 12: A conservation sign in the Manali Nature Park





Photo 13: A walk through the Manali Nature Park

Photo 14: Map of the Nehru Pheasantry Nature Park

4.3 Planning and Management Approach for PAs in the Kullu District

As mentioned in the literature review (Chapter Two), planning and management of many PAs globally has been shifting from an exclusive approach focused on decoupling conservation efforts from local livelihoods to a more inclusive approach that fosters relationships between local people and park managers and attempts to harmonize conservation goals with local needs (Ghate, 2003; Walsh, 2018). Although the management plans and other government documents for PAs in the Kullu District describe an inclusive approach to PA planning and management, it became apparent while in the field that this inclusive approach has yet to be implemented on the ground. Experiences shared by local people revealed that an exclusive approach is still very much prominent in the study area.

As a way to determine where the planning and management approach of PAs in the Kullu District fall between the Exclusive and Inclusive Models, Table 3 was adapted from an IUCN table describing the differences between the two models. A fourth column was added to the

IUCN table to highlight the characteristics of PA planning and management in the Kullu District, as well as a fifth column providing evidence and examples from interview data and document review. The sixth column highlights major challenges that were expressed by study participants and a seventh column describes some recommendations that were shared by study participants. As such, Table 3 provides a framework for the presentation of my data and a summary of my findings, which are further described following the table.

Table 3. Description of the approach to PA planning and management in the Kullu District compared with the Exclusive and Inclusive models described in the IUCN guidelines on PA planning and management, including challenges and recommendations shared by study participants

Topic	**Under an Exclusive Model, PAs are…**	**Under an Inclusive Model, PAs are…**	**In the Kullu District, PAs are…**	**Evidence from interviews & documents:**	**Challenges as identified by study participants:**	**Recommendations as identified by study participants:**
1) Objectives	• Set aside for conservation • Established mainly for spectacular wildlife and scenic protection • Managed mainly for visitors and tourists • Valued as wilderness • About protection	• Run also with social and economic objectives • Often set up for scientific, economic and cultural reasons • Managed with local people more in mind • Valued for the cultural importance of so called "wilderness"	• Set aside for conservation but undertake some social and economic objectives • Established mainly for spectacular wildlife and scenic protection • Managed only for visitors, tourists and	• It is evident from the exclusive nature of the PAs (e.g. locals are removed and many local rights are extinguished), that conservation objectives are prioritized over social ones • "According to the Wildlife Protection Act, peoples' rights can be seized for conservation. Customary rights should have been recognized but they were not." – GHNP, community member, 27 • "GHNP is a complete loss for the people, it has stopped us from harvesting	• Poor implementation of management plans • Park officers not willing to change	• Provide employment opportunities to support socio-economic objectives • Raise awareness of conservation benefits • Promote sustainable use of PAs

		• Also about restoration and rehabilitation	biodiversity protection • Valued as wilderness • About protection	medicinal plants. Now we can't even go inside the park." – GHNP, community member, 48		
2) Governance	Run by central government	Run by many partners and involve an array of stakeholders	Run by state government	• "I am not involved in park management or planning but I am satisfied with the forest department's decisions." – Inderkilla NP, community member, 9 • Joint Management is mentioned in GHNP's management plan but study participants confirmed that Joint Management of PAs was not taking place	• Lack of local involvement and cooperation	• Form village committees to help plan and manage PAs • Joint forest management
3) Local people	• Planned and managed against people • Managed without regard to	• Run with, for, and in some cases by local people • Managed to meet the needs of local people	• Planned and managed mostly against people, while claiming that it	• "The management approach of the park is to involve the public, we do patrolling with locals in several places." – GHNP, forest officer, 19 • "Government doesn't communicate with locals"	• Poor communication with locals • Lack of local involvement in planning and management	• Allow limited access and resource use within PAs • Involve local people in planning and management

	local opinions		intends to meet the needs of local people • Managed without regard to local opinions	– GHNP, community member, 23 • "No one has been involved in the planning or management nor were we consulted at first. Once they declared the park, then people knew about it." – GHNP, community member 32		
4) Wider context	• Developed separately • Managed as 'islands'	• Planned as part of national, regional and international systems • Developed as 'networks' (strictly protected areas, buffered and linked by green corridors)	• Some PAs are planned as part of national, regional and international systems and some are developed separately • Some are managed as 'islands' and some are developed	• It was explained by several forest officers that their intent is to merge Khirganga NP with GHNP, Pin Valley NP, Sainj WLS and Tirthan WLS to make a contiguous network of PAs including a buffer zone, which is thought to facilitate management efforts • The other WLS in the area are managed as 'islands' without buffer zones		• Merge PAs to facilitate management activities

			as 'networks'			
5) Perceptions	• Viewed primarily as a national asset • Viewed only as a national concern	• Viewed also as a community asset • Viewed also as an international concern	• Viewed as an asset to some communities • Viewed as a national and international concern	• GHNP has been awarded UNESCO World Heritage Status and thus, is recognized as having international importance • Few people are receiving benefits from increased tourism associated with PAs: "The benefits of the park are with tourism, lots of local guys are involved in the business and women are also employed as guides." – GHNP, community member, 28	• Conflict between local people and forest officers • Human-wildlife conflict • Corruption	• Raise local awareness of conservation benefits • Recognize cultural heritage in UNESCO designation • Improve tourism development in local communities
6) Management techniques	• Managed reactively within a short time scale • Managed in a technocratic way	• Managed adaptively in a long-term perspective • Managed with political considerations	• Planned for long-term management but often managed reactively • Managed in a	• Management plan provides long-term goals and is revised every 10 years • "The management approach of the park is to keep local people busy with other work so that they don't engage in illegal activities like poaching and	• Accessibility issues • Lack of staff • Illegal activities	• Preserve local forest rights

			technocratic way	harvesting medicinal plants." – GHNP, forest officer, 20 • "The officers in higher positions in the office develop the management plans and then the forest guards use them as instructions." – GHNP, forest officer, 19		
7) Finance	Paid for by taxpayer	Paid for from many sources	Paid for mostly by taxpayers but also from other sources	• Many international organizations have provided money for GHNP (e.g. World Bank, UNESCO, GIZ) but WLS have been mostly paid for by government (taxpayers). • "They spent the world bank money on women's self-help groups and committees, which is a waste of money." – GHNP, community member, 27 • "The money coming from UNESCO was not properly	• Lack of funding • Uneven budget distribution	• More transparency in budget distribution

				utilized." – GHNP, community member, 42		
8) Management skills	• Managed by scientists and natural resource experts • Expert led	• Managed by multi-skilled individuals • Drawing on local knowledge	Managed by state government and sometimes local people	• It was understood from interviews that few people from some villages had been involved in management activities, such as patrolling, but that the majority of the management was done by the forest officers • "Some people got part-time jobs as watchers with the park but nothing full-time" – GHNP, community member, 26	• Lack of diversity in planners and managers	• Involve local people in planning and management activities • Improve training for forest officers

Source: Adapted from: "A new paradigm for protected areas" table in the IUCN guidelines (Thomas & Middleton, 2003)

4.3.1. Objectives of PAs

Table 3 demonstrates that overall, PAs in the Kullu District still operate under a very exclusive approach that largely excludes local people from planning and management activities, even though many traditional uses carry on in the WLS areas. However, the table shows that park planners and managers have made incremental progress towards the preferred inclusive model. While the objectives of PAs in Kullu remain focused on the protection of the environment and preservation of natural resources, management plans have begun to include consideration of impacts, benefits and involvement of local communities (Srivatsava, 2010). For example, the strategic approach of GHNP "aims at bringing about a change in the relationships between the natural resource base including the park and the immediate and long term livelihood needs of the local communities from the open access management to an increasingly participatory mode of joint management involving all stakeholders" (Srivatsava, 2010). Although addressing local livelihood in management plans suggests a step in a positive direction, this consideration for local people was not confirmed by study participants, which might reveal that positive changes on paper have yet to be implemented on the ground.

In regards to the objectives of PAs in the Kullu District, two major challenges that were found in the interview data relate to poor implementation of management plans and a concern that forest officers are not willing or able to change the way parks are managed under a top-down management approach. Although joint management practices, such as participatory management and joint decision making by local communities and park administration, are described in GHNP management documents, forest officers and community members both confirmed that this approach was not being implemented. For example, "Most of the work is on paper. If they did the work practically then they could achieve better joint management" (GHNP, community member, 26). As well, community members and NGOs expressed concerns that government officials in higher level positions lack the willingness to evolve and evoke change in the system. For example, "Maybe one guy has changed in the last 20 years but 99 percent of them have not and will not. The overall management approach has not changed at all" (GHNP, NGO, 51). Government officials in lower level positions shared that they saw the importance of involving local people but that their position within the government hierarchy did not allow them to

suggest such changes. Finally, it was expressed by community members that the objectives of PAs were not being met due to lack of local involvement, e.g., "The real objectives of conservation are not being achieved. People need to get livelihood through conservation which is not happening" (GHNP, community member, 27).

Providing employment opportunities for local people was a major recommendation shared by study participants as a way to achieve socio-economic objectives and increase the effectiveness of conservation efforts. Many community members viewed PAs as an opportunity to increase tourism in their village and recognized its potential to bring employment and income to residents. However, many participants had concerns that the government had not properly developed and promoted tourism to date and that this was impacting their ability to earn a living. For example, one participant explained that "*the department is not doing anything about tourism, they should develop the WLS and promote tourism because right now, most people don't know about tourism here*" – interview 68, and "*tourism would bring benefits, we could open cafes, homestays and trekking so employment would increase*" (GHNP, community member, 50). It was suggested by some participants that greater coordination between state level departments – the HP Forest Department and the Himachal Pradesh Tourist Development Corporation – could help resolve some of these concerns.

One participant also expressed the need to consider socio-economic needs in early planning phases of PAs, e.g., "Before starting the project, the government should consult with local people and learn about how to develop local communities and learn about what they need – for example, roads. Then the national park can connect everything from flora, fauna to tourism, road development and flights into the area" (Inderkilla, community member, 13).

4.3.2 Governance of PAs

The IUCN states that when working in an exclusive model, PAs are managed and operated by the central government only, whereas PAs in the inclusive model are managed and operated by a variety of stakeholders (Thomas & Middleton, 2003), for example, Community Conserved Areas present in some Indian states are governed by one or multiple village groups (e.g., women's groups, youth groups or forest groups) with potential support from NGOs or the government

(Pathak & Kothari, 2009) but this approach was not seen in the Kullu District. Again, although the management plan of GHNP discusses joint management and participatory approaches to managing the park, it was made evident when talking to affected individuals that they had not been involved in any planning or decision-making activities related to the park, e.g. "*I have not been involved in any planning or management of the park. I was not consulted at first. Only after they declared the park did we know about it*" (GHNP, community member, 32) and "*We don't have a good relationship with the government because all decisions are made on a higher level*" (GHNP, community member, 21). This theme was recurrent for all national parks, WLS and nature parks in the study area. Interviews revealed that some local people had participated in management activities, such as patrolling and/or maintenance of paths, but that local input was not included in the planning and management decisions. This top-down approach to PA planning and management in Kullu District was further described by the NGO BTCA when discussing the two new national parks: "*Now, the national parks are in high level discussions and have not yet reached the grassroute level. Once decided, it will be communicated down and conflict will erupt. It is an extra duty to conduct consultation early on in the process so they [forest officers] probably won't want to do that*" (Inderkilla & Khirganga NP, BTCA, 6). Although it is the state government of Himachal Pradesh that takes on the governing role of PAs rather than the central government as described in the table by IUCN, PAs are still managed and operated in a very exclusive manner.

Recommendations to overcome governance issues in PA planning and management were shared by study participants through offering ideas such as forming village committees that could act as a mechanism for communication between forest officers and community members. Two participants also mentioned joint management as an alternative approach to the current top-down management approach of PAs, e.g., "*I am not against national parks, but I want a new model of conservation, one that harmonizes conservation and livelihood. I am looking at management from other countries and some of them are doing a joint management approach*" (GHNP, community member, 27). Another participant did not explicitly mention joint management but suggested a similar participatory management approach: "*Each Panchayat should develop a five year management plan of what needs to be done specifically in their village*

and how to do it. These plans should be developed at the community level and then brought up to higher levels of government" (GHNP, NGO, 52).

4.3.3 Local people and PAs

An exclusive PA is run and managed against local people and without consideration of local opinions whereas an inclusive PA is managed with people and considers local needs (Thomas & Middleton, 2003). Interview data revealed that consultation, engagement and involvement of local people is lacking in PA planning and management in Kullu, e.g. "*Practically, people are not involved in any conservation activities or livelihood*" (GHNP, community member, 27). For the two new national parks, Khirganga and Inderkilla, although they were both established in 2010, many people living in surrounding villages revealed that they had yet to hear about the new national parks or had heard some village talk on the subject but nothing from the HP Forest Department, e.g "*No one from the forest department has come here to tell people about the national park. They have not done any meetings about it either. I first heard about the park in 2019 from people in the village*" (Khirganga, community member, 59). This experience was similar for individuals from communities surrounding GHNP who claimed that they had not heard about the national park until the government actually started putting up fences and gates or, for a few participants, after it has received UNESCO world heritage status, e.g. "*I read about GHNP from UNESCO in 2014. Before that, I didn't know about it*" (GHNP, community member, 42). This shows serious lack of consultation and local input in the planning stage of PAs. In addition, only a few people from locally affected communities have been employed for patrolling or monitoring activities in the park, which were mostly periodic short-term positions, e.g. "*There are 13 Panchayats around the park and some people may be getting employment for 15 to 18 days but not for regular or long-term positions*" (GHNP, community member, 21).

Challenges with poor communication between forest officers and local community members and lack of local involvement in planning and management activities were expressed by many research participants. While these procedural justice challenges are further discussed in Chapter Five, some recommendations shared by study participants include allowing a certain level of access and resource use within PAs and involving local people from the early planning stages to on-going management activities. For the new national parks that are still in the

notification process, Inderkilla and Khirganga national parks, many villagers had concerns about the lack of early consultation and thought that better local engagement in the planning stage could reduce conflict later on, e.g., "*The government should resolve conflict before it happens. They can do this by promoting local people and giving them benefits. Before even starting the project, they should consult with local people and learn about how to develop local communities and learn about what they need, like roads for example.*" (Inderkilla NP, community member, 13).

4.3.4 Wider context

The intent of geographically connecting several PAs in Kullu is to manage them as a network rather than to manage them independently. According to Thomas & Middleton (2003), managing a network of PAs with a broader context in mind is considerate of the inclusive model of PA planning and management. In Kullu, the Khirganga national park is intended to be merged with GHNP, which is already connected with the Sainj and Tirthan WLS, and the Pin Valley national park (which is not in the Kullu District and thus was not included in this study). Creating this network of PAs is thought to facilitate management efforts, which aligns with an inclusive model. In addition, GHNP was awarded UNESCO World Heritage Status in 2014 and has since become a PA of international importance. The other WLS and nature parks in Kullu District are managed independently but remain part of the broader regional PA network in Himachal Pradesh.

One recommendation to better address wider context issues in PAs in the Kullu District was shared by forest officers as merging multiple PAs, e.g., "The government is trying to make a contiguous national park between GHNP and Khirganga that would connect all three PAs – Khirganga, NP and Pin Valley – and several WLS" (Inderkilla, forest officers, 4). This was thought to facilitate coordination of planning and management activities between the various PAs.

4.3.5 Perceptions of PAs

The fifth topic in Table 3 refers to the perceptions of PAs solely as national assets under an exclusive approach and as community, national and international assets under an inclusive

approach (Thomas & Middleton, 2003). GHNP became an international asset when it was awarded its UNESCO designation in 2014 and the award is thought to attract international tourists as well as domestic tourists from all over India. In addition, the park now receives funding from the international agency. However, only a small number of communities located nearby PAs in the Kullu District would likely consider them an asset to their communities. People living near GHNP closer to the Tirthan WLS were the only study participants who mentioned receiving benefits from an increase in tourism in the area that resulted from GHNP and its UNESCO status. Communities where people are working as trekking guides, porters and homestay hosts consider PAs as an asset to their community, whereas other people that are being denied access into PAs and whose rights have been limited or extinguished explained that PAs are a nuisance rather than an asset. For other WLS, the general feeling from community members was that they did not see many benefits or negative impacts from the PA but that they recognized the potential future environmental benefits of having protected forests nearby.

