

# COMMUNITY FOREST GOVERNANCE IN MOUNTAIN ECOSYSTEMS: FOUR CASE STUDIES FROM HIMACHAL PRADESH

SOCIETY FOR RURAL DEVELOPMENT AND ACTION (SRDA)



This report is a working paper and has been written and compiled for Society for Rural Development in November 2024.



# **COMMUNITY FOREST GOVERNANCE IN MOUNTAIN ECOSYSTEMS: FOUR CASE STUDIES FROM HIMACHAL PRADESH**

**SOCIETY FOR RURAL DEVELOPMENT AND ACTION (SRDA)<sup>1</sup>**

---

<sup>1</sup> This report is a working paper and has been written and compiled for Society for Rural Development in November 2024.

---

## About this document

Approximately 1.6 billion people globally rely on forests for livelihoods, with India having about 88 million Forest Proximate Peoples (FPPs), predominantly in tropical regions. This report delves into the significance and dynamics of local forest governance practices amongst FPPs in the North West Himalayan region of Himachal Pradesh. The socio-economic and cultural identities of FPPs have historically aligned with and in turn produced natural ecosystems. However, colonial-era territorial occupation, deforestation and development led exploitation together propelled a trend of rapid socio-ecological disruption. The State's interests around sustainability of resources led to emergence of formal state management of forests, a shift away from traditional governance practices. In India in general and also in the Himalaya, the British administration implemented forest laws and policies towards establishing control over forests and also attempting to set management practices, such as the establishment of Van Panchayats in Uttarakhand or the Kangra Forest Cooperative Societies (KFCS) in Himachal, to regulate local resource use while negotiating access rights with locals. In the post-colonial era, amidst continued commercial forest usurpation, was a growing recognition of the inadequacies of centralized forest management, leading to attempts at policy changes that emphasized importance of joint forest management (JFM). While JFM sought to 'empower local communities in forest governance', the program was severely critiqued for inadequate structural and institutional robustness. The ongoing ecological degradation especially, the climate crisis and contemporary socio-economic challenges, has brought renewed thrust on community forest governance in policy research and international agreements. We present four case studies from Himachal Pradesh to explore current local practices of community forest governance and their legal, social, and institutional dynamics and challenges. The case studies highlight ongoing issues of resource protection, ownership and access amid rapid socio-ecological shifts, new market pressures and stricter conservation goals. Communities have adapted to the development challenges and opportunities to earn from cash based livelihoods while precariously balancing the connect with landscapes and cultural identities. Legal battles, like those in the case of KFCS or assertion of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 in Kinnaur and Lahaul-Spiti, indicate a strong desire to assert ownership and protect communal rights. In tribal areas, the significance of resources extends beyond economic value to cultural importance fosters collective mobilization, though gender and caste inequalities persist even today. The 'success of CFM' and institutional best practices is hard to define and cannot be assessed in isolation from broader socio-political and economic structures. The report advocates the need for a nuanced, more complex and localised understanding of 'community-led conservation' with the interplay of multiple factors along with the need for inclusive and democratic governance principles. The rights, roles, needs and struggles of forest-dependent communities need foregrounding in the quest for sustainability.

## I. Introduction: Emergence and Significance of 'Community Forest Management' in the Global South, India and the Himalaya

The Global Forest Goals Report 2021 estimates that 25% of the world's population, approximately 1.6 billion people can be classified as forest dependent - relying on forest landscapes for their 'subsistence needs, livelihoods, employment, and income' (UN 2021). Newton et al refer to these populations as FPP (Forest Proximate People) and apply the criteria of people living within 5 km. of a forest. By their evaluation, almost 2/3<sup>rd</sup> of this population lives in tropical countries, falling in the Global South and India is one of the five countries with the highest FPPs at 88 million (5%)(Newton et al. 2020). However, information provided by the Ministry of Environment, Forests and Climate Change in India, as per the 2011 census, indicates that there are about 6,50,000 villages in the country, out of which nearly 1,70,000 villages are located in the proximity of forest areas, often referred as forest fringe villages and "as per India State of Forest Report 2021, published by Forest Survey of India, approximately 300 million people are dependent on forests"(Lok Sabha 2023). Most of these forest dwelling and proximate communities comprise indigenous populations, including but not limited to adivasi peoples. In the Himalaya, covering around 16.2% of the Indian sub-continent's landmass, extending from the east to west, nearly 50 million FPPs practice mountain agriculture, pastoralism and varied forest and nature –based livelihoods in diverse ecosystems, including species-rich forests and grasslands.