Local perceptions of PAs that were shared by study participants that also create challenges include conflict between local people and park managers, such as corruption, as well as human-wildlife conflict. A few participants mentioned conflict between park officers and local resource users as a result of park restrictions and others mentioned corruption and bribery as a way to overcome such conflict, e.g., "*there has been some conflict with some people and forest guards, but if people take wood illegally and get caught then they usually compromise*" (Kais WLS, community member, 64) and "*they have a relationship with forest guards, they simply have to pay the guards to take wood from the park*" (GHNP, community member, 30). In much of the literature on PA planning and management, conflict often results from displacement of people and restrictions placed on their long-standing livelihood practices (e.g., S. M. Andrade & R. Rhodes, 2012; Schuster et al., 2019). Similar to examples from elsewhere as described in the research literature, conflict in the study area poses obstacles to the effectiveness of conservation goals. In addition to conflict between forest officers and local people, human-wildlife conflicts were also expressed as a concern by a few study participants. Although conflict between humans and wildlife has been a common phenomenon in the Kullu District even before the emergence of PAs, study participants expressed a perceived increase in such conflict due to PAs, e.g., "*There has been an upsurge in leopard spotting and there has been some conflict with*

leopard attacking sheep in the last 2 or 3 years" (Manali WLS, community member, 71) and "*Monkeys disturb crops and fields so people will keep dogs to scare away the monkey. But then wildlife, like leopards and bears, will attack their dogs, sheep and cattle*" (Khokhan, community member, 58). Safety concerns expressed by study participants living nearby PAs mirrored findings by Battharai & Fischer (2019) who attributed a negative perception of wildlife in local Nepalese to fatal tiger attacks in their communities.

Raising awareness of the benefits of wildlife conservation was suggested by few participants as a way to overcome negative perceptions of wildlife conservation. Recognizing cultural heritage in addition to biodiversity was another recommendation made by study participants to improve local perception of PAs, especially in GHNP. A few study participants also shared ideas on how to improve tourism in their village which was also thought of as a way to improve local perception of PAs, e.g., "*the government should make maps of the park and ecozone that show where the temples are, like the 380-step temple in Tung village, where the 4-story house in Kaliyara is, and other historical sites, so that tourists can move from village to village following a route, which could bring benefits to all 13 Panchayats in the ecozone*" (GHNP, community member, 21) and "*they should bring in birds and animals to attract more tourists*" (GHNP, community member, 33). For others, developing roads and improving infrastructure in and around PAs was key to increasing tourism in the area, e.g., "*The government should build roads to villages, at least until Shakti and Maraur, then tourists could go there*" (GHNP, community member, 42). Although tourism is not directly linked to the planning and management of PAs, by providing employment to local people their dependence on park resources could decrease, which would likely reduce conflict around PAs, improve local perception of PAs and in turn, improve conservation efforts.

4.3.6 Management techniques

The sixth topic in Table 3 is management techniques. According to the IUCN, reactive management techniques that focus on short-term results and adopt a technocratic approach align with an exclusive model, whereas long-term planning and adaptive management align with the inclusive model (Thomas & Middleton, 2003). For this topic, data show that PAs in Kullu fall somewhere between the two models as management plans are developed for a period of ten years

and describe long-term management goals. This shows a more inclusive aspect of PA planning and management. However, since local people and NGOs are not consulted and engaged much in the development of these plans, it can be argued that the PAs are managed in a more technocratic way, which aligns with a more exclusive model.

Management challenges that were expressed by study participants relate mainly to accessibility issues, lack of staff and illegal activities within park boundaries. Accessibility was a major challenge communicated by both forest officers and local communities for almost all of the PAs in the Kullu District. Many study participants explained that due to the remoteness and lack of road development in and around PAs, it was difficult for forest officers to properly patrol and monitor the areas. For example, one participant expressed that "*the terrain is very different and at high altitudes the area is usually snow bound and so, accessibility by road is a big challenge*" (GHNP, forest officer, 19). Lack of staff to cover such large areas and lack of funds to do so were also expressed by a few study participants, e.g., "*there is a lack of staff because the park covers such a large area and is of high altitude*" (GHNP, forest officer, 20), and "*they started building a gate to keep wildlife in but then the funds finished and the gate was not finished*" (Kais WLS, community member, 68).

Illegal activities, such as poaching, collecting medicinal herbs, and illegal felling of trees, were perceived as major barriers preventing proper management of PAs, by forest officers and local community participants alike. The challenge in preventing such activities is directly linked to the lack of staff, issues of accessibility, large geographic area and perhaps most importantly, the fact that many people from surrounding villages have lost their sources of livelihood due to park restrictions but were not provided with alternative land or alternative sources of income generation. Participants indicated that this has given them little choice but to continue practicing their traditional ways of life that have now become illegal, e.g., "*Hunting is very common in the WLS especially in winter, although this is not allowed but people still do it*" (Kais WLS, community member, 68), and "*there is lots of poaching going on in the park and people are still burning the forest*" (GHNP, community member, 42).

To overcome such challenges, it was mentioned by many study participants that a certain level of local resource use in PAs, especially in GHNP, should be allotted to local villagers. In

relation to the new national parks that have yet to be closed off to local use, a few community members expressed fear over potential PA restrictions and suggested that PAs should not impede their ability to practice their traditional ways of life. For many, preserving local forest rights and continued access into the national park were the deciding factors between welcoming the park or opposing it, e.g., "*I believe that in Inderkilla national park, they will have to keep the rights of the people and preserve local areas where deities go. If our local rights, beliefs and cultural heritage is preserved, then we will not oppose but rather welcome the national park.*" (Inderkilla NP, community member, 1). For others, establishing a WLS with limited access and resource use rather than a national park with complete restrictions was the solution to preventing conflict around new PAs, e.g., "*I think a sanctuary would be better than a national park because poaching would be stopped and forests would survive but local people would still have rights.*" (Inderkilla NP, community member, 14).

For participants living near WLS, issues of rights were not discussed as major concerns since most people mentioned still being able to practice limited resource use inside park boundaries. For GHNP, although people lost their forest rights over two decades ago, it was suggested that a few people still practice some level of resource use in the park and that reinstating rights would greatly reduce conflict and illegal activities in the park. While a few participants thought that all forest rights should be reinstated, others thought that limited subsistence use should be allowed while external resource users and commercial resource use remain prohibited, and others thought that only grazing should be allowed and/or only medicinal herb harvesting should be reinstated. For example: "*I think medicinal plant harvest should be allowed so that we can get some benefits but no hunting or killing of animals*" (GHNP, community member, 45) and "*I think grazing and medicinal herbs and mushroom collection should be allowed. We used to pick mushrooms when they were fully ripe, which was more sustainable because they would grow again next year. Now because of restriction, people pick them when they aren't fully ripe*." (GHNP, NGO, 53). Although participants disagreed on the level of resource use that should be reinstated in GHNP, almost all agreed that local access into the park and subsistence resource use should not be fully restricted.

4.3.7 Finance

The WLS and nature parks in Kullu are managed entirely by the state government and paid for by taxpayers. GHNP, on the other hand, has received funding from several different sources including the World Bank, UNESCO and the National Hydel Power Corporation (Hughes, 2011). These funding agencies have supported a number of biodiversity conservation programs and rural development initiatives in the ecozone of the GHNP, which in turn support management activities within the park (Hughes, 2011). However, a few research participants mentioned lack of transparency with budgets and were concerned that funds were not equitably distributed, resulting in some participants feeling like they did not receive the funding that was intended to support them, e.g. "*If there is a budget it goes to a committee or to an NGO and villagers only get a small portion, so that's why we have to resort to illegal activities. Some funds have come to NGOs which then formed committees and gave some training to locals for a short times, but most of the benefits went to outsiders*" (GHNP, community member, 21) and "*So much money is coming in on the name of GHNP but the department is not even spending 10,000 in this village*" (GHNP, community member, 48). While receiving international funding is a sign of an inclusive PA, using funds in an unfair and non-transparent manner is surely a characteristic of an exclusive one. Although recommendations to improve PA finances were not mentioned by study participants, it can be assumed that more budget transparency would help to overcome issues and perceptions of uneven budget distribution.

4.3.8 Management skills

The eighth and final topic in Table 3 refers to management skills. In the exclusive model, PAs are managed by scientists and other natural resource experts whereas in the inclusive model, PAs are managed by multi-skilled individuals and developed using local knowledge (Thomas & Middleton, 2003). It was argued by local study participants that management plans of PAs in Kullu are developed entirely by government experts with very little input from local communities, NGOs and other organizations, e.g. "*For Kanawar, there was no consultation done when they declared it in 1979 or 1980. This was a long time ago but even today there is no consultation done for management activities*" (Kanawar, community member, 40). This was also confirmed by forest officers who explained that: "*Every ten years, management plans are revised*

using multiple levels of monitoring from different departments including the Wildlife Department, the Wildlife Institute of India, and wildlife experts from different parts of the country" (Khirganga, forest officer, 35) and "*The people in higher positions in the offices develop the management plans and then the forest guards use them as instructions*" (GHNP, forest officer, 19).

The lack of diversity in PA practitioners could be overcome by involving local people in planning and management activities, as was suggested by many study participants and discussed above. In addition, one study participant expressed concerns over the training of forest officers and recommended improvements to training programs, e.g., "*Forest officers need to be properly trained and educated. Now, they are not fully educated so it is hard for them to teach the public. Programs in schools should also be taken more seriously*" (Manali WLS, community member, 71).

4.4 Nature parks

Although nature parks are not legally protected under the Wildlife Protection Act (1972) as PAs, research findings suggest that they are planned and managed in the same exclusive nature as other PAs in Kullu and impose some restrictions on local resource use. While I did not formally canvass participants about the development and management of nature parks, many discussions about these parks emerged during my time in Kullu and I did visit many of these parks myself. Although nature parks have existed in Kullu for decades, discussions with my interpreter and other residents in and around Manali revealed that there has been a mini boom in their development in the last five years or so. It was often suggested that these nature parks are merely roadside playgrounds intended to make a profit from entrance fees rather than to preserve or protect the forest. In addition, it was observed and mentioned by few that in some cases, some of the forest was actually destroyed to put in walking trails or to build man-made ponds in order to attract tourists into these nature parks. Overall, they were not seen as bringing benefits to the environment nor to local people.

While visiting the new nature park near Goshal (photos 15-16), a forest officer shared that the main purpose for this park was to prevent encroachment of local people into the forest.

Further, the forest officer explained that nature parks can be used for recreational purposes by locals and tourists alike as a way to escape the busy town of Manali. When asked about local peoples' forest rights, the officer claimed that no locals had rights to these forests and that today, most people are employed in tourism and do not need to use the forest to collect firewood or graze livestock anymore. However, I did observe many local women collecting firewood nearby the nature park during my time in Goshal. Although I was unable to confirm if they had rights to the forest, it is likely that putting up a fence around a section of the forest would impact their livelihood means. Moreover, the forest officer explained that since local people don't have much interest in the area, the nature park was planned by the HP Forest Department without local input.

A few study participants spoke positively of nature parks and suggested that these had a conservation purpose, such as the pheasant breeding centre that raises awareness about the endangered species and the display of conservation messages throughout the park (photo 17). However, when asked if they or anyone in their village had been involved in the planning or management of these nature parks, respondents answered that they had not been consulted or engaged in any way. Therefore, the research reveals that nature parks follow the same exclusive approach employed for other PAs in Kullu, developed entirely by the HP Forest Department without consideration for local people.





Photo 15: The entrance gate to the new nature park in Goshal, Manali

Photo 16: Inside the new nature park in Goshal, Manali



Photo 17: A conservation message in the Kullu Nature Park

4.5 Summary

As the data in this chapter show, and as summarized in Tables 3, the planning and management of PAs in the Kullu District has failed to transition from an exclusive to an inclusive approach. When analyzed alongside IUCN's characteristics of exclusive and inclusive PAs in Table 3, the features of PAs in the Kullu District point almost entirely to the exclusive model, especially national parks. The objectives of PAs in Kullu prioritize biodiversity protection while failing to adequately consider socio-economic impacts to local communities. PAs are governed under a top-down management system wherein decisions are made entirely by the state government and local people are not involved in planning nor adequately represented in management activities. Although several PAs in Kullu are planned to be merged into a single contiguous area, the majority of PAs are still managed as 'islands' without buffer zones. The proportion of community members receiving benefits from PAs is much smaller than those being adversely impacted causing a negative perception of PAs and preventing local support for conservation efforts. Management techniques are technocratic, PAs remain mainly funded by tax payers with

the exception of GHNP that receives money from international sources, and finally, management skills remain in the hands of government officials.

The PA planning and management challenges described in Table 3 further strengthen the idea that PAs in the Kullu District still operate under an exclusive model. Challenges were mainly described as issues of accessibility due to remoteness and lack of road development, as well as a lack of both staff and funds. Illegal activities were also perceived as a barrier to management activities, especially in national parks, as were conflict and corruption. Conflict between park officials and local communities was frequently identified in the literature as common challenges to PAs worldwide (e.g. Martin et al., 2016; A. Mukherjee, 2009), as were human-wildlife conflicts (e.g. Battharai & Fischer, 2019). As mentioned by Martin et al. (2016), when conservation restrictions interfere with livelihood needs of communities, conflict is likely to emerge. Conflict over conservation effort has occurred in the Kullu District as a result of the restrictions that national parks have placed on the traditional livelihood practices of surrounding communities, such as grazing livestock, collecting firewood and harvesting medicinal plants. Although some members of communities have been involved in short-term, periodic positions with PAs, this was not recognized by study participants as an adequate trade-off for the overwhelming loss of resources. As described in the literature and suggested by the research findings, whether it be between park officers and local community member or between wildlife and humans, conflict tends to decrease local support for conservation efforts which impedes the effectiveness of such efforts (Battharai & Fischer, 2019; Martin et al., 2016; A. Mukherjee, 2009).

Recommendations made by study participants about the ways to improve PA planning and management in Kullu that make up Table 3, suggest a desire for more participatory approaches and fall under the inclusive model. Since most of the challenges brought forward by study participants pointed to flaws in the exclusive approach, it certainly makes sense that these recommendations are in line with an inclusive one. Suggested improvements such as more involvement of local people, whether it be through direct communication between the HP Forest Department and local people, early consultation or joint management, were reflected in much of the literature where scholars have advocated for more pluralistic and multi-stakeholder approaches to PA planning and management (N. Mukherjee, 2002; Ormsby & Bhagwat, 2010).

More participatory approaches to conservation which empower local people in planning and management activities and promote a shared understanding of environmental issues and conservation purposes, have been recommended as best practices worldwide (Kohler & Brondizio, 2017; S. M. Andrade & R. Rhodes, 2012; Wells & McShane, 2004) and by study participants of this research, but have yet to be embraced by park planners and managers in Kullu. Another recommendation was for tourism and ecotourism to be developed in and around PAs so that local communities can reap the benefits of tourism dollars. These recommendations came mostly from participants who had observed the tourism benefits that villages in the Tirthan Valley had received since GHNP had become a UNESCO World Heritage Site and thought that such benefits could be experienced in their villages if tourism was properly planned. Reinstating some level of local access and local resource use in PAs was also recommended by study participants as a way to improve PAs, which is in line with suggestions made by academics to foster human-nature interactions and allow limited access and resource use in PAs where humans depend on natural resources for survival (Ghate, 2003; Mckay, 2001; Walsh, 2018).

An important point to make is that although this study does not compare national parks from WLS and nature parks, the planning and management approach for the different types of PAs does differ. While national parks place absolute restrictions on resource use, WLS allow for some traditional rights to be practiced and are therefore more inclusive in nature. As mentioned earlier, national parks in the Indian Himalaya have been established as a result of extensive wildlife and plant surveys that demonstrated biodiversity richness worth conserving and revealed deterioration of such biodiversity to be a result of excessive harvesting by locals and non-residents (Srivatsava, 2010). In GHNP, failed attempts at regulating traditional resource use resulted in the establishment of a national park with absolute restrictions. However, the establishment of the Tirthan and Sainj WLS adjacent to the park allowed for some traditional resource use to continue in the area. As suggested by research participants and in the literature, allowing a certain level of resource use is seen as a more inclusive approach to PA planning and management, which suggests that WLS are a preferred type of PA. Although there are ongoing attempts to displace villages from within WLS in the Himalayas, the fact that these villages are not being forced to relocate also demonstrates an important step toward a more inclusive approach to PA planning and management. The establishment of WLS instead of national parks

in regions where local populations depend on natural resources for livelihood seem to be a readily available avenue for pursuing more inclusive PA planning and management.