For centuries, the socio-economic, political and cultural identities and practices of FPPs have evolved in alignment and response to nature and have in turn impacted forest landscapes enabling survival of both human and more than human species. However, since the 17<sup>th</sup> century, began the era of industrial and colonial deforestation which brought about fast paced socio-ecological disruptions, across the world, but especially in the Global South. The planned exploitation executed through measuring and classification of forest land by the imperial State for their administrative and commercial interests was the first large scale 'forest management' regime in regions like India. It was along with the process of 'forest settlement' that the formal (State) recognition of 'customary' practices of community resource use and management gained prominence. So while traditional forms of community forest governance existed (and progressed) interwoven with indigenous ways of living, the idea of 'community forest management' (CFM) as a modern concept can be traced to the colonial period when most of the world's forests were being utilized for imperialistic aspirations. It may be seen as a form of negotiation where the State in the process of reserving certain forests for the empire had to grant use and management concessions over certain other forest lands (Chhatre 2000).

Instances of this can be found in the Himalayan states, when the British government in erstwhile state of Uttarakhand created the Van Panchayats in the 1930s, to quell a resistance movement in Kumaon against declaration of reserved forests ((Menon et al., 2014; Pathak et al., 2021a). In Himachal Pradesh, the Punjab Hill States government was impelled to create the Kangra Forest Cooperative societies (KFCS) to raise local stake in forest access in exchange for timber reservation (Chhatre 2000). Wood scarcity was always deployed as an argument of the empire (Pluymers 2021) and dictated its need to 'reduce pressure' of local uses (grazing, fuel, timber) on the forests on one hand and promotion of 'scientific forestry' which also led to monoculture propagation of fast growing wood species like the



pinus in the Himalaya, on the other. Albeit, centralised forest management remained the dominant mode of governance through a series of laws and policies implemented through the forest bureaucracy in the colonial and then post-colonial period.

From the late 60s and 70s onwards, forestry and conservation policy research once again drew attention towards the inadequacy and ineffectiveness of conventional centralized approaches to forest protection. The Chipko movement in Garhwal Himalaya had drawn the attention of the world to the threat of commercial deforestation. Despite this, Himalayan 'environmental degradation' was presented as a crisis that could be contained through restrictions imposed on 'indiscriminate' local use of forest resources (Ives 2004). Yet again 'managing' local dependence on forests and making government reforestation programmes successful – both required "people's participation" (Gilmour 2016). In India the 1988 Forest Policy emphasised the need to support indigenous forest based livelihood through social forestry and during this period the narrative of CFM as a formal type of forestry was popularized by Ostrom (1990). Her work stated that when sufficient rights are granted to local and indigenous communities, it increases the possibility of creating sustainable institutions that address deforestation and create sustainable livelihoods. The National Forest Policy of 1988 together with the Central Government Guidelines for Joint Forest Management of 1990 made radical shifts from the previous forest policies, most specifically the National Forest Policy of 1952 which focused on forests for timber and stressing the need of industry and defense, and the recommendations of the National Commission on Agriculture 1976, which had approved commercial forestry to continue on forestland (Gupta and Gulati n.d.). Critiques of JFM, however soon emerged on the scene with a new push towards more devolution with approaches like CFM.

Subsequent research during this period facilitated the development of different models of CFM across the world. Subsequently, in the international arena of treaties and agreements, the idea of CFM now fitted the transforming economy. It was noted that Community-Based Forestry (CBF) initiatives fit within the reforms that governments have been pursuing under IMF and under the conditionality lending of the World Bank since 1990s. One of the significant conditions is that governments downsize their service bureaucracies in order to reduce costly public expenditures (Gilmour, 2016). This transformation, coupled with the extensive research on the failure of centralized models, led to governments increasingly considering CFM as an alternative (Ibid.). Loss of natural forests, its ecological as well as socio-economic impacts and the need for conservation are in the spotlight today more than ever. Accelerated deforestation due to rapidly changing land use has been at the center of the climate discourse and as a result the role of FPP in the governance of forests has once again presumed primacy. Emerging climate change and neoliberal practices are reshaping the relationship of indigenous peoples and forests, creating new forest forms (Ramdas 2009). In addition, people's movements and advocates of rights of indigenous communities have critically highlighted their dispossession and displacement as a result of top down policies of extractivist development. The same have also highlighted the exclusivist approach of protected area conservation by creation of inviolate and restricted forest zones through centralised forest regulatory regimes. Resource conflicts (in the colonial and post-colonial era) in forested landscapes critical for FPPs survival and the search for better conservation outcomes by devolution of power both are playing a pivotal role in the re-emergence of the idea of 'Community Forest Management' (CFM).



The following section of this working paper is a compilation of secondary information on guiding principles, methods and best practices in CFM, while section three broadly presents examples, documented experiences and issues around forest governance in the Global South, India and Himachal Pradesh. Case studies from Himachal Pradesh based on field work carried out in Kangra, Lahaul, Spiti and Kinnaur are in section four. The case studies were developed using an interview method and backed up with secondary information from published works. In the final and fifth section we cull out findings on legal, socio-ecological and institutional challenges for community led forest governance in the region. Some key principles and trends vis a vis community led resource governance in the state are collated here, highlighting the hurdles and complexities to be addressed in the conversation on sustainability in the context of Himalayan ecosystems. The report aims to generate a dialogue amongst forest dependent communities and practitioners in the field of sustainable livelihoods, forest protection and restoration. The findings may be useful for advocacy and to identify further gaps in understanding.



## II. Recurring themes in CFM literature review

CFM is rooted in the framework of formal forest management and refers to a policy approach where governance is devolved in varying degrees to FPPs, local user groups or institutions in order to implement government approved forestry and restoration programs by 'giving stewardship to the local community' which ensures both global environmental and local livelihood benefits (Pathak et al. 2021). From the perspective of Adivasi resource rights' struggles in countries like India it is seen as a set of social, economic and political mechanisms that provide a space for indigenous people and local communities to exercise their rights in the use and reclaim ownership in governance of their habitats. The term encompasses many different communal resource management practices, including those traditionally used by forest-dependent indigenous people and local communities (Baltodano J 2022). This distinction can also be used to segregate CFM into formal and informal regimes in terms of their recognition from the state in legal and policy regimes. CFM regimes exist in a complicated realm of property rights and the structures of each type of regime decides their level of devolution in a spectrum (Gilmour 2016). In a sense, CFM refers to the political control of communities over their territories and resources through horizontal decision-making mechanisms including transparency and accountability to the rest of the community. Some of the recurring and defining themes from literature are given below.

### Resource System, Units and Demographic Profile

Biophysical factors have been given primacy in assessing the variables that affect forest condition. These include - elevation, forest size, forest diversity, condition of the forest, rainfall, soil quality etc. Closely connected with the features of the resource system are the characteristics of the resource unit which includes the size and age of the community user group, number of households, including the livestock size – especially in agropastoralist societies.

In Nepal researchers have found that higher age, higher number of households and lower resource availability leads to adoption of rigid management regimes to manage the community forests and this in turn impacts outcomes and benefits for the poorer households (Pokharel 2012). Community size and heterogeneity are among the independent variables studied most frequently by social scientists and while a theoretical understanding favours a small-sized and homogenous community there are different experiences on whether these lead to better outcomes and the likelihood of CFM's success measures in terms of not only the health of the forest or any other resource but also in terms of livelihoods sustainability (Pagdee, Kim, and Daugherty 2006). Agarwal and Chhatre in the case of Himachal Pradesh found the community size has a positive relationship with forest condition and population change has a negative relationship. Common sense suggests that a smaller homogenous community may be able to better 'manage' its resources, but there seems to be a combination of variables that come together to make for community governance possible.

### Socio-economic equity and justice

The socio-economic status of communities – the nature of livelihoods, the class and caste and landedness seems to be a key factor in resource dependence and also governance (C. Negi 2017). Pathak et al., (2021) in their study of the Van panchayats found a declining interest of the communities in VPs due to these reasons. Poonam, D N et.al., (2011) have documented agroforestry practices in the districts of Lahaul and Spiti and found that these practices did help people reach some of their diverse needs such as food, fuelwood, fodder and timber but farmers with small landholding had difficulties due to water scarcity.