As mentioned above, a recommendation made by study participants to promote a more inclusive approach to planning and management in national parks is the development of tourism, including road development, in and around parks. Although such development may bring more tourism dollars to rural and remote communities, tourism pressures can also be antagonist to conservation purposes. Tourism pressures in and around the town of Manali are visibly detrimental to the environment (e.g., garbage covering the streets, thick air pollution from car traffic, etc.) and if measures are not taken to carefully manage and limit numbers of tourists in areas of rich biodiversity, such as GHNP, the biodiversity in these areas will also be at risk of deterioration. Nature-based tourism or ecotourism was suggested by community members as a way to earn money from tourists while minimizing the ecological footprint of tourism. Activities such as trekking, bird-watching and camping are thought of by locals as having minimal impact on the environment. While this seems like a solution that would appease both conservationists and local community members, ecotourism must be developed very carefully as to not increase pressures on the national parks. In their analysis of the Pico de Europa National Park in Spain, Lopez & Pardo (2018) identify conflict arising from ecotourism activities between community members that are benefitting from tourism dollars and those who are not, between tourism companies and conservation agents, and between tourists using PAs for recreation and local community members whose access into the park is restricted. Therefore, although ecotourism can bring some benefits to local communities, the business must be carefully planned and managed to prevent conflict from spurring.

On a global scale, some nations have made great strides in their transition to inclusivity while others, like India, lag behind. Adewumi et al. (2019) performed a cross-national comparative analysis of PA management and found that although the concept of co-management has been introduced in some countries, top-down approaches to planning and management of PAs still dominate in the developing nations. They found that in Nigeria, local communities are not involved in planning and decision-making nor are they engaged in tourism related activities but rather conservationists and tourism investors have begun to form private partnerships that exclude local interests (Ifeoluwa Adewumi et al., 2019). Similar findings from studies in South

Africa indicate communities neighbouring PAs continuously experience loss of land, restricted access to natural resources, and lack of compensation (Nsukwini & Bob, 2019). Adewumi et al. (2019), however, found some progressive policies in Vietnam where local communities have started running their own ecotourism ventures within parks and are involved in Sustainable Resource User Groups that have the ability to utilize limited resources within parks in sustainable ways (Ifeoluwa Adewumi et al., 2019). The study suggests that such progressive and inclusive approaches to PA planning and management have yet to be embraced by PA practitioners in the Kullu District.

Chapter 5: Environmental Justice and PAs in the Kullu District

5.1 Introduction

As described in much of the literature, adopting an exclusive approach to PA planning and management tends to result in environmental injustices to be felt in communities residing in and around PAs (Ghate, 2003; Mckay, 2001; Walsh, 2018). Restricted access and denial of customary and *de jura* rights to the land and natural resources are key features of an exclusive model of PA planning and management and were identified by research participants as cause of environmental injustices. This chapter discusses issues of environmental justice, as identified by research participants, relating to PAs in the Kullu District. The data are organized by attributes of environmental justice: (i) distributive justice, (ii) procedural justice, (iii) recognitional justice, and (iv) restorative justice. The chapter concludes with a discussion of how environmental justice can be improved in PA planning and management in the study area and how learning may be used as a tool to elicit such change.

5.2 Distributive justice and PAs of the Kullu District

Early studies of environmental justice focused almost entirely on fair treatment and the distribution of environmental harm as part of the distributive justice concept (Schlosberg, 2007; Trubek, 1980). Today, equal distribution of environmental and social benefits is considered as important as equal distribution of environmental costs. Table 4 outlines both the positive and negative environmental and socio-economic impacts of PAs in the Kullu District as identified by study participants. The positive and negative attributes are discussed in turn in the text that follows.

Table 4. Positive and negative environmental and socio-economic impacts of PAs in the Kullu District as identified by study participants

Type of Impact	Positive	Negative
Environmental	More animals	
	More trees for the future	
	Reduced pressure on forests	
	Environmental awareness	
	Clean Environment	
Socio-economic		Loss of rights & livelihoods
	Training & employment	Inadequate compensation
	Increase in tourism	Inadequate budget distribution
	Road & infrastructure	Displacement
		Restricted access
		Human-wildlife conflict

5.2.1 Positive impacts of PAs

Positive environmental and socio-economic impacts of PAs in the Kullu District were identified by study participants (Table 4). However, it is important to note that during interviews I specifically asked research participants if they could identify any positive impact of nearby PAs and that prior to asking this question, most participants primarily listed negative ones. Nonetheless, recognizing positive impacts is an important aspect of distributive justice.

Some study participants, community members and forest officers alike, recognized that the declaration of PAs had a positive impact on the numbers of animals in the area, e.g., "*Now we can see huge herds of Ibex close to habitation.*" (Manali WLS, community member, 71), and when referring to the two newly proposed national parks, study participants recognized the potential for a future increase in wildlife, e.g., "*Most species are getting perished in the Himalayas, so a new national park would be useful in protecting these*" (Inderkilla NP,

community member, 13). Although an increase in wildlife was seen by some as a positive impact, e.g., "*there is an environmental benefit of biodiversity increasing in the WLS*" (Khokhan WLS, forest officer, 54), it was seen by several others as a negative impact of PAs (Table 4).

Perhaps the most frequently noted positive impact was the perception that PAs would bring environmental benefits for the future. It was often mentioned during interviews that PAs would lead to better overall health of the forest and that this would result in more trees to be used for future generations, e.g., "*It will benefit us and others in the future when there are more trees and the environment is protected*" (Kais WLS, community member, 66) and "*They have been planting trees so this is good for the environment and wood will be good for building things in the future and for our children*" (Manali WLS, community member, 72). Similarly, many participants identified a cleaner and healthier environment as a benefit to living near a PA and again, as a benefit to future generations, e.g., "*The environment is kept clean, otherwise it can become difficult for future generations*" (Kanawar WLS, community member, 41) and "*A national park would be a good thing because there would be less pollution now and in the future"* (Khirganga NP, community member, 36). Consideration of future generations is an important component of distributive justice (Martin et al., 2016).

Other positive impacts that relate directly to an increase in wildlife and trees and a healthy environment were expressed by participants as reduced pressures on the forest and environmental awareness in local villages. Some participants mentioned that since PA restrictions had been in place, there had been less grazing pressure on the forest and they saw this as having positive environmental effects. Others thought that a newly acquired awareness of the importance of wildlife, trees and a clean environment in local villages was responsible for the improved health of the environment. Overall, it was recognized that PAs have a positive impact on the environment and on peoples' attitudes and behaviours toward the environment.

Although these were not mentioned frequently, a few study participants did share socio-economic benefits of PAs. A few participants expressed having gained employment from PAs, either as park patrollers, maintenance workers or in the tourism industry, e.g., "*People from my village get benefits with maintenance of the park and building check dams. Forest guards also come to recruit people from my village for jobs as watchers.*" (GHNP, community member, 22)

and "*The benefits of the park are with tourism, lots of local guys are involved in the business and women are also employed as guides*." (GHNP, community member, 28). However, it was more often expressed that these job opportunities fell short in comparison to the loss of livelihood caused by the park, e.g., "*There are some watchers hired from the villages but usually everything is done strictly by the forest department, including plantation activities*" (GHNP, community member, 47) and "*Poor and middle class people used to go far into the forest for medicinal plants and now they are unemployed, whereas the people who already had money have now built homestays. Those with less money cannot afford to build homestays and so they have suffered more deeply from the restrictions imposed by GHNP*." (GHNP, community member, 43). It was apparent from participant comments and my observations that people from remote villages were not receiving the same employment opportunities as were those living in the tourist-frequented villages.

An increase in tourism was seen as a positive impact of GHNP and as a potential positive impact of Inderkilla and Khirganga national parks but was not mentioned for many WLS. An increase in tourists in and around GHNP was perceived by study participants to have resulted in an increase in employment opportunities for local communities, especially on the side of the Tirthan Valley. Local people also mentioned having received training by the HP Forest Department and/or NGOs for employment in tourism such as training to become trekking guides and to run homestays, e.g., "*I am in the tourism business. I work as a guide in the ecozone, sanctuary and park and I work at a homestay at Goshaini. I have done my training at Shai Ropa and have received my identity card which is needed to enter into the park. This training is offered once a year. Whenever tourists come, they stay in registered homestays and ask for recognized guides.*" (GHNP, community member, 28). WLS, on the other hand, were not recognized as bringing in many tourists and so, socio-economic benefits were rarely mentioned.

The final positive impact, mentioned solely by study participants residing around GHNP, relates to road and infrastructure that was seemingly developed as a result of funding received in the name of GHNP. However, this benefit was only recognized by villagers living in the ecozone and close to a road, e.g., "*Because of GHNP, they have built roads here so people received employment through that and accessibility is a major benefit. Since we are close to the road we only see positive impacts of GHNP*." (GHNP, community member, 29). For villages far from the

road, the exact opposite feeling was expressed: "*The money coming from UNESCO is not properly utilized. If it was, then maybe the recent death of a lady who fell off a cliff because the road is not properly developed here could have been prevented. The money should go toward fixing the roads.*" (GHNP, community member, 42). Although several positive impacts of PAs in the Kullu District were mentioned by study participants, there is a seemingly unequal distribution of those benefits and the negative impacts seem to outweigh the positive ones.

5.2.2 Negative impacts of PAs

The third column in Table 4 refers to the negative impacts of PAs in Kullu as expressed by study participants and it is important to note that only socio-economic impacts are listed here. When asked about any impact – positive or negative – of PAs, community members typically responded with negative socio-economic impacts affecting them and their village, suggesting that these impacts are felt more widely and intensively than positive ones. The most prominent response related to concerns over loss of forest rights and the resulting effect on livelihood. This was especially important for villages affected by GHNP but was also mentioned as a potential concern for Inderkilla and Khirganga national parks. For WLS, concerns of restricted resource use within park boundaries was sometimes mentioned but it was often accompanied by claims that regulations were not strictly enforced in WLS and thus, that local people had not completely lost their rights and livelihood. When GHNP was legally notified in 1999, the forest rights of local people were totally extinguished and at that time, people were heavily dependent on natural resources, such as medicinal plants, mushrooms, grazing, and wood products.

Local people have suffered greatly from loss of rights in GHNP and the resulting loss of livelihood and it was mentioned in several interviews that compensation was not adequate nor was it equally distributed between and within villages, e.g., "*When the government talks about compensation, this is very limited. People lost their rights to harvest medicinal plants and to graze. Some people got compensation and some did not. I think only Shangar, Shakti and Maraur got compensated while other villages got nothing.*" (GHNP, community member, 21) and "*GHNP took away all rights of villages, which included forest rights and grazing rights. Only four or five people received compensation – only the villages that touch the park and only people who had land inside the park. No one else got compensation or were given alternative*

land for loss of rights." (GHNP, community member, 32). Although the villages closest to GHNP may have received some compensation, this totalled between 40,000-45,000 rupees in one lump sum per household. Participants felt that this did not counter the complete loss of livelihood that was incurred.

The villages closest to GHNP that are likely the most impacted by park restrictions are also the ones where participants claimed to have received the fewest employment opportunities. While pointing out that many villages in the ecozone have received employment through an increase in tourism, the more remote villages located far from the road are not being visited by many tourists. Participants from those remote villages expressed that they felt they were the most disadvantaged by PAs because of the limited tourism benefits in their village and the greater impact from park restrictions on their livelihood. What became clear in our discussions was that although these villages may have received some compensation twenty years ago, they had not been provided with an alternative source of income generation and thus, were likely the most negatively impacted, e.g., "*Many people have lost their sources of income, mainly collecting medicinal herbs like karu and charrie. Unemployment rate has increased because of this*." (GHNP, community member, 42) and "*Some part-time employment was offered at first but now everything is terminated."* (GHNP, community member, 25).

In addition, due to their remoteness, these villages have not benefitted from road development or new infrastructure, e.g., "*It snows here and often there is no electricity so we will definitely need wood to burn. There are problems with water and roads also. If someone is sick then they have to carry them on their backs, which is a big problem."* (GHNP, community member, 6) and "*There are no good schools here and no English. If we want to send our children to good schools we have to rent a room there which we cannot afford. The same problem will happen to their children. There is also lack of teachers here."* (GHNP, community member, 49). This was described by some participants as unequal distribution of funding and inadequate budget detailing, e.g., "*So much money is coming in on the name of GHNP but the department is not even spending 10,000 rupees in this village*." (GHNP, community member, 48).

Another negative impact of PAs mentioned by many study participants is the increase in human-wildlife conflicts. Although an increase in animals was perceived by some as a positive

impact of PAs, it was also commonly perceived as having negative impacts on the community. Local community members from around various WLS and GHNP frequently expressed that living nearby a PA increased the occurrence of human-wildlife conflict in their village, e.g. "*There are lots of animals now like monkeys, shahis, and bears. However, these animals are now destroying our fields and we are not allowed to kill them now."*(Khokhan WLS, community member, 57) and, "*Sometimes there are leopards and bears that come down from the WLS and attack people and the department is not doing anything about it. This year, three bears came inside the village and one person was seriously attacked by one."* (Kais WLS, community member, 68) and "*Villages on the border areas of WLS may have the most problems with wildlife because wildlife doesn't respect borders*." (Kanawar WLS, community member, 40). It became clear over the course of the interviews that although an increase in wildlife can be seen as a positive environmental impact of PAs, this feeling was often coupled with a negative perception of wildlife in relation to the safety and well-being of local communities.

5.3 Procedural justice and PAs in the Kullu District

As discussed in the literature review, involvement of local people in the planning and management of PAs is embraced by conservationists under an Inclusive Model. Consultation and engagement with local people from the early planning phase of PAs and continued involvement throughout the operational management activities are considered key features of an inclusive PA and are known to facilitate the success of conservation efforts. Such activities fall under the procedural attribute of environmental justice. Table 5 establishes the major themes and sub-themes that emerged from the interview data relating to those aspects of procedural justice. Each major theme is discussed in detail following Table 5.

Table 5. Themes and sub-themes relating to procedural justice for PAs in the Kullu District as expressed by study participants

Major themes	Sub-themes
Consultation & Engagement	Lack of information
	Lack of early consultation
	Lack of on-going consultation
	Lack of local input
	No public hearing
	Local involvement in management
	NGO involvement
Opposition	Petitions
	Social movements
	Forest Rights Act filing
Committees	Forest Rights Committees
	Eco-development committees
	Mahila Mandal & youth groups

5.3.1 Consultation & Engagement

The first major theme in Table 5 relates to communication, and most importantly lack thereof. It was shared by the majority of community members residing near all of the existing and proposed PAs in the study area that there had been a lack of information sharing by the government to local people. For the two new national parks, Inderkilla and Khirganga, lack of information dissemination to communities in the area was made evident by the large number of people who had not yet heard about the new national parks even though they were notified in 2010, e.g., "*There has been no communication between the forest department and local people. No one reads the Indian Gazette where the notification was posted*" (Inderkilla NP, community member, 1) and "*I have never heard of Inderkilla national park or any national park near the Hampta Pass. I have heard of an ecotourism park because I saw a notice board near Pan Ropa and I heard some women in the village talking about it.*" (Inderkilla NP, community member, 14). For most of the WLS in the Kullu District, the common theme was that most people knew about the

sanctuary but were not aware of its purpose, e.g., "*I think village people around the WLS don't even know what it means to have a sanctuary. Nobody has told us the purpose*." (Kais WLS, community member, 68). Surprisingly, even villages from around GHNP, a well-known UNESCO heritage site, mentioned lack of information as a barrier to achieving procedural justice. Although everyone knew the name "GHNP", many participants mentioned not knowing what the park was about and not receiving enough information about the park from the HP Forest Department, or not knowing its boundaries, e.g., "*People don't know much about the GHNP here. They notified the park, but we still don't know much about it or play any kind of significant role. The government should first explain how the national park works, then they should raise awareness at the village level.*" (GHNP, community member, 21). Sharing information with locally affected communities is an important first step toward achieving procedural justice (Dilay et al., 2019; Schlosberg, 2004).

Early and on-going consultation between various stakeholders is also critical in achieving procedural justice and is seemingly lacking in PA planning and management in the Kullu District. For the Inderkilla and Khirganga national parks, it was expressed by nearly all local villagers that the HP Forest Department had not done any consultation with locals yet, e.g., "*No consultation has been done yet. It is all at the higher level forest department for now*" (Inderkilla NP, community member, 6), and "*The government said they would take people in confidence and consult them but this hasn't happened yet. I think all people from the villages should say yes before they give the land for the national park. Sethan [her village] doesn't get consulted by the Panchayat before decisions are made*." (Inderkilla NP, community member, 14). When discussing with the *Pradhans* of villages, it was apparent that they had been informed about the new national parks but that they had not been formally consulted in any way. This lack of consultation was further confirmed by forest officers who claimed that some but not much consultation had occurred to date and that the planning and management approach was the same as GHNP, for which participants also identified lack of early and on-going consultation.

While early consultation is key to reducing conflict later on, on-going consultation with locally affected communities is also critical in achieving both procedural justice and conservation goals. While it is apparent that a public hearing was held for GHNP, only one study participant mentioned attending a hearing, which can demonstrate poor consideration of aspects

of procedural justice. However, one thing to note is that some participants involved in the study would have been too young to participate in a public hearing or any engagement activity for GHNP. No public hearing was mentioned for any WLS, which again could be in part attributed to the fact that younger study participants would not have been old enough to participate, and no public hearings have been organized yet for the two new national parks. Finally, it was further evident that consultation had been limited as no local or traditional input have been included in the planning and management strategies of any PAs in the Kullu District. Even for the new national parks, local input was not utilized for site selection or other early planning activities.

Another sub-theme in Table 5 pertains to local involvement in management activities. While the majority of study participants expressed that they had not been involved in any management or conservation activities related to PAs in Kullu, e.g., "*No one in this village has been involved in any patrolling or management of WLS"* (Kais WLS, community member, 66) and "*Other Panchayats that are closer to GHNP must be more involved, like Tinder and Ropa, but not from here*" (GHNP, community member, 31), few mentioned having been involved in patrolling, maintenance, and plantation activities, as described in the distributive justice section. The apparent low involvement of locals from communities surrounding PAs is perhaps partly responsible for the lack of awareness of conservation purposes in communities.

On a more positive note, NGOs have been involved in GHNP since it was first declared and their role has been mainly to involve and train local community members in other income generating activities to reduce their dependence on natural resources from the park, e.g., "*They do training for handicraft making and organize shops in Manali where they can sell their stuff. In Shai Ropa too, they sell kidney beans here*." (GHNP, forest officer, 20). The three NGOs most active in and around GHNP are SAHARA, BTCA and TCTDA, which are all now focused on developing ecotourism in the area and training local people as guides, porters, cooks and homestay owners. Although local people are being increasingly involved in tourism activities and provided with alternative sources of income generation, they remain relatively uninvolved in actual conservation activities in PAs and thus, their livelihood remains decoupled from conservation goals, a prominent feature of the Exclusive Model of PA planning and management.

5.3.2 Opposition

Another major theme in Table 5 relates to opposition activities, which were mentioned in relation to GHNP only. If local community members are not adequately consulted or involved in projects, engaging in opposition activities can become a way to have their voices hear. Social movements and protests are commonly seen in India as platforms for pursuing environmental justice, especially for poor and marginalized sectors of society (Sherpa, Sinclair, & Henley, 2015). Few study participants had personally been involved in opposition activities, such as petitions, social movements and Forest Rights Act filings, but many did have knowledge of such activities occurring in opposition to the formation of the GHNP, e.g., "*I have not been involved in any opposition but all the Panchayats did oppose GHNP because of grazing rights. They gave a resolution to have their rights back but nothing came of it*." (GHNP, community member, 21) and "*We engaged in activities such as protesting and court cases but the main organizer has passed away. We started opposing before the park received final notification. All the Panchayats were involved in this opposition. Forest officers did not listen to our opposition at all and today, we are not engaged in any opposition activities*." (GHNP, community member, 32). One of the main organizers of opposition against GHNP explained that he was not against the park but that he was fighting for an alternative approach to conservation, one that involved local people and preserved local traditional forest rights, e.g. "*During the initial notification process, I opposed the park saying that they should consult local people. I am against the exclusive approach of park management.*" (GHNP, community member, 27). He explained that he had also opposed the UNESCO world heritage status to prevent further restrictions being placed on local people and he believed that cultural heritage should also be recognized, e.g. "*During the UNESCO period, I asked to add cultural heritage to the world heritage status and finally, they are considering it*." (GHNP, community member, 27). Finally, he added that he is currently organizing people to fight for their forest rights, e.g. "*Today, we are still raising awareness of forest rights. According to the Wildlife Protection Act, peoples' rights can be seized for conservation and compensated, but customary rights should also be recognized and they weren't.*" (GHNP, community member, 27). As described in the literature, proper consultation and involvement of local people in various projects, including PAs, can greatly reduce opposition of this sort and increase local support for conservation projects.

5.3.3 Formation of Committees

The final major theme of Table 5 is the formation of committees. A recognition of the power in numbers was mentioned by community participants and the formation of committees was seen as a way to group people together in order to work toward a common goal. Similarly, it was expressed by forest officers that communicating through various village committees was a way to disseminate information to the population at large, e.g., "*The government communicates to locals through workshops, Mahila Mandals and youth groups. Locals can also communicate to the government through these mechanisms*." (GHNP, forest officer, 20). Existing committees such as Mahila Mandals, which are Women's Savings and Credit Groups, were formed by the NGO SAHARA as early as the year 2000 and are present in almost all villages in the region. In some villages, the Panchayat communicates information to villagers through the Mahila Mandal and these women groups are sometimes involved in conservation activities, such as tree planting. Eco-development committees were mentioned by many study participants as new mechanisms for involving locals in ecotourism development in villages, especially in villages near the new proposed national parks. Finally, Forest Rights Committees were also mentioned by community members as groups with the purpose to fight for the implementation of the Forest Rights Act. Although forming committees can facilitate communication between government and locals and can be a useful mechanism for engaging local people in conservation activities, most of these committees were still new during the time of the research and thus, their purpose and efficiency have yet to be observed.

5.4 Recognitional justice and PAs in the Kullu District

The third attribute of environmental justice discussed is recognitional justice. As explained by Martin et al. (2016), recognitional justice may be the most crucial attribute yet the least studied in conservation conflict resolution. The authors argue that the wide spatial and cultural diversity of PAs typically result in recognitional injustices to be disproportionately felt by some marginalized groups of people (Martin et al., 2016). It is evident from the data I collected that recognitional injustices were widely felt by community members surrounding PAs in the Kullu District. Table 6 describes the major themes expressed by study participants that relate to recognitional justice and the resulting inequalities that are experienced by those individuals who

are not adequately recognized in the planning and management process of PAs. Each theme is then further discussed following Table 6.

Table 6. Themes related to recognitional justice as expressed by study participants referring to PAs in the Kullu District and resulting inequity

Themes	Results
Lack of recognition of the experience of women	Gender inequality
Lack of recognition in the diversity of experiences felt between villages	Inter-village inequality
Limited recognition of people of lower caste	Intra- and inter-village inequality
Lack of recognition of external resource users	Inequality between external and local resource users

5.4.1 Lack of recognition of women

In the Kullu District, and in much of rural India, the status of women in local society remains much lower than that of men. The perception of gender roles is very strong – women typically stay home to cook, clean, take care of the children and of animals while men are responsible for earning an income for the household. The interview data and my observations reveal that men are also more typically the ones involved in decision-making for the village while women are infrequently consulted about decisions impacting their livelihood. When asked about communication between the HP Forest Department and local people, the women participants often expressed that it is the men who are consulted and that women do not know much, e.g. "*Only gents go to the Panchayat, ladies don't go there. Ladies are too busy with cows and housework so they don't have time*." (GHNP, community member, 49), "*I have talked to many*

women about how we don't want a national park but I think that men are the ones who make the decisions." (Inderkilla NP, community, 16) and *"There might be some forest committees but only men would be involved so I don't know about it"* (Khirganga NP, community member, 61). Although the participation of women in discussion and decision-making related to PAs is seemingly sparse, it is apparent that some women were involved in conservation activities and some were provided training for alternative income generating activities, e.g., "*The Mahila Mandal is a village ladies committee. Last year, we planted 2,000 deodar trees with the forest department. 22 women from Kasol village were involved.*" (Inderkilla NP, community member, 4) and "*Most ladies are involved by getting alternative livelihood opportunities and employment to replace shepherds."* (Khirganga NP, forest officer, 35). The involvement of women in conservation activities is an important step toward recognitional justice for women. However, the data reveal that the limited recognition of women in planning and management of PAs has resulted in experiences of distributive and procedural injustices to be greater for women than for men.

5.4.2 Lack of recognition of diversity between villages

The second theme in Table 6 refers to inequalities between villages. It was expressed by community members that other villages were being more involved in planning and management activities, e.g., "*The forest department keeps meeting with three to four Panchayats when they should be meeting with all Panchayats and all local people at the village level. Otherwise, it is not fair for villages who are not there*" (GHNP, community member, 21). This shows lack of recognitional justice between villages, which in this case can be linked to geographic location, accessibility, or population demographics. For example, one villager from Dhareli, the most remote village visited during this research, expressed that: "*From this village, no one is involved in patrolling in GHNP. I am not sure why no one is involved from this village but it is probably because the forest department doesn't come here, they only go to Shangarh because the school and Panchayat are there."* (GHNP, community member, 49) and someone from the village of Sethan expressed that, "*Sethan doesn't get consulted by the Panchayat before decisions are made. I think this is because we are settlers here and we are Buddhists and so, we feel like the Panchayat doesn't consider us as villagers*." (Inderkilla NP, community member, 14). Although local community members expressed concerns that remote villages were not adequately

considered, forest officers claimed to reach out to all affected villages including remote ones, e.g., "*Invitation to conservation awareness programs go to remote villages too.*" (Khirganga NP, forest officer, 35). Based on my data this was likely just for information sharing. Lack of recognition of the diversity between villages by the HP Forest Department but also by Panchayats who may have multiple villages under their jurisdiction in the Kullu District, has caused some villages to experience greater instances of distributive and procedural injustices.

5.4.3 Limited recognition of caste

Inequalities between and within villages based on caste is reported as the third theme in Table 6. This theme was mentioned only by a few participants but the caste system in India is very strong, especially in rural settings, and caste discrimination was observed often throughout the research. Members of the scheduled caste in Himachal Pradesh are not often elected to the Panchayat and are not often part of village committees and therefore, have less opportunities for involvement in decision-making. We did meet with the Pradhan of a lower caste Mahila Mandal and she expressed that she had not received any information about the new Inderkilla national park and suggested that the other higher caste Mahila Mandal in her village had probably received the information. Although we were unable to verify with the other Mahila Mandal members, her concern suggests that members of lower caste Mahila Mandals perceive to be less consulted or involved than those of higher castes, e.g. "*I haven't heard about the national park. I think maybe the forest department has talked to the other Mahila Mandal but not me. I have not attended or been invited to any meetings about ecotourism either."* (Inderkilla NP, community member, 12). Not recognizing the experience of people from lower castes in planning and management of PAs has resulted in greater distributive, procedural and restorative injustices to be felt by those individuals.

5.4.4 Lack of recognition of external resource users

The final theme represented in Table 6 refers to the lack of recognition of experiences felt by external resources users. This was not a common theme but remains important because of the long history of external resource users in the Kullu District. It was mentioned in a few interviews that external resource users, mainly transient pastoralists and shepherds, frequent PAs in the

Kullu District and have some level of rights in the area. However, it was apparent that these resource users were not included in discussion and decision-making related to parks because they are not considered local residents. Therefore, these nomadic resource users appear to have no voice in the way that PAs will impact their lives and livelihood, which results in greater distributive and procedural injustices to be felt by those individuals. It was explained by forest officers that if external resource users are not happy, they can access the court to voice their concerns, e.g., "*External resource users are sometimes compensated. If they don't agree then they can go to the court. Shepherds will be compensated and can change routes so their livelihoods won't change.*" (Inderkilla NP, forest officer, 5). However, although the court system is a mechanism for pursuing environmental justice, there are several barriers that make it extremely difficult to access courts in India, especially for poor and marginalized members of rural communities (Dilay et al., 2019). Therefore, the HP Forest Department's lack of consideration for external resource users and the assumption that the court can bring them relief from environmental burdens, brings further evidence that aspects of recognitional justice are not adequately incorporated into PA planning and management in the Kullu District when it comes to external resource users.

5.5 Restorative justice and PAs in the Kullu District

The final attribute of environmental justice, discussed in Table 7, is restorative justice. Restorative justice as mentioned in the literature review emerged later in the environmental justice discourse and refers to the remediation or restoration of environmental and social harm (Dilay et al., 2019; Jenkins & Strategist, 2018; Motupalli, 2018). Although PAs may not cause environmental harm as do industrial development projects, negative socio-economic impacts can still be incurred by communities surrounding PAs. Therefore, considering aspects of restorative justice in PA planning and management is important to relieve some of the environmental burden and achieve overall environmental justice. Table 7 is organized into three themes with a brief explanation of each theme. The themes are described in detail following the table.

Table 7. Themes relating to restorative justice as expressed by study participants for PAs in the Kullu District

Themes	Explanation
Monetary compensation	Monetary compensation for loss of land and livelihood for those with *de jure* rights
Alternative land	Alternative land for those who lost land within PAs
Alternative sources of livelihood	Employment and income generation opportunities for loss of livelihood

5.5.1 Monetary compensation

The method of compensation for loss of land and livelihood most often discussed by study participants was monetary compensation (Table 7). For GHNP, monetary compensation was allocated in 1999 when the park was legally notified. According to the GHNP official website, the Collector in Himachal Pradesh awarded a total of 17,976,433 Rupees to 369 families who were named in the Anderson Settlement Report (1886) as having rights within the boundaries of GHNP ("The official website of Great Himalayan National Park | A UNESCO World Heritage," n.d.). This amounted to between 40,000-45,000 Rupees per household and was provided as a one-time lump sum to the head of each household listed in the report. The study participants who have received this monetary compensation claimed that this amount did not counter or balance their loss of livelihood, e.g., "*Many people have lost their sources of income, mainly collecting medicinal plants. Unemployment rate has increased because of this. In the past, fathers and families used to make a living from the park only then they were given some compensation, but this compensation was only worth one year's harvest, not enough to last a lifetime.*" (GHNP, community member, 42). In addition, they claimed that the government had misguided them by promising to provide families with monetary compensation every few years, a promise that was not honoured, e.g., "*People didn't know about their rights. They gave 44,000 Rupees to every household but some didn't receive it. They had also promised compensation every five years but*

they only gave it once." (GHNP, community member, 25) and "*We have been cheated. We received 45,000 Rupees one time even though we were promised some money every year. The government should either give compensation every five years or let us go into the park*." (GHNP, community member, 48). Although monetary compensation is an important aspect of restorative justice, participants felt that what was available was not enough to offset the cost incurred by the PA, and therefore restorative injustices will still be felt. In addition, those families with customary rights that were not recorded in the Anderson Settlement Report (1886) were not recognized by the state and thus not compensated.

5.5.2 Alternative land

Another method of compensating for loss of land and livelihood under restorative justice would be to provide local communities with alternative lands where they could exercise their rights, a theme mentioned by a few participants (Table 7). Although this theme emerged from the data, it was suggested that no alternative land was actually provided to villagers and that this was likely due to a lack of unoccupied and unclaimed land in the Kullu District. Since all land is already held by other villages, it is not realistic to offer alternative lands to practice traditional rights, e.g., "*When awarded as a national park, peoples' rights need to be compensated or alternate thatches (land) should be provided, but there is no other land available here*." (GHNP, community member, 27) and "*Here we have recorded rights and there is no possibility of alternative lands because villages have rights to those lands and Panchayats wouldn't agree.*" (Inderkilla NP, community member, 17). This concern was expressed for both the new national parks and for GHNP, but this type of compensation was not discussed for WLS.

5.5.3 Alternative livelihoods

Finally, perhaps the most sustainable method of compensation for loss of livelihoods, as was seen in this research, is to provide villagers with alternative ways to make a living (Boyce, Narain, & Stanton, 2007). Programs to help local communities reduce their dependencies on forest products by training them for other livelihoods and employing them for part-time jobs have been widely practiced around GHNP. For example, the government has employed locals for patrolling and maintenance of GHNP, NGOs have organized Women's Savings and Credit

Groups in most villages, and both NGOs and the government have trained local people in the tourism business allowing them to gain benefits from the influx of tourists in the region. For example, the NGO SAHARA: "*began to organize women's savings and credit groups in 2000. 96 women's groups were started by SAHARA in the whole area of GHNP to give a new style of compensation to locals. Money also came from the department to the women's groups. SAHARA also began a vermicomposting project. They also gave training for the making of handlooms, handicrafts and knitting. After two to three years, there was a new source of income generation.*" (GHNP, NGO, 51). Today, the purpose of SAHARA has transitioned to training and employing locals in the tourism business, e.g., "*The first ecotourism policy in all of Himachal Pradesh was started in GHNP. We signed an MOU with the forest department to establish that only local people would be employed as guides, porters and cooks in GHNP. So this is our purpose now, to employ local people in tourism*." (GHNP, NGO, 51). The government's push for ecotourism has also started in the region of the Inderkilla national park where many study participants expressed having been invited to participate in ecotourism training. It is apparent from interview data that offering training opportunities and employment is more sustainable than providing cash compensation and more realistic than offering alternative lands.