When it comes to the effective management of commons, wealth and land distribution has a considerable role to play. Naidu, (2005) in her study of CFM in Himachal Pradesh found that wealth heterogeneity has a positive impact on cooperation if users with large endowments undertake the burden of managing resources. She also states, empirical evidence shows wealth inequality has a non-monotonic relationship with cooperation. Caste exclusions have been a recurring aspect especially in the case of traditional CFM regimes. It is observed that landed upper caste groups who have property rights in forests, end up representing CFM managing committees and taking the benefit of the sale from NTFPs. In the case of villages in Himachal Pradesh it was found that when there is landlessness, communities attempt to protect forest resources better and higher levels of village conflict lead to the worst conditions of forest (Agrawal & Chhatre (2006). More conflict-ridden social relationships in the village make decision-making around forest difficult.

Involvement of women in institutionalized decision making improves the prospects for better resource conservation and their presence in leadership positions, can create regulatory mechanisms that are more suited to the local context as well as their needs for forest products Sarin (1995). The analysis also indicates that the presence of gender conflicts is positively associated with better forest conditions. The labour of women is critical in traditional forest governance even while they remain on the margins of decision making in patriarchal systems, however, there are few studies that examine gender in CFM through the Marxist feminist lens. While lip-service is paid to women's participation in joint JFM, their role was seen mostly as 'natural protectors' of forests, rather than addressing issues of women's right over land and role in decision making in local institutional processes (Agarwal 1992, 2010).

### **Tenurial rights and arrangements**

*When it comes to Community Forest Governance it is clear land tenure and secure community as well as individual proprietary rights are two key aspects.* In the Himalayan regions both are intrinsically linked as forest services contribute to individual agricultural and horticultural operations – especially in terms of leaf litter, fodder and pastures for livestock rearing which contributes to the manure needs and even water for irrigation. When it comes to CFM and formal land tenure, it is collective and community rights that are relevant because Community Forest Management is, by its very definition, a collective endeavor (Baltodano J, 2015). In addition to effective governmental support for community rights and land tenure, governmental measures that prevent the activities of and encroachment by industrial timber and agricultural sectors are also important (FOEI,2015). The threats to tenurial rights in form of market and external influences thus plays a determining role. A meta-study found that local ownership and autonomy in rule-making positively influences outcomes regarding forest dynamics. What is the extent of decentralization and nature of property rights, required for success in CFM regimes? While, it has been widely accepted that assurance of tenurial rights improves forest condition, the type of CFM regime also decides the level of active control by communities. There are different institutional mechanisms through which communities manage forested landscape in HP. Such institutional arrangements include self-initiated systems, cooperatives, corporate clan-owned forests, sacred forests, and co-managed forests (Agrawal & Chhatre, 2006). Through these arrangements, communities in Himachal Pradesh govern the full range of different forest types found in the state (Ibid.).

Agrawal and Ostrom (2001) has reviewed property rights and shown how it is related to decentralization, where the state devolves particular property rights to local actors. However, it is also



pertinent to give attention to the nature of property rights which is being devolved. Government claims to ongoing decentralization cannot be taken at face value since, it remains unclear why would the State devolve of its power who are known for their pursuit of power (Ibid). They also highlighted the agency of local political actors to understand how they play an important role in ensuring property rights and decision-making (Ibid). Alternatively, they also built an understanding of the extent of decentralization by examining the rights and capacities which are transferred to local actors (Ibid). CFMs exist in a realm of property rights which includes both formal and informal power structures. Traditional regimes have been based on informal power structures owing to the hierarchy in the social structure especially in the form of caste. This is probably why the historically privileged, traditional elite and informal institutions continue to dominate the entire social structure.

### **Institutional Mechanisms and legal frameworks**

In the 'governance of commons' research has probed the institutional mechanisms from political economy and sociological perspectives. Socio-cultural heritage - social norms, trust within a community, common rules and sanctions on one hand and land-labour relations on the other influence local institutional processes (FOEI 2015; Menon et al. 2014). Agrawal & Chhatre, (2006) analyzed the role of markets in CFM regimes and found that its influence is limited by the community's social capital such as traditional knowledge, common practices, and beliefs toward the resources (e.g., forest-spirit, offering ceremony, and medicine man). Thus, the markets cannot significantly impact natural resource stock and community stability, especially in rural communities where community connection is strong. However, they also found that a better accessibility to markets does improve the economic condition of the people.

A study from Garhwal in Uttarakhand has assessed how a historical foundation of an organisation has an impact on its management structure and finally, its impact on forest protection. They found that the organisation's philosophy linked to the Chipko movement or specifically to the approach of social organisations that helped them to mobilize the community through pad yatras (Menon et al. 2014). Regarding its mechanisms of management, the factors which could be considered a failure was the lack of a democratic forum. This meant, even though meetings were held and decision-making processes involved all villagers, there isn't a set mechanism for a democratic forum through which decisions are taken. One important part of the institutional feature is record keeping. Murali et al., (2022) finds an essential mechanism of record keeping which is true for many traditional indigenous governance systems. In their study of the Spiti valley, they find that record keeping is also historical and oral wherein history influences the rules, norms and strategies used by communities over time; referred to as 'institutional memory'. Regarding the challenges to effective mechanisms, the ones posed by the intervention by external agencies such as the Forest Department affect many CFM regimes negatively. Pathak et al., (2021) analyzed the case of the Van panchayats in Uttarakhand, and how their status and credibility declined rapidly due to the increased involvement of forest officials in the affairs of the VPs. As a result, they have mostly become disinterested in management affairs.

The legal frameworks governing CFM regimes have a considerable impact on its functioning and effectiveness. Dilution of decision-making powers of VPs, and lack of funds, further limited the fundamental activities of the VPs such as plantation during rainy season, forest fire control and watch and ward for illegal felling of trees (Ibid). There are many different kinds of laws and policies that impact the functioning of a CFM regime in India – Forest and more recently biodiversity related laws,



policies, programmes; Societies registration acts; agricultural laws – to name a few. Conflicting policies, institutional and legal framework of natural resource management between centre and state is also an issue from tenurial issues to NTFP collection and sale (Gupta and Gulati n.d.).

G. Paudel et al. found that despite some notable success of Nepali CFM in enabling environmental conservation and establishing a network of local level institutions across the country, its role in enhancing socio-economic outcomes for communities is much more ambivalent. They found that the Nepali government's drive to maintain control over more economically valuable forests may play a major role in restraining the economic benefits of CF by limiting that approach to regions perceived to have forest resources of lower value. Community forestry enterprises' reliance on external donor funding support may have led enterprises to focus less on local income and employment opportunities. Third, the embedded conservationist thinking where cutting trees or harvesting forest products is considered deforestation rather than a prudent resource use and ecological outcomes gain priority over localised socio-economic outcomes needs to be studied (Paudel, Carr, and Munro 2022).

### On methods

Scholars have highlighted the need to engage with ecological complexity from the 'science' perspective, oft simplified in the 'management' frameworks of CFM (Romanelli and Boschi 2019). However, emphasis has also been laid on the inseparable nature of society and ecology which is why socio-economic, political and institutional factors shaping resource management need to be interwoven as has been attempted in the Socio-ecological Systems framework (Murali et al. 2022). A variety of methods and frameworks have been used to assess CFM and its 'success and best practices'.

For identifying various attributes from case studies, scholars have mostly used a meta-analytical approach where selected articles having the similar theme are categorized as having 'success' or 'failure' attributes. Pagdee et al., (2006) have assessed the articles whether management outcomes, community and resource attributes are presented and presented a preliminary for identification of success measures and factors. The basic framework of case studies with these attributes – 1) minimal backgrounds of community context such as management practices (property rights, institutional settings, and management problems) 2) community attributes (populations, heterogeneity, socio-economic conditions, and practices) 3) forest features 4) management outcomes, (improvement of forest conditions, fulfillment of local needs and equity of benefit distribution.

Agrawal & Chhatre, (2006) in their study of 205 forests in Himachal Pradesh, ensured that the sampling included all major types of forests and institutional regimes. Villages for data collection were selected across altitudinal gradient in the state, sampling equally from the lower hills, middle hills and high hills. Within each altitudinal gradient, cases were selected to represent different institutional regimes. This sample selection ensured that cases are not only dependent on the different attributes of the value of a category for e.g. institutional regime. Pathak et.al (2021) in their study of Van Panchayats in Uttarakhand categorized the size of VPs as small (upto 30 ha) medium (31-60 ha) large (more than 60 ha). Establishment years were taken from 1980 and before and after 1980 – to look at importance of historicity.