5.6 Summary

As mentioned in the literature review, Hart (2014) describes PAs as "microcosms" of society that often reflect societal inequalities and injustices and this phenomenon was revealed by study participants to be true for PAs in the Kullu District. Distributive injustices are revealed in Table 4 as negative impacts of park restrictions on local livelihood and uneven distribution of park benefits within and between communities. Disproportionate loss of traditional rights, forced displacement of some villages, and inadequate compensation were common themes from interview data that are also reflected in much of the research literature (e.g., Ghate, 2003; Hart, 2014; Mckay, 2001). The uneven employment opportunities that have seemingly emerged from PAs in Kullu, whether it be from tourism, maintenance of PAs, or other sources of income generation, demonstrate the unequal access to park benefits. Although many participants recognized the environmental benefits of PAs, the negative socio-economic impacts were perceived as having much more significance on peoples' lives, which again, reflect common themes from the literature (e.g., Ghate, 2003; Hart, 2014; Walsh, 2018)).

Procedural injustices were also described by most participants who mentioned not being consulted, engaged or involved in any planning or management activities regarding PAs. Literature (e.g., Chaudhary et al., 2018; Martin et al., 2016) indicates that the lack of access to participate in discussion and decision-making is a common result of poor consideration of procedural justice in the planning and management of projects, which has clearly fueled opposition activities mainly surrounding GHNP. Opposition to conservation efforts like this typically reveal lack of procedural justice during the planning phase, which results in local people feeling the need to resort to petitions, protests, and other social movements to have their voices heard (Dilay et al., 2019; S. M. Andrade & R. Rhodes, 2012; Sherpa et al., 2015).

In the environmental justice literature, authors (e.g., Chaudhary et al., 2018; Martin et al., 2016) argue that recognitional injustices experienced in society at large by marginalized groups are typically reflected in PA planning and management. Recognitional injustices were described by study participants as unfair compensation received by some households and not others, training and employment opportunities only made available to some people, and the perception that some villages were more negatively impacted by PA restrictions than others. These inequalities were most often mentioned by people already marginalized by societal norms such as women, people of lower caste, and people from remote villages.

Finally, restorative justice was identified by participants only in association with the GHNP as this is the only PA where compensation for loss of land and rights was offered. Although aspects of restorative justice were clearly implemented, there were many study participants who claimed that the compensation amount was inadequate and that only a very limited number of affected people were offered this compensation. It was suggested by study participants that providing alternative sources of income generation through training sessions and employment opportunities is a more sustainable method of compensation than offering monetary relief. Boyce et al. (2007) also argue that providing alternative livelihood means is a more sustainable method of compensation than money.

Overall, the research reveals many similarities between PAs in the Kullu District and other case studies in the environmental justice literature, such as the Mai Pokhari Ramsar site in Nepal. There, study participants described uneven access and distribution of ecosystem services

across villages, uneven participation in decision-making processes, and underrepresentation of low-income groups as major shortcomings of PAs (Chaudhary et al., 2018). Environmental injustices in PAs could be greatly reduced by studying other PAs in the world, such as the Mai Pokhari Ramsar site, and learning from others' past mistakes.

6.0 Learning for biodiversity conservation in the Kullu District

6.1 Introduction

As explained in the literature review, PA planning and management can provide a platform for learning in various forms that can result in a variety of outcomes. The most commonly studied learning concepts include social learning, transformative learning and policy learning. While social learning was the original learning concept used to guide the research, it became apparent while in the field that other types of learning were emerging from interview data. Therefore, rather than to focus on a single learning concept, I employed the notion of learning in NREM, which encompass learning outcomes from a variety of learning approaches, as a framework for analyzing and organizing data. The learning outcomes that emerged from interview data have been classified using a framework developed by Suskevics et al. (2018) (Figure 1). The authors of the framework conducted an extensive qualitative review of learning outcomes in NREM from 53 articles that addressed the three major learning concepts – transformative, social and policy learning – and identified five categories of learning outcomes and three mechanisms in which learning outcomes are manifested in NREM, as outlined in Chapter 2. In this chapter, learning outcomes and manifestations in NREM identified by study participants are first discussed according to the five categories and three mechanisms of learning identified by Suskevics et al. (2018). Learning processes are then examined followed by a discussion of power dynamics. The chapter concludes with a discussion on how learning opportunities and outcomes may contribute to achieving environmental justice and improve PA planning and management.

6.2 Learning outcomes and their manifestations in PA planning and management in the Kullu District

The conceptual framework developed by Suskevics et al. (2018) (Figure 1), has been used to organize learning outcomes and their manifestations in NREM as expressed to me by the study participants during interviews (Table 8). Once categorized in the framework, the outcomes are further classified by type of learner including forest officers and community members.

Table 8. Learning outcomes and manifestations in PA planning and management in the Kullu District as expressed by forest officers and community members

1. Learning outcomes		
1.1 Cognitive changes	Forest officers	Benefits of involving locals
		No forced displacement
	Community members	Value changes (e.g. recognition of the importance of forest and wildlife)
		Behavioural changes (e.g. less hunting and less cutting of trees)
		Power in numbers
		Rights & compensation
		Purpose of PAs
1.2 Relational change	Forest officers	Improved relationships
		Attitudinal change toward locals
	Community members	Improved relationships
		Reduced conflict
		Committees forming
1.3 Skill-development	Community members	Compromise
		Ecotourism/tourism business
		Filing petitions
		Patrolling
		Photography
1.4 Action-orientation	Community members	Committees forming
1.5 Wider capacities		
2. Manifestations of learning outcomes in NREM		
2.1 Management change	Forest officers	Improved monitoring
2.2 Policy/institutional change	Forest officers	Moved boundaries of WLS
		No displacement of villages for new NPs
2.3 Environmental effects	Community members	Increase in trees & wildlife

6.2.1 Cognitive changes

The first category of learning outcomes in Table 8 is cognitive changes. The majority of cognitive changes shared by study participants refer to knowledge acquisition. For example, forest officers interviewed for the research shared a newly gained appreciation for the importance of involving local people in conservation efforts, e.g., "*Before, the government thought that they could just throw out the people but now we have realized that it's better to involve them so relationships have improved.*" (GHNP, forest officer, 20). Seeking to identify areas that do not have any villages for the creation of new national parks suggests that the HP Forest Department has learned that physical displacement of people can induce conflict and that it is better to locate parks away from villages. However, when it comes to the practice of customary and *de jure* rights in PAs, it is apparent that forest officers are still unsure on how to adequately offset such loss of rights. The solutions suggested by the HP Forest Department remain to either compensate for lost *de jure* rights with a single lump sum of money or to offer alternative lands to practice such rights, which were both seen by community members as unsustainable restorative measures. In addition, customary rights that are not recorded in the Anderson Settlement Report (1886) remain unrecognized by the state and uncompensated.

During interviews with community members, acquisition of new knowledge was often stated to have emerged from local peoples' involvement in PAs or simply from living nearby a PA. In relation to knowledge acquisition, community members also expressed value changes. For example, community members shared that their realization that trees and forests should be protected for future generations, e.g., "*We learnt that we need to work for a better future for our children. Our duty is to protect the environment so that future generations can get fresh water and wood.*" (GHNP, NGO, 52), and "*It was a good learning experience. We learnt that it's good for the future and for our kids. They can now use what we have planted. It is good for the environment also*." (Kais WLS, community member, 66).

It was mentioned that such value changes in local community members had also caused behavioural changes to occur in recent years, e.g., "*In the past, my parents used to say that you should burn the forest to get good grass but we have lost many trees and animals because of it. So I have learnt not to start fires and that if I do, then I should put it out properly. I learnt about*

animals and medicinal plants too." (GHNP, community member, 46). In addition, many study participants mentioned gaining an appreciation for wildlife which had caused a decrease in hunting, e.g., "*When we were young we were not much aware of wildlife and forests and the benefits of trees. Now children know that trees should not be cut and that wildlife is good and so hunting is rare now."* (Manali WLS, community member, 70).

Some community members that had been involved in opposing GHNP or had heard about opposition efforts suggested they had learned about the power in numbers. Participants expressed this by saying that alone they do not have much influence over decision-making but that in groups they could more easily express their opinions and concerns, e.g., "*When we are joint we can do many things, whereas when we are alone we cannot do much.*" (Kanwar WLS, community member, 41) and "*Alone I can't influence any decision but maybe if there was a joint meeting then we could all talk about it."* (Khirganga WLS, community member, 61). When talking about opposition activities, many community members mentioned learning about their rights and about the compensation process for loss of rights. For Inderkilla and Khirganga national parks, many participants expressed having learned how the declaration of PAs can restrict forest rights and suggested having learned this through interaction with those affected by GHNP and having learnt from their lived experiences, e.g., "*I believe a national park would take away our rights of pastures, grazing and timber wood. I think we won't be allowed to go inside the national park without permission. I think this because I have relatives on the Sainj side, in Shakti, Sainj, Maraur and Shanshar and I am a healthcare worker so I talk with many people. I know that GHNP has taken away their rights*." (Khirganga WLS, community member, 63).

The final cognitive change suggested by some community members is a newly acquired understanding of conservation efforts and the purpose of PAs. It was mentioned by many study participants that they used to cut trees, kill animals and litter, and that due to conservation awareness programs and the establishment of PAs, people have learned to take better care of their natural surroundings, e.g., "*Here, I learnt that we should plant trees and take care of what we plant and also not to kill birds or animals*." (GHNP, community member, 48) and "*The forest department has done some awareness programs where we learnt not to cut trees and to protect wildlife and we learnt about pheasants.*" (Kais WLS, community member, 64).

Although positive cognitive changes were identified by study participants, the most common theme that emerged from interview data was that since locals were not consulted or involved in any PA planning and management activities, they had not learned anything from the HP Forest Department or from the PAs themselves, e.g., "*I have not been in involved in WLS even though I am interested in it. I think all village people around the WLS don't even know what it means to have a sanctuary because no one has told us the purpose."* (Kais WLS, community member, 68) and "*I have not learnt anything from living near a WLS.*" (Khokhan WLS, community member, 58).

6.2.2 Relational changes

The second category of learning outcomes in Table 8 is relational change. Interview data revealed attitudinal changes toward other stakeholders and some actual changes in relationships, although I was not able to confirm these with secondary sources of data. Forest officers often mentioned that relationships between them and local people had improved since the declaration of GHNP in 1999, which was ridden with conflict at the time. Forest officers explained that over the years the HP Forest Department had begun to recognize the importance of involving local people in conservation efforts. This likely demonstrates an attitudinal change towards local people, which also may have resulted in improved relationships, e.g., "*I have been working with the wildlife office since 1989. I have built strong relationships with locals by living in villages and staying in peoples' homes."* (GHNP, forest officer, 20). I addition, the creation of nature parks throughout the Kullu District may also be seen as a way for the HP Forest Department to reach out to communities and communicate conservation messages. Some community members also shared the limited conflict around PAs and explained that relationships between them and forest officers are good, e.g., "*I believe there is no conflict between people and forest guards. The relationship between locals and forest officers is not bad."* (Kanawar WLS, community member, 39). Coupled with lack of consultation, engagement and involvement of local people in PA planning and management, it is difficult to understand how relationships between local people and forest officers can be as good as expressed in interviews. However, it is possible that time has healed relationships since the conflicting notification of PAs and has resulted in actors and attitudes to change and conflict to supress even though community engagement has not increased.

Forming committees can also be classified as a relational change because it is likely that members of committees are forming some kind of relationship. While some of the committees that have formed (e.g. Mahila Mandals and youth groups) are made up solely of members from a single village, others like some Forest Rights Committees are made up of members from several villages, while others like various eco-development committees may bring together local villagers and members of the HP Forest Department, which shows that there are interactions and likely relations forming between various groups of people from various levels of society.

6.2.3 Skill-development

The third category of learning outcomes in Table 8 is the development of skills. While forest officers did not mention learning any new skills per se, they did mention learning about the importance of involving local people in conservation efforts. Community members, on the other hand, identified several skills that they had learned through the establishment and management of PAs. Study participants mentioned learning how to "compromise" with forest officers when they wanted to collect resources from inside a PA or if they were caught doing so, e.g., "*We have a relationship with forest guards, for example we have to pay them to take wood from the park*." (GHNP, community member, 30) and "*It is better to compromise with people, so forest guards don't usually start any conflict*." (Kanawar WLS, community member, 39).

Another common theme expressed by community members relating to skill-development was learning how to work in the tourism or ecotourism industry, especially around GHNP. A few local people described having learned skills like how to interact with tourists, how to open and operate a homestay, how to keep a clean and safe cooking environment and how to guide tourists during treks. The majority of these skills were said to have been learned during training sessions offered by the HP Forest Department or organized by NGOs, e.g., "*During this training, I learnt how to behave with guests and how to make them happy. I also learnt about species of animals and birds*." (GHNP, community member, 28) and "*I received my guiding card with GHNP after 6-7 days of training as a guide and cook at Shai Ropa. I also learnt skills during this training like fishing, cooking and how to behave with tourists."* (GHNP, community member, 31). Other skills that some community members claimed having learnt from being involved in management

activities of PAs was how to patrol a PA and some photography skills, but these were seldom mentioned.

Finally, two community members who were involved in opposition to GHNP claimed having learned how to file a petition and/or how to file for local rights to be recognized under the Forest Rights Act. For example, one community member from around GHNP whose name did not appear on the Anderson Settlement Report (1886) claimed having learnt how to navigate the system to have his name included: "*They announced compensation at the time but my name wasn't on the list. My land was under the name of the Deity, that's why. I told them that my land was given to me by the Deity and filled out some papers and then they added my name to the list and I got compensated some money.*" (GHNP, community member, 25). Other participants claimed that they had learnt how to file forest rights claims through Forest Rights Committees, e.g., "*People are now filing forest rights claims under the Forest Rights Act through Forest Rights Committees. Legally, people are entitled to claim their forest rights, and customary rights should also be recognized*." (GHNP, community member, 27).

6.2.4 Action-oriented

While the learning outcomes discussed thus far could mostly be related to the individual level, the formation of committees can also fall under the category of social action-oriented outcomes, which are experienced mostly at the collective level. Several committees have formed around PAs in the Kullu District with various purposes such as Mahila Mandals and youth groups, ecodevelopment committees, and most recently Forest Rights Committees. While village committees like the Mahila Mandal and youth group may not have a direct focus on action but rather to act as a communication and support mechanisms for women and youth , Forest Rights Committees can be considered action-oriented as their mission is to fight for peoples' rights and ensure local and traditional rights are recognized and respected. While Mahila Mandals were mandated by the central government during Indira Gandhi's time as Prime Minister, some of the more recent village committees may have formed as a result of the cognitive learning outcome that there is a power in numbers and that people in groups can better influence decision-making. The final category of learning outcomes described by Suskevics et al. (2018) is learning that

expands to wider capacities, however, these types of learning outcomes were not identified by study participants in this research.

6.2.5 Management changes

The second part of Suskevic et al.'s (2018) framework (Figure 1) and the data I have associated with it (Table 8) describe the various ways in which learning outcomes can be manifested in NREM. Two management changes were described by forest officers: a transition away from forced displacement of villages and monitoring improvements. Locating the two proposed national parks in the Kullu District away from villages to avoid forced displacement of people is a significant management change that was shared by some forest officers, e.g., "*There is no habitation of villages inside Inderkilla National Park. For GHNP, some villages were inside the park so there was more opposition. No displacement will occur for this new park*" (Inderkilla NP, forest officer, 4). Although there has not been an official change in state policy, this management change represents an important step toward an inclusive model of PA planning and management.

Forest officers also explained that although their overall approach to monitoring have not changed over the years, some of their monitoring practices have improved because of scientific and technological advancements, e.g., "*Monitoring has changed over the years. It used to be less scientific and now it is more scientific. A Monitoring Effectiveness Evaluation – a comprehensive monitoring report – will come out soon."* (Khirganga, forest officer, 35) and "*Now there are trap cameras and technology like phones, GIS and GPS systems, and more awareness of climate change due to technology. This technology makes it easier to manage and monitor the park."* (GHNP, forest officer, 20).