Scholars have highlighted the importance of conducting statistical work on local resource use and governance because so much of the literature on the subject is driven by single case-oriented analytical



lens. Hence, in order to build an extensive understanding of all the attributes that affect the success of CFM, quantitative data on variables can give a meta-analysis framework to the study. However, they also emphasize that case studies can be remarkably effective in providing in-depth knowledge of specific conjunctures and highlighting the importance of causal processes significant in those conjunctures. They can potentially also be invaluable tools to identify the direction of causal forces and specify the contextual features that lend a particular cause its leverage over outcomes. Qualitative data is seen as helpful to consider 'subjectivity' of the user groups. Group discussions as a form of collecting qualitative data can uncover different biases and errors which normally will not be captured in a single case data.

Tania Murray Li in the context of her CFM research in India, examines it as an assemblage of practices that contribute to holding disparate elements including things (trees, logs, non-timber forest products, tools, documents), socially situated subjects (villagers, labourers, entrepreneurs, officials, activists, aid donors, scientists), objectives (profit, pay, livelihoods, control, property, efficiency, sustainability, conservation) and an array of knowledges, discourses, institutions, laws and regulatory regimes, including some of colonial provenance. She states how over the last three decades CFM has absorbed hundreds of millions of dollars in programme funds supplied by national forest agencies, transnational aid donors and 'non-governmental' agencies as it remains a subject of contested actions and debates. Recent works have highlighted that in the age of neoliberal capital relationships of rural and even indigenous communities with forests and nature are entangled with the new markets and class cultures (Anthias and Asher 2024; Li 2007). As Li states claims to land are more about 'agrarian class formation than 'management,' still less management on a communal basis'. The CFM advocacy and programs are ill-equipped to 'address processes of this kind so they do not figure in the narrative'.

A recent study has critiqued the widely repeated claim that "80% of the world's biodiversity is found in the territories of Indigenous Peoples," a statistic often cited in policy documents and reports. This claim, according to Zhang et al. (2023), needs to be re-examined for its validity. Not only is the statistic questionable, but it may also undermine the very conservation efforts meant to support Indigenous communities, preventing a deeper understanding of how to best conserve biodiversity in these regions.



### III. Experiences and Illustrations of CFM from the Global South to Himachal Pradesh

Community-led initiatives to manage forests and their resources can be linked to various case studies from the Global South. These cases include Asia, Africa, Latin America and Oceania that comprise the Global South region. In Mexican cities, the *ejidos* have played a significant role in managing the forest through local practices such as selective logging, monitoring forest systems, traditional agro-forestry techniques etc. (Baltodano J 2022). Similarly in Africa, the Kenya, Cameroon and Tanzania states have shown significant success in CFM through local management practices. Kenyan people have planted trees themselves together to restore the Mierma Forest, while in Cameroon CFM saw a success where local people's traditional practices contributed to its growth (Minang et al. 2019; Okata 2022). The Asia -pacific regions of Nepal, Cambodia, Philippines and Vietnam have also been extensively researched mainly for CFM (Ghimire and Lamichhane 2020; Ibarra Gené, Scheyvens, and López-Casero n.d.). In Nepal, the devolution of power and handing over the governance to locals through various policies led to the emergence of Community Forest User Groups is said to be a turning point in the achievement of community forestry. In the case of the Philippines, programmes and laws like the Integrated Social Forestry Programme and Indigenous People's Rights Act have become a summit for the successful integration of CFM with local practices. In Asia, forest-management regimes in the Himalayan temperate forest biome span across China, Myanmar, India, Bhutan and Nepal. Studies have found Nepal and Bhutan as having successful regimes of forest management whereas, India and China struggle to keep the deforestation numbers less and Myanmar fares the worst in tackling deforestation (Brandt et al. 2017).

In India formal efforts began through forest department programs since the 1988 Forest Policy. Research points out that with the beginning of benefit flow from forests, the communities created a far greater stake in the forests and following this the visibility of CFM systems and growing demand for secure forest rights had become major concerns for the state forest departments (Sarin 1995). Forest land claims and the issue of tenurial rights along with laws like PESA and its significance gained momentum in India in the decade of the 1990s in the face of continued restrictions in accessing forests with a colonial and centralised forest regime with dispossession by development and evictions in the name of forest conservation. This ultimately led to the birth of the Forest Rights Act in 2006 to provide formal legal recognition to individual and community claims (Asher 2019; Kodaveri 2024).