6.2.6 Policy/institutional changes

An important policy change relating to the management change in moving away from forced displacement described by both forest officers and community members was a shift in the geographic boundaries of most WLSs in 2014. This change in policy was implemented in the whole state of Himachal Pradesh. At that time, villages or village pastures that were located within a WLS were removed from PAs not by displacing the village but rather by de-notifying

some areas of the WLS and shifting the geographic boundary of the PAs, e.g., "*A few years back, the boundary of the WLS changed so that we could continue to use our pastures for grazing and firewood. The boundary changed to accommodate people.*" (Kanwar WLS, community member, 39) and "*Before, Kasol was in the WLS and so was Gram village. This was a mistake done by the officials. There was long opposition process to get villages out of the WLS. In 2014, they de-notified some areas of the WLS to allow villages to keep some pastures and some areas for fuelwood.*" (Kanawar WLS, community member, 40). This important policy change likely resulted from the recognition that forced displacement of people tends to provoke local opposition to conservation programs and cause conflict, which in turn reduces the effectiveness of conservation efforts.

6.2.7 Environmental effects

The final category of manifestations of learning outcomes in NREM and perhaps the ultimate goal of learning for NREM described by Suskevics et al. (2018) is evidence of positive environmental change. In Table 8, I have noted the increase in wildlife and trees observed by community members in and around PAs as an environmental change. These positive environmental effects in and around PAs can likely be attributed to a combination of local people learning about the importance of protecting trees, animals and nature in general, which has resulted in behavioural changes such as less hunting and cutting of trees, and the restrictions that PAs have instilled on natural resource use, which has allowed for the regeneration of the forests.

6.3 Learning opportunities in PA planning and management of the Kullu District

While much of the literature on learning in NREM focuses on learning outcomes, it is also important to look at learning opportunities to be able to identify venues or platforms where learning occurs. In the research literature, learning opportunities are most often described as participatory or collaborative processes that promote co-creation of knowledge and knowledge exchange (Diduck, Clark, Bankes, & Armitage, 2005; Diduck et al., 2012; Suškevičs et al., 2018). In the study area, such participatory and collaborative processes have been sparse. It was made evident during interviews that local communities have not been involved in the planning of PAs and that management plans are developed by forest officers in higher level positions in a

non-collaborative manner (Chapter 4). Although some management and policy changes were identified (Table 8), when asked how the overall approach to PA planning and management has changed since the notification of GHNP, forest officers most often shared that it has not. In addition, although monitoring of management outcomes and revising management plans are described in the GHNP management plan as important procedures, it was made evident through the interviews that the management plan is poorly implemented and thus, that learning might not be a goal that GHNP managers are pursuing.

One learning outcome that did come to light from interviews with forest officers was the potential policy change of no longer displacing villages for the purpose of PAs. This policy change may have resulted from the on-going conflict experienced around GHNP and a desire to avoid future conflict, rather than having emerged from participatory and collaborative decision-making processes with locally affected communities. Similarly, the new-found appreciation for local people expressed by some forest officers could have resulted from the challenges of following a top-down exclusive approach and/or could have come from interacting more with villagers. The limited opportunities for participatory and collaborative learning to occur and the resulting lack of learning outcomes identified by forest officers in Kullu, suggest a missed opportunity to embrace learning as a tool to improve PA planning and management and facilitate the transition toward a more inclusive approach.

With regard to community members, it is apparent that they have learned from being engaged in participatory processes. For example, villagers who have been involved in management activities such as patrolling and monitoring of PAs or conservation activities such as plantations responded with having acquired new knowledge and skills related to conservation, more so than local people who had not been involved. Similarly, those community members who had attended training sessions for employment in the tourism business or other income generating activities, reported having acquired new knowledge and skills, more so than those who had not participated in training. However, these skills did not translate into action-oriented learning outcomes (e.g. forming stakeholder alliances) or wider-capacity learning outcomes (e.g. instilling change in other policy arenas). Instead, community members who were not involved in these learning opportunities, often were those involved in committees to oppose the PAs. This suggests that failure to involve local communities in participatory processes and activities related

to PA planning and management has cause more people to become involved in opposition and conflict, which is in turn detrimental to conservation goals.

6.4 Internal and external factors that influence learning

A review of the learning process and contextual factors in action-oriented learning by Suškevičs et al. (2019) suggest that there are several factors that can affect learning. Factors internal to the learning process include participatory and collaborative arenas, proximity to praxis and inter-mediaries, and contextual factors external to the learning process include power asymmetries, social-ecological crises, time, complexity and identity (Suškevičs et al., 2019) Other research on learning in NREM note that power asymmetries among participants are important, though often ignored, considerations in the study of learning processes and outcomes (Gerlak et al., 2018; Suškevičs et al., 2018). Although research participants did not directly discuss issues of power relations and its influence on learning, some of the challenges that participants described can surely be linked to power dynamics in the Kullu District. The structure of society and governing institutions in India, demonstrate that power is unevenly distributed within populations and institutions and this is reflected in PA planning and management. The HP Forest Department in particular has been a very important agent of government power in the region for years (Davidson-Hunt, 1995; Devi, Reserve, & Kent, 2005)

Power is recognized as the ability to influence or sway others into deciding or acting in a certain way (Levesque, Calhoun, Bell, & Johnson, 2017). The study suggests that even when forest officers did invite local people to voice their concerns about PAs, power relations may have reduced the ability of local input to truly influence project decisions and some participants may not have even known they had the opportunity to comment. For example, as described in Table 6, women are almost entirely left out of the planning phase of PAs which reduces their ability to become educated on the topic and to voice their opinions. Not many women are part of Panchayats or village committees in the Kullu District that may be involved in environmental discourse and many study participants shared that the Mahila Mandals did not have much power when it comes to influencing decision-making. Similarly, people of lower caste have been consistently marginalized over the years and thus, power imbalances in society have prevented them from effectively participating in discourse and decision-making. It is apparent that unequal

power relations are problematic across all of India, which also affects the PA planning and management in the Kullu District. The hierarchal structure of institutions, villages and society as a whole causes power barriers to prevent marginalized sectors of society from voicing their opinions and influencing decisions.

6.5 Summary

The framework by Suskevics et al. (2018) (Figure 1) was used to organize and as a basis to analyze the interview data because of its ability to identify not only learning outcomes but also ways in which these outcomes can translate into NREM. Learning outcomes that emerged from interview data represent mainly cognitive changes, such as forest officers learning about the importance of local people in conservation efforts and community members learning about the purpose of PAs and the importance of biodiversity protection. The research literature (e.g., (Muro & Jeffrey, 2012; Pahl-Wostl, 2015; Suškevičs et al., 2018) also identifies cognitive changes as the most common learning outcomes in NREM. Relational changes were described mainly as improved relationships between local communities and forest officers, however such relationships were not identified by other sources of data, and thus cannot be confirmed. Whether relationships have improved or not, the perception of improved relationships suggests that conflict around PAs is low. Learning new skills, especially in the tourism industry or for other employment, was mentioned by some community members. Skill-development is also recognized as a common learning outcome by several authors in the literature (e.g., Diduck et al., 2012; Muro & Jeffrey, 2012; Suškevičs et al., 2018). Finally, the only learning outcome that occurred at the community level rather than at the individual level, was the formation of committees. The formation of village committees, especially Forest Rights Committees, suggests that some action-oriented outcomes have resulted from the establishment of PAs in Kullu but that these have yet to translate into wider capacity learning outcomes.

Studying how these learning outcomes have resulted in changes to NREM is an important component of the concept of learning for NREM. In regard to some PAs in the Kullu District, forest officers suggested that improved monitoring of PAs had resulted from learning over the years and from the availability of better technology in the region. Perhaps the most obvious and important manifestation of learning outcome in the planning and management of PAs are the

apparent policy changes that resulted in the de-notification of some parts of WLSs to avoid displacement of villages and in the decision that new national parks be located away from settlements, again to prevent forced displacement. Transitioning away from forced displacement of people, which was widely practiced at the time of the GHNP declaration, represents a significant positive manifestation of learning outcomes that changed the planning and management approach of PAs in the Kullu District. In addition, such positive learning outcomes also have implications for environmental justice by having the potential to enhance distributive, recognitional and restorative justice. Abandoning the practice of forced displacement of people is also representative of a shift from an exclusive to a more inclusive approach to PA planning and management (Dahlberg et al., 2019; Martin et al., 2016). Finally, environmental effects are commonly understood as the ultimate goal of learning for NREM (Suškevičs et al., 2018) and study participants did identify an increase in trees and wildlife in and around PAs. Such positive environmental changes can be attributed to value changes (e.g., recognizing the importance of tree and wildlife for future generations) and behavioural changes (e.g., hunting less and cutting down less trees) of community members but also to the restrictions that PAs have placed on resource use.

It was made evident by research results that learning could be better facilitated and encouraged in regard to PA planning and management in the Kullu District. The few community members who mentioned having learned about the benefits of PAs and biodiversity conservation were typically the ones who had the opportunity to participate in PA management activities or conservation activities, and such opportunities were scarce. Participatory activities were attended by very few people, which suggests that learning platforms lack accessibility and are under-utilized in the Kullu District. Overall, the results reveal that some learning has occurred among stakeholders involved in or impacted by PAs and that learning outcomes may have resulted in some positive changes to the planning and management approach and to the environment.

7.0 Conclusions

7.1 Introduction

As environmental degradation and loss of biodiversity threaten the life we currently know, the need for protected areas of land and water is ever more important. The dire need to protect the environment in the Kullu District was recognized not only by government officials but also by local level study participants who frequently mentioned the importance of preserving forests for future generations. Although PAs are recognized globally as an effective way to protect biodiversity, when poorly planned or managed, they tend to result in conflict between resource users and uses and cause environmental injustices to be felt in communities that depend on the natural resources contained in those PAs to meet livelihood needs (S. M. Andrade & R. Rhodes, 2012). Such has been the case in India, where a long history of exclusion and restrictions associated with PAs and lack of consultation and involvement of local communities and transient pastoralists has resulted in local resistance to some conservation efforts by those adversely impacted (A. Mukherjee, 2009).

The purpose of the study was to examine if and how learning can help to improve PA planning and management so as to enhance environmental justice for those affected by PAs. The specific objectives were to: i) describe the planning and management approach of protected areas in the Kullu District of Himachal Pradesh, India; ii) consider how the planning and management approach of protected areas has changed; iii) evaluate the integration of the four attributes of environmental justice into PA planning and management; and, iv) identify learning opportunities and outcomes for individuals, communities, organizations and others involved in or affected by PAs in Kullu. The research was undertaken over a four-month period in the state of Himachal Pradesh in northwestern India and focused on a network of PAs in the Kullu District. Semi-structured interviews and participant observations were the main methods of primary data collection and a qualitative thematic analysis of the data followed. In this chapter I draw conclusions regarding each of the objectives I set at the outset of the study and in relation to my conceptual frame.

7.2 PA planning and management approach in the Kullu District

When assessing the planning and management framework for PAs in India, it became clear that conservation efforts, although bringing some environmental benefits, are actually intensifying existing inequalities embedded in society at large. PA planning and management in the Kullu District has yet to fully embark on a transition toward an inclusive approach, contrary to what is widely encouraged by the global conservation community. As highlighted in Table 3 of Chapter 4, most of the characteristics of PAs in the Kullu District are consistent with an Exclusive Model while very few features are inclusive in nature. Rather than being managed by local people and with local people in mind, PAs in Kullu are owned and managed entirely by the state and remain focused on reducing local peoples' dependency on natural resources and removing them from their natural environment. This contradicts what is recommended by PA academics such as Ghate (2003) and Walsh (2018), amongst others, as well as the IUCN (2016) who advocate for the harmonization of conservation goals with local needs rather than the dissociation of one from the other. The interests of external resource users such as nomadic and semi-nomadic pastoralists is also entirely left out of planning and management considerations in Kullu. This is common in India where mobile pastoralists have been evicted from PAs and relocated far from their traditional lands for decades, for example, the Van Gujjar tribe of Rajaji National Park in Uttarakhand and Uttar Pradesh has been suffering from ongoing harassment by park officials since 2002 (Yilmaz et al., 2019). Yilmaz et al. (2019) have found similar conflict in countries like China, Tanzania, Lebanon, Spain and others, where mobile pastoralism is still widely practiced in remote regions.

Worldwide, there exists different forms of forest management and conservation initiatives, mainly government, community, or private sector-led. In India, two major types of conservation areas can be found, government owned and community owned (Reddy, Karanth, Kumar, Krishnaswamy, & Karanth, 2016). Community owned areas occur mostly in the northeastern hill states and are not currently found in Kullu where only PAs that are government owned and managed under the legal framework of the Wildlife Protection Act (1972) exist, while conservation areas that operate under a multi-stakeholder government structure have yet to be initiated. Although joint management of GHNP is claimed to be practiced on the park's official website, the data from community members and forest officers alike revealed that this is

not the case. In order to keep up with recommended best-practices in PA planning and management, the state government of Himachal Pradesh could benefit from exploring community conservation strategies and implementing joint management approaches that include local and external resource users. However, transitioning to an Inclusive Model of PA planning and management requires adopting and implementing new ideologies, which will surely require the HP Forest Department to undergo an institutional culture shift.

7.3 Evolution of PA planning and management

An important and positive change in the way PAs are planned and managed in Kullu since the establishment of the first national park in 1984 (GHNP) relates to a transition away from the forced displacement of communities. The proposed areas for the new Inderkilla and Khirganga National Parks are located away from human settlements and the boundaries of Wildlife Sanctuaries in Kullu have been altered in the last few years as a way to de-notify the areas that are still occupied or used by residents. In the early days of GHNP, the controversial displacement of people caused significant conflict in the region and to transition away from such a planning approach is a crucial step in embracing a more inclusive approach to PAs. Whether the government has changed its approach solely to prevent such conflict from resurging or because it has begun to recognize that forced displacement of people cause environmental injustices to be felt and is contradictory to inclusive conservation efforts, was not revealed in the data, but this change was the only real demonstration of some kind of evolution in the PA planning and management approach in the Kullu District.

The failure to fully transition to an Inclusive Model of PA planning and management is not unique to the Kullu District but rather common in many states in India and elsewhere. In Bhopal, villages are still being forced to relocate away from their traditional lands (Panwar & Chaudhry, 2019) and as mentioned above, conflict between mobile pastoralists and park managers continue in states like Uttarakhand and Uttar Pradesh (Yilmaz et al., 2019). As mentioned earlier in the paper, many nations still struggle with the exclusivity of PA planning and management while others have implemented progressive and inclusive policies (e.g. IB Adewumi, Funck, Nguyen, & Usui, 2019; Nsukwini & Bob, 2019). Although Kullu, and India

more broadly, is not unique in its situation, real progressive and inclusive change has been implemented in other nations suggesting that India is lagging behind.

7.4 Consideration of Environmental Justice

The thesis revealed that environmental injustices have been imposed by PAs in Kullu in various ways and on a variety of resource users. Remote villages, near or within PAs, that already lack access to basic amenities, were the most adversely impacted communities receiving the fewest socio-economic benefits and the fewest opportunities to participate in PA planning and management. These aspects of distributive justice that are already present in society are amplified by PA restrictions on access and resource use, which is a common feature of the Exclusive Model of PAs as described in the literature (Ghate, 2003; Hart, 2014; Martin et al., 2016; Walsh, 2018).

The thesis also shows that aspects of procedural justice were not adequately considered in the planning and management of PAs in Kullu. Lack of dissemination of information to locally affected communities and absence of early and on-going consultation with locals, as well as limited opportunities for community members to participate in discussion and decision-making regarding PAs, are clear signs of poor consideration of procedural justice (e.g. Dahlberg et al., 2019; Martin et al., 2016). The opposition to GHNP that resulted in part due to lack of procedural justice is a perfect example of the common phenomenon in India where social movements emerge as platforms for marginalized people to seek environmental justice when they are not involved in other ways (Dilay et al., 2019; Sherpa et al., 2015). By adopting an approach similar to that in GHNP, where early and ongoing consultation and attention to local knowledge were lacking, for the planning of Inderkilla and Khirganga National Parks will ensure that local communities will engage in similar opposition efforts against the new PAs. Poor consideration for procedural justice tends to create conflict between communities and park managers and decreases the overall effectiveness of conservation efforts, as described in much of the literature (e.g. Chaudhary et al., 2018; Martin et al., 2016). While this type of conflict was not evident in the results there were concerning signals, such as a negative perception of conservation efforts in local communities, weak relationships between local communities and park officials and a general lack of awareness of PA planning and management processes.

The research results indicate that recognitional injustices have been experienced in several ways in relation to PAs in the Kullu District. For example, the limited involvement of women, the uneven consideration of people from different villages and from different castes, and the exclusion of mobile pastoralists, in the planning and management of PAs has resulted in distributive and procedural injustices to be felt more intensively by some individuals. This suggests that marginalized sectors of society, such as women, people of lower caste, and people from remote villages or external to the region, that are already suffering from societal injustices in their daily lives, are even more burdened by PAs. For example, remote villages in Kullu tend to be the closest to PAs and thus, their traditional livelihoods are most impacted by restrictions placed on access and use of the forest. Remote villages are also typically left out of consultation processes and are not invited to participate in management activities in part because of the remoteness and inaccessibility of their location. This research result is a direct reflection of Martin et al. (2016)'s argument that spatial and cultural barriers can cause some vulnerable communities to be left out of PA planning and management.

Finally, the thesis shows that restorative justice has been recognized in the Kullu District through the offering of compensation for lost *de jure* rights, but that compensation to date has not been equitable and does not include lost customary rights**.** It was shared by community members that a one-time monetary compensation was not an appropriate form of remediation to counter for loss of rights and livelihood and that more sustainable compensation strategies, such as providing training for alternative sources of livelihood, are preferred. The perceived inequity in compensation demonstrates inadequate consideration of restorative justice as well as recognitional justice. As suggested by the IUCN in its Inclusive Model, a PA should incorporate all aspects of environmental justice in its planning and management so as to reduce the need for restorative justice (Thomas & Middleton, 2003). For example, a PA that involves local people throughout planning and management activities and that does not completely exclude local people and their traditional ways of life, would require less restorative adjustments since negative impacts would already be mitigated and/or minimized.

7.5 Learning for NREM in PAs in the Kullu District

The results of the study reveal that cognitive changes were the primary type of learning outcome for study participants. This is common in learning for NREM (Suškevičs et al., 2018). Two important cognitive changes include forest officers acquiring new understanding about the importance of involving local people in conservation efforts and community members learning new knowledge about conservation and the importance of a clean environment. These both relate to a more inclusive model of PA where local people are empowered in planning and management activities and where a shared understanding of environmental issues and conservation purposes is established between park managers and local communities (Kohler & Brondizio, 2017; S. M. Andrade & R. Rhodes, 2012; Wells & McShane, 2004).

In addition to the positive policy change of no longer requiring communities to relocate for the purpose of PAs, the thesis reveals that positive environmental effects, such as an increase in trees and wildlife (Table 8), have also been observed in and around PAs. Although positive environmental change could result from local communities learning about conservation, such changes may also be attributed to the restrictions imposed by PAs. It is likely that all of the learning outcomes identified by study participants over the recent years will eventually result in some positive environmental impact. In the learning literature (e.g. (Cheng, Danks, & Allred, 2011; Hahn, Olsson, Folke, & Johansson, 2006) it is argued that learning by actually participating in conservation activities or environmental organizations tends to yield greater positive environmental change. This suggests that research participants who have participated in plantation activities or patrolling the PAs might evoke more significant positive changes than those who were not involved.

Overall, although the study demonstrates that some positive learning outcomes have emerged from PAs in the Kullu District, it was more often mentioned by community members that they had not been involved in any way in PAs and thus, had not learned anything. The data reveal that participatory and collaborative processes conducive to learning are seemingly absent in regard to PAs in Kullu, as outlined above. Lack of collaboration between stakeholders and lack of input from locally affected community members are likely responsible, at least in part,

for the slow evolution and minimal improvements to PA planning and management in the Kullu District.

7.6 Conceptualizing PA planning and management, environmental justice and learning

The conceptual framework (Figure 2) introduced in Chapter 2 to connect themes from social learning, environmental justice, PA planning and management, and conflict resolution literatures guided the field research. On completion of that research, it was found that social learning was not a useful learning concept to guide the analysis since a group or organization engaged in social learning that could be used as a unit of analysis could not be found. Many interviews were with community members from various villages making it difficult to identify common values and understandings between participants that had resulted from social learning. Also, few participants that had been working together to solve issues related to PAs could be found. For this reason, I chose to analyze the data based on a broader learning for NREM concept. I found that the framework by Suskevics et al. (2018) was more appropriate for classifying the learning outcomes that emerged from the research data and ranging from individual to collective learning outcomes.

During the fieldwork, I found that there was little PA-related conflict currently occurring in the Kullu District and therefore this concept was removed from the conceptual framework. Figure 5 represents a revised conceptual framework developed on the basis of field data collected. These data related more directly to learning outcomes and their manifestations described by Suškevičs et al. (2018) than to social learning outcomes. The revised frame focuses on the three major concepts of PA planning and management, environmental justice and learning, and does not include conflict resolution.

The revised conceptual framework (Figure 5) begins with PA planning and management. The framework, and the research, suggests that involvement in PA planning and management creates opportunities for learning to occur, which can lead to learning outcomes. Research participants identified learning outcomes that belonged to most of the categories suggested by Suskevics et al (2018), which include: cognitive change, relational change, skill-development,

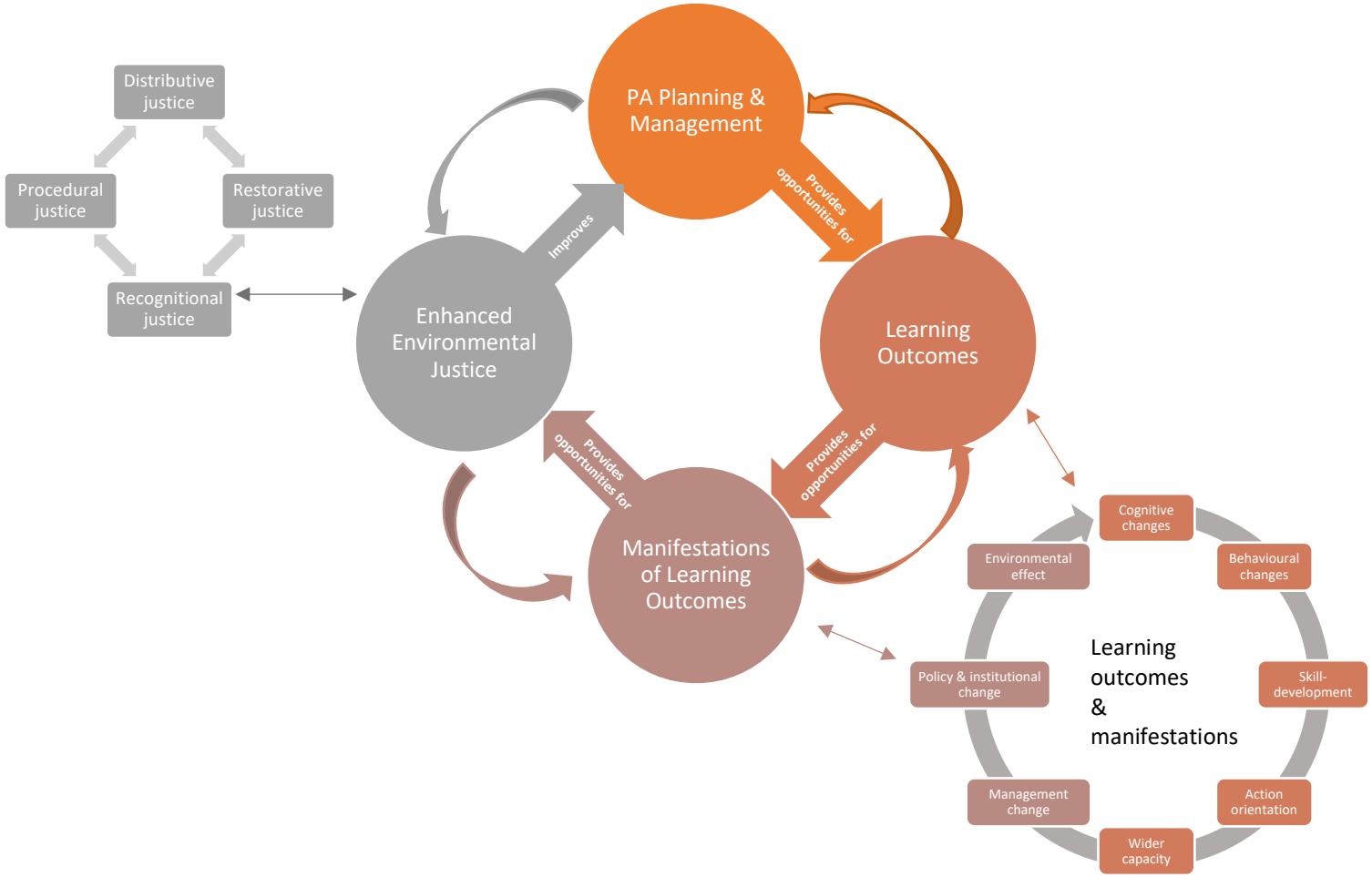
action-oriented, and/or wider capacity learning outcomes. Although wider capacity learning outcomes were not identified in the study, the category was left in the conceptual frame as it remains an important learning outcome in some of the literature (e.g. Armitage, Berkes, Dale, Kocho-Schellenberg, & Patton, 2011; Cundill & Rodela, 2012). Learning outcomes then feedback to PA planning and management because such outcomes can help to improve PA planning and management practices. Learning outcomes also create opportunities for the manifestations of such learning outcomes in NREM. In the study, learning outcomes were manifested in PA planning and management in the three ways described by Suskevics et al. (2018) as: management change, policy and institutional change and environmental effects. Such manifestations have also been identified in the literature as changes in one's worldviews (Diduck et al., 2012; Marschke & Sinclair, 2009) or management and institutional changes (Plummer & Armitage, 2007) that are targeted at environmental change (Suškevičs et al., 2018). It is important to note that each aspect of the learning outcomes and manifestations are interconnected, represented by the second cycle figure.

Manifestations of learning outcomes then create opportunities for the enhancement of the four attributes of environmental justice for PA-affected communities and *vice versa*. Although minimal in this study, I believe learning manifestations have enhanced some aspects of environmental justice for affected communities, for example, the transition away from forced relocation has important implications for recognitional and distributive justice. The four attributes of environmental justice – recognitional, procedural, distributive and restorative – are interconnected which is represented by the third cycle figure. Continuing to follow the framework, the enhancement of environmental justice supports the improvement of PA planning and management, which I believe is revealed in the study by the minimal conflict and increased local support for PAs in the Kullu District in recent years. Likewise, the improvement of PA planning and management can enhance aspects of environmental justice.

Overall, when following the framework (Figure 5) the goal is for involvement in PA planning and management to create opportunities for learning outcomes and manifestations, which can enhance environmental justice in PAs. Enhancement of environmental justice not only has implications for social justice in PA-affected communities but also increases the effectiveness of conservation efforts in those PAs. Although the evolution of PAs in the Kullu

District has demonstrated some aspects of this framework, much learning in PA planning and management is needed in order to foster environmental justice for communities and enhance conservation results.

Figure 3. Revised Conceptual Framework: Learning for biodiversity conservation and enhancing environmental justice in PA planning and management.



7.7 Limitations

Some limitations of the research include the localized case study, the time frame and the lack of comparative analysis between the types of PAs. Focusing on a network of PAs in one localized district does not allow for the generalization of the research results to other parts of India or other nations. However, by providing contextual information, readers can decide if some aspects of the case study can be applied to other regions. As well, the case study can still contribute important data to the literature on PA planning and management, environmental justice and learning in NREM.

The short time frame of the fieldwork (four months) to obtain information on a long history of PA planning and management in the Kullu District is cause of limitation. Many of the research participants would have been too young or in some cases not born yet during the declaration of the PAs in question. This results in some of the data to reflect a lack of early engagement, when in reality many participants were not present at the time of early engagement and were rather sharing information they had learnt from their parents or older relatives. However, many participants who were present during the declaration of PAs confirmed this lack of early engagement and thus, this data is presented throughout the thesis.

Finally, by combining the various types of PAs into one analysis does not adequately distinguish the differences in planning and management approaches. For example, some of the WLS and nature parks in the Kullu District continue to allow a certain level of resource use from within park boundaries whereas resource use is entirely restricted in national parks. Comparing the differences in planning and management approaches could reveal the benefits and/or disadvantages of certain types of PAs, which could shed light on the preferred approach. Future research on the topic could benefit from a comparative analysis of the types of PAs.

7.8 Future research

Future research of this type is needed to overcome some of the limitations of the study. As mentioned above, conducting a comparative analysis of the various types of PAs in the Kullu District and in India more broadly could shed light on which type of PA is most conducive to the transition toward an inclusive approach to planning and management. The data suggests that WLS that do not impose total restrictions on resource use might be more inclusive and therefore favourable but further research is needed to confirm this idea. Future research with more focus on nature parks could also help to answer nature park related questions that this research did not answer, e.g. do nature park help achieve conservation purposes and do local communities benefit from these enclosed areas?

In addition, since this study focused on one localized district, constructing the same research in a new location or in a different culture could help to generalize the findings to other contexts. As well, comparing the research findings to other case studies would reveal similarities and contrasts between contexts. Finally, undertaking a similar research but expanding the learning theory to include social learning, transformative learning and policy learning could help to enhance the literature on learning for biodiversity conservation and learning in relation to environmental justice.

7.9 Concluding comments

Based on my research results and IUCN recommendations and guidelines for PA planning and management, the following are suggested steps for the Government of Himachal Pradesh to take to transition from an exclusive to an inclusive approach to planning and managing its network of PAs:

1) Policy changes that would allow some level of local resource use in national parks;
2) Early and on-going consultation with all stakeholders interested, involved or affected by existing and proposed PAs and incorporation of local input in management plans;
3) Facilitate communication between PA practitioners and local community members

4) Transition from sole purpose of biodiversity conservation to include the protection of cultural and spiritual heritage and to incorporate local socio-economic objectives in PA planning; and
5) Recognize that local people and their traditional livelihood practices are pivotal to the conservation movement and empower them to manage their own environment.

Recognizing existing injustices in society is a critical step in the design, planning and management of PAs in order to avoid replicating and intensifying such societal inequalities in conservation efforts. During my time in India, I learnt that such injustices are deeply embedded in customs, norms and institutions in the nation and to decouple such complex societal systems from NREM governance systems can be onerous. Until such a cultural shift occurs, I believe that the following key considerations could enhance environmental justice in PA planning and management in the Kullu District:

1) Recognize the diversity of stakeholders, including but not limited to women, individuals of lower caste and external resource users, and their experiences in the planning and management of PAs and in society at large and avoid mirroring existing societal inequalities in PAs;
2) Recognize issues of power in PA planning and management and in society at large and address such concerns so that all voices can have equal weight in decision-making;
3) Fair and even distribution of the negative and positive impacts of PAs between stakeholders;
4) Ensure that overall positive impacts and benefits of PAs in locally affected communities outweigh the total negative impacts incurred by park restrictions;
5) Provide opportunities for all stakeholders to participate in consultation and engagement activities from the early planning phase and throughout management activities; and
6) Provide fair and sustainable compensation that is developed in collaboration with each affected community and tailored to their needs and desires.

During my time in Kullu, I also found that collaborative learning platforms where forest officers and community members interact were almost entirely absent. Further, I found there to be a disconnect between forest officers on the ground that actually have some interaction with local communities and those in higher positions that are in charge of planning and decision-making. I had observed this during my previous research in India as well where government officials in higher positions did not know much about what was happening at the grassroots level. While forest officers at the local level expressed their intent to better involve local communities, it seemed they were prevented from doing so by their lack of power within the government hierarchy. I believe the following suggestions could help the HP Forest Department in Kullu facilitate learning and better utilize learning outcomes as a way to help achieve environmental justice in PAs and improve conservation efforts:

1) Set learning goals for PA planners and managers and track learning outcomes;
2) Facilitate collaborative knowledge exchange and co-creation of knowledge between all stakeholders in PA planning from early stages of site-selection to on-going management activities;
3) Embrace different forms of knowledge in PA planning and management including local traditional knowledge; and
4) Embrace pluralistic decision-making by involving all stakeholders in decision-making processes while recognizing and addressing power imbalances.

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Appendix A: Interview Schedules

Interview schedule for community members

1) How does your family earn a living?
2) How has the designation of GHNP impacted your life? (Potential prompts)
    a. Has the designation of the park restricted your use of natural resources (e.g. firewood, collecting medicinal herbs and mushrooms, farming, grazing, etc.) in and around the park?
    b. Since the designation of the park, has the quality of your water, air or land changed?
    c. Have you or your family had to relocate due to the designation of the park?
    d. Has your ability to practice your traditional way of life changed? If so, how?
    e. Have you received compensation for the restrictions or displacement you have incurred?
    f. Are you receiving benefits from the park (e.g. monetary, employment, increase in business, etc.)?
        i. If yes, what types of benefits are you receiving?
        ii. If no, who is receiving the benefits of the park?
3) Is there tension or conflict between local communities and park managers, government officials, other resource users, organizations, etc.?
    a. What is the cause of this conflict?
    b. How has this conflict been managed?
    c. Has there been any social movements against the park? (e.g. protests, marches, rallies, etc.)
4) Have you been involved in social movements in opposition to GHNP? Describe if so.
    a. What have you learnt from your involvement in social movements in opposition to the park?
    b. Would you participate in other social movements against GHNP or other conservation efforts?
    c. Would you participate in social movements against industrial development?
5) Have you been involved in any court cases regarding GHNP? Describe if so.

    a. How did you learn about court processes?
    b. What was your involvement like?
6) Have you been involved in any petitions, hunger strikes, or other activities in protest against the GHNP? Describe if so.
7) Are you involved in the planning and management of GHNP? Describe if so.
    a. What have you learnt from your involvement in GHNP?
8) If not, what do you know about management of GHNP? Describe if so.
    a. Who is involved in planning and management?
    b. How are decisions made and who makes them?
9) Have you been consulted about decisions regarding GHNP? Describe if so.
    a. Where has this consultation occurred?
    b. How frequently?
    c. Who was involved?
    d. How did you feel during and after this consultation?
10) Do you have concerns about GHNP?
    a. If so, is there an avenue for you to express your concerns? To who?
    b. Do you feel your concerns are being considered?
11) Do you think others have concerns about GHNP?
    a. If so, who?
    b. What type of concerns do others have?
    c. Do others have opportunities to voice their concerns?
    d. Do you share your concerns with other neighbours of the park?
12) Many people believe that traditional practices like grazing, harvesting medicinal plants and mushrooms, collecting fire wood, etc. degrade the environment in national parks, what do you think about this?
13) Are you in support of biodiversity conservation?
    a. Why do you (or not) support conservation efforts?
    b. If so, when and how did this support begin?
14) How has industrial development impacted the park area?
    a. And how has it impacted your life?
15) How has tourism impacted the park area?

a. And how has it impacted your life?

16) What's it like being a neighbour of the park and how has this changed over the years?
    a. What are some key lessons you have learnt from living near GHNP?

Interview schedule for other resource users

1) How does your family earn a living?
2) Do you or did you use resources from GHNP for livelihood needs?
    a. If so, what type of resources?
3) How has the designation of GHNP impacted your life? (Potential prompts)
    a. Has the designation of the park restricted your use of natural resources (e.g. firewood, collecting medicinal herbs and mushrooms, farming, grazing, etc.) in and around the park?
    b. Since the designation of the park, has the quality of your water, air or land changed?
    c. Have you or your family had to relocate due to the designation of the park?
    d. Has your ability to practice your traditional way of life changed? If so, how?
    e. Have you received compensation for the restrictions or displacement you have incurred?
    f. Are you receiving benefits from the park (e.g. monetary, employment, increase in business, etc.)?
        i. If yes, what types of benefits are you receiving?
        ii. If no, who is receiving the benefits of the park?
4) Is there tension or conflict between resource users and park managers, government officials, community members, organizations, etc.?
    a. What is the cause of this conflict?
    b. How has this conflict been managed?
    c. Has there been any social movements against the park? (e.g. protests, marches, rallies, etc.)
5) Have you been involved in social movements in opposition to the park? Describe if so.
    a. What have you learnt from your involvement in social movements in opposition to the park?

6) Have you been involved in any court cases regarding GHNP? Describe if so.
    a. How did you learn about court processes?
    b. What was your involvement like?
7) Have you been involved in any petitions, hunger strikes, or other activities in protest against the GHNP? Describe if so.
8) Are you involved in the planning and management of GHNP? Describe if so.
    a. What have you learnt from your involvement in GHNP?
9) If not, what do you know about management of GHNP? Describe if so.
    a. Who is involved in planning and management?
    b. How are decisions made?
10) Have you been consulted about decisions regarding GHNP? Describe if so.
    a. Where has this consultation occurred?
    b. How frequently?
    c. Who was involved?
    d. How did you feel during and after this consultation?
11) Do you have concerns about GHNP?
    a. If so, is there an avenue for you to express your concerns? To who?
    b. Do you feel your concerns are being considered?
12) Do you think others have concerns about GHNP?
    a. If so, who?
    b. What type of concerns do others have?
    c. Do others have opportunities to voice their concerns?
    d. Do you share your concerns with other neighbours of the park?
13) Many people believe that traditional practices like grazing, harvesting medicinal plants and mushrooms, collecting fire wood, etc. degrade the environment in national parks, what do you think about this?
14) Are you in support of biodiversity conservation?
    a. Why do you (or not) support conservation efforts?
    b. If so, when and how did this support begin?
15) How has industrial development impacted the park area?
    a. And how has it impacted your life?

16) How has tourism impacted the park area?
    a. And how has it impacted your life?

Interview schedule for government officials/park managers

1) What is your role in the planning and management of GHNP?
    a. How long have you been in this role?
        i. How has your role changed over the years?
    b. What kind of activities does your role involve?
2) What has been the overall approach to managing the Park?
    a. Has this change over the years? Describe if so.
3) What challenges do you feel you face?
    a. Who are park managers reaching out to in order to try to solve these challenges (e.g., local people, new policy regulations)
4) In what ways (if any) have you tried to modify your personal approach to management over the years? Has the government changed their approach?
5) How do you involve local residents in the planning and management of the GHNP?
    a. How do you ensure that local livelihood needs are met?
    b. How do you ensure that local perspectives are included in decision-making regarding the park?
    c. How do you educate local residents about the benefits of biodiversity conservation?
6) Do local residents and other resource users have access to GHNP? Can they use resources from GHNP?
    a. If not, have resource users been compensated for the restrictions on their livelihood?
    b. Have resource users been consulted during displacement or compensation processes?
7) Many people believe that traditional practices like grazing, harvesting medicinal plants and mushrooms, collecting fire wood, etc. degrade the environment in national parks, what do you think about this?
8) Has there been conflict between park managers and local communities or other resource

users?

   a. What has been the cause of this conflict?
   b. How has this conflict been resolved?
   c. What does the park do to avoid such conflict?

9) What has surprised you in your work over the years at the GHNP or elsewhere regarding parks management planning? What have been key learning outcomes/lessons for you?
10) Do you monitor the outcomes of planning and management strategies of GHNP?
    a. Are monitoring results used to improve the management plan? Describe if so.

Interview schedule for NGOs

1) What is the purpose of your organization?
2) What types of activities does your organization engage in?
3) What is your organization's role in the planning and management of GHNP?
    a. How long have you been in this role?
    b. How has your role changed over the years?
4) What has been the overall approach to managing the Park?
    a. Have you been a part of designing this approach?
    b. Has the approach changed over the years?
5) What challenges do you feel you face?
    a. Who is your organization reaching out to in order to try to solve these challenges (e.g., local people, new policy regulations)
6) How do you involve local residents in your activities pertaining to GHNP?
    a. Do you advocate for local people and other resource users?
    b. Do you consult with diverse groups of people?
    c. Do you educate local residents about the benefits of biodiversity conservation?
    d. Do you involve other resource users such as migratory and nomadic pastoralists?
7) Many people believe that traditional practices like grazing, harvesting medicinal plants and mushrooms, collecting fire wood, etc. degrade the environment in national parks, what do you think about this?
8) Do local residents and other resource users have access to GHNP? Can they use resources from GHNP?

a. If not, do you believe resource users have been compensated for the restrictions on their livelihood?
b. Do you believe resource users have been consulted during displacement or compensation processes?

9) Has there been conflict between park managers, local communities, other resource users and/or yourself and other NGOs?
    a. What has been the cause of this conflict?
    b. How has this conflict been resolved?
    c. What does the park do to avoid such conflict?
10) What has surprised you in your work over the years at GHNP or elsewhere regarding parks management planning? What have been key learning outcomes/lessons for you?

Interview schedule for academics

1) What is your academic background?
2) What is your current academic focus?
3) What do you know about the overall approach to managing GHNP?
    a. Has this approach changed over the years?
    b. Do you believe this approach is appropriate?
    c. Are there other better approaches out there? Describe if so.
4) Has there been conflict between GHNP stakeholders?
    a. What has been the cause of this conflict?
    b. Has the conflict resulted in social movements?
    c. How has this conflict been resolved?
    d. What does the park do to avoid such conflict?
5) What has surprised you in your work over the years with conservation and GHNP or elsewhere regarding parks management and planning? What have been key learning outcomes/lessons for you?
6) Many people believe that traditional practices like grazing, harvesting medicinal plants and mushrooms, collecting fire wood, etc. degrade the environment in national parks, what do you think about this?
7) Do you believe local communities and other resource users are adequately involved in

GHNP planning and management?

a. Describe if so.
b. If not, how could they be better involved?

Appendix B: Consent Forms

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM
Individual Interview



UNIVERSITY OF MANITOBA
NATURAL RESOURCES INSTITUTE

70 Dysart Road, Winnipeg, Manitoba
Canada. R3T 2N2.
General Office (204) 474-7170
Fax: (204) 261-0038
http://www.umanitoba.ca/academic/institutes/natural_resources

Title of Study: Protected area planning and management and social learning in the Great Himalayan National Park

Principal Investigator: Ariane Dilay
Natural Resources Institute, University of Manitoba, Sinnot Bldg., 70 Dysart Road, Winnipeg, R3T 2N2
E-mail: umdilaya@myumanitoba.ca
Tel: [redacted]
Research Supervisor: Professor John A. Sinclair
Natural resources Institute, University of Manitoba, 306 Sinnot Bldg., 70 Dysart Road, Winnipeg, R3T 2M6.
Tel: (204) 4748374 Fax: (204) 2610038
Email: john.sinclair@ad.umanitoba.ca/john.sinclair@umanitoba.ca

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This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Purpose of this Study: The purpose of the proposed research is to examine how social learning can be used as a tool to advance protected areas planning and management and to help reconcile conservation goals and community interests. The research will be conducted in the context of the Great Himalayan National Park (GHNP). The specific objectives are to i) identify communities, organizations and other actors involved in and/or affected by the planning and management of GHNP, ii) evaluate the planning and management of GHNP, and iii) identify learning opportunities and outcomes for individuals, communities, organizations

and others involved in and/or affected by GHNP.

Participants Selection: You are being asked to participate in this study because of your involvement, impact or expertise in the planning and management of the Great Himalayan National Park. A total of 40-50 participants will be asked to participate.

Study procedures: The method of data collection for this study will be individual interviews. Individual interviews will be semi-structured and answers will be recorded with hand-written notes. Participation in the study will be for one interview of approximately one hour in length. I will be conducting the interview and will have a local translator present. The translator will be required to sign an Oath of Confidentiality and so, the answers you share in his presence will remain anonymous and confidential. You will be asked some questions relating to your experience with the planning and management of the Great Himalayan National Park or about the impact the park has had on your livelihood. These questions will help us to better understand how the park is planned and managed. You are not required to identify yourself by name or identifiable characteristics that connects you with information you provide unless you choose to be identified. You will be referred to by a general descriptor identifying only your community, position, NGO or field of study unless you choose to waive your anonymity in which case you would be identified by your first and last name.

Data Storage: All notes and transcripts will be stored in password-protected computer files, and any hard copies will be stored in a locked cabinet. The information resulting from this interview will be kept confidential. No one other persons than myself, supervisor, and auditors for the University's ethics review board will have access to the information you provide. Data will be destroyed by December 2022 after conducting the research and allowing for dissemination, journal publications, and public presentations where necessary.

Risks and Benefits: No information will be used in a way that could put you at risk. You may also choose not to respond to questions, if you deem them inappropriate, or you can carefully word your sentences. Participating in this research might not benefit you directly but research results will be disseminated to participants, which could be used to improve planning and management practices of the Great Himalayan National Park.

Confidentiality: We will do everything possible to keep your personal information confidential. Your name will not be used at all in the study records unless you choose to waive your anonymity. A list of names and addresses of participants will be kept in a secure file so we can send you a summary of the results of the study. If the results of this study are presented in a meeting, or published, nobody will be able to tell that you were in the study. Please note that although you will not be identified as the speaker, your words may be used to highlight a specific point.

Expected Outcomes: A Master's thesis, academic publications and presentations would be the result of this study. If you are interested in receiving a copy of the findings of my research, I will make that available to you.

Feedback/Debriefing: Towards the end of each interview, I will request you to verify and confirm the information you have provided, with the help of the translator. I will create an overview newsletter-type report of my work and send that to you, and you also have the opportunity to receive an electronic copy of my thesis if you are interested.

Questions: If you have any questions either now or in the future, please feel free to contact me or my advisor (contacts are provided on the first page).

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way. This research has been approved by the Joint-Faculty Ethics Review Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at (204) 474-7122 or humanethics@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

☐ I give you permission to associate my name with information I provide in this interview

☐ I do not permit you to associate my name with information I provide in this interview; instead, I want to remain anonymous.

☐Yes, I would prefer to receive a summary report of this research via email: _____ or mailing address: _____

☐No, I do not prefer to receive a summary report of this research.

I, _____ agree to participate in the interview.

Research Participant's Signature _____ Date _____

Researcher's Signature _____ Date _____

Thank you for your time

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM
Individual Interview



UNIVERSITY OF MANITOBA
NATURAL RESOURCES INSTITUTE

70 Dysart Road, Winnipeg, Manitoba
Canada. R3T 2N2.
General Office (204) 474-7170
Fax: (204) 261-0038
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Title of Study: Protected area planning and management and social learning in the Great Himalayan National Park

Principal Investigator: Ariane Dilay
Natural Resources Institute, University of Manitoba, Sinnot Bldg., 70 Dysart Road, Winnipeg, R3T 2N2
E-mail: umdilaya@myumanitoba.ca
Tel: [redacted]
Research Supervisor: Professor John A. Sinclair
Natural resources Institute, University of Manitoba, 306 Sinnot Bldg., 70 Dysart Road, Winnipeg, R3T 2M6.
Tel: (204) 4748374 Fax: (204) 2610038
Email: john.sinclair@ad.umanitoba.ca/john.sinclair@umanitoba.ca

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Participants Selection: You are being asked to participate in this study because of your involvement, impact or expertise in the planning and management of the Great Himalayan National Park. A total of 40-50 participants will be asked to participate.

Study procedures: The method of data collection for this study will be individual [interviews/transect walks/workshops]. Individual interviews will be semi-structured and answers will be recorded with hand-written notes. If chosen for the interview, participation in the study will be for one interview of approximately one hour in length. I will be conducting the interview and will have a local translator present.

Data Storage: All notes and transcripts will be stored in password-protected computer files, and any hard copies will be stored in a locked cabinet. The information resulting from this interview will be kept confidential. No one other persons than myself, supervisor, and auditors for the University's ethics review board will have access to the information you provide. Data will be destroyed by December 2022 after conducting the research and allowing for dissemination, journal publications, and public presentations where necessary. Protected area planning and management and social learning in the Great Himalayan National Park

Risks and Benefits: No information will be used in a way that could put you at risk. You may also choose not to respond to questions, if you deem them inappropriate, or you can carefully word your sentences. Participating in this research might not benefit you directly but research results will be disseminated to participants, which could be used to improve planning and management practices of the Great Himalayan National Park. Risks of participating in this study are no greater than in everyday life.

Confidentiality: We will do everything possible to keep your personal information confidential. Your name will not be used at all in the study records unless you choose to waive your anonymity. A list of names and addresses of participants will be kept in a secure file so we can send you a summary of the results of the study. If the results of this study are presented in a meeting, or published, nobody will be able to tell that you were in the study. Please note that although you will not be identified as the speaker, your words may be used to highlight a specific point.
Expected Outcomes: A Master's thesis, academic publications and presentations would be the result of this study. If you are interested in receiving a copy of the findings of my research, I will make that available to you.

Feedback/Debriefing: Towards the end of each interview, I will request you to verify and confirm the information you have provided, with the help of the translator. I will create an overview newsletter-type report of my work and send that to you, and you also have the opportunity to receive an electronic copy of my thesis if you are interested.

Questions: If you have any questions either now or in the future, please feel free to contact me or my advisor (contacts will be provided).

By providing verbal consent, you confirm that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time until April 2020, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. There are no negative consequences with withdrawing. To withdraw, please contact me or my advisor by phone or email. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way. This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project you may contact me or my advisor (I will provide contact information) or the Human Ethics Coordinator (HEC) at (204) 474-7122 or humanethics@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference. Protected area planning and management and social learning in the Great Himalayan National Park

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Do you give permission to associate your name with information you provide in this interview?
Or do you prefer to remain anonymous?

Do you prefer to receive a summary report of this research via email: _____or mailing address: _____
Or do you rather not receive a summary report of this research?

Would you like to be contacted to participate in a workshop at a later date?
Or would you rather not be contacted to participate in a workshop at a later date?

Verbal consent by research participant _____was given on Date _____
Researcher's Signature _____ Date _____

Thank you for your time