Himachal Pradesh is a state with diverse communities inhabiting varied topographies and altitudes where traditional resource management practices were not separate from socio-cultural and family structures. Occupations, rituals and the way of life influenced and was influenced by climatic and ecological dynamics – both woven together to lend adaptive capacity, mobility and autonomy. Socio-cultural governance, especially in the mountainous regions was the domain of the local animistic deities and ancestral gods, who also owned farm land and forests. Sacred groves, known as *devbans* in Himachal Pradesh, considered sacred were protected by local communities since generations. Managed by *devta* committees, these forests vary in size and rules, often prohibiting certain uses and restricting access based on social or gender norms. Caste and gender based exclusion, however, remains a feature of most sacred groves in the region (Vasan and Kumar n.d.).



Many of these practices in terms of forest use and dependence were officially recorded during the forest settlements of the British period, where by the relationships of villages with their territories and land was formalised (Alam 2007). One such formal institutionalised setup came into existence in the Kangra region called Kangra Forest Co-operative Societies (KFCS) with the *Rakha* system, that is one of the case studies presented below (Rajeev Ahal 2002; Vasan 2001). British officials who attempted to understand the nature of rights in village 'wasteland', often arrived at conflicting conclusions. Village 'wastelands' were simply treated as surplus land available for cultivation leading to transfer of rights of property had taken place straight from the state to the individuals. While this supported land distribution under the land reforms process in the post colonial period and was critical for the landless peasantry, many of the traditional occupations, like weaving or masonry, which called for destigmatisation and financial support lost significance in the process of modernisation. In regions like Kinnaur, increasing population pressures (with the splitting of households from joint polyandrous units to nuclear families), socio-economic disparities within village communities, centralised forest laws and public sector interventions - promotion of horticulture for instance, have been identified as variables that have led to transformations in the common property regimes, especially pasturelands which cover more than 50% of the landscape in the valley (Asher and Mahar 2019; C. Negi 2017). One of our case studies is from Kinnaur and it looks at the systems around collective harvesting of a rare pine nut.

CFM studies from Himachal have also highlighted the role of Gram Panchayats and Mahila Mandals (Bingeman, Berkes, and Gardner 2004; Rani and Agnimitra 2021). Joint forest management programs specifically 'targeted' Mahila Mandals considering that women were the frontline community members who carried out forest work. However, the labour contributed and agency exercised by the Mahila Mandals in these various initiatives needs to be examined from a feminist lens – this is the third case study this report presents from Lahaul. The fourth case study is from Kibber village in the trans-Himalayan region of Spiti. Kibber recently filed the largest CFR claim, perhaps in the whole country – spread over an area of 90,000 hectares up until the border of Tibet. Murali and others in their study of the ecosystem services (ES) and their governance in Kibber, an agro-pastoral community have studied decision making, knowledge sharing and conflict resolution practices. Their study found that due to the close-knit character of the society, conflicts even when they arise, are resolved quickly, sometimes with the help of the *nambardar* or the oracle. Their work highlights the role played by 'institutional memory' which influences the rules, norms and strategies used by communities over time (Murali et al. 2022). Each of the case studies delves into a context and then the key elements of the governance systems along with challenges and conflicts.



WOMEN SITTING ON RHODODENDRONS THEY HARVESTED FOR SALE IN CHAMBA



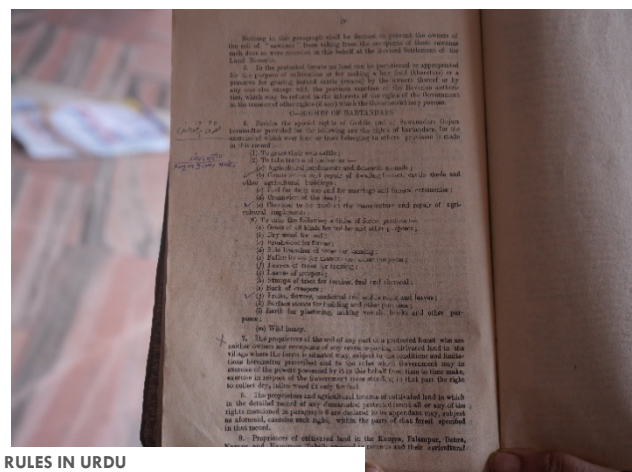
### A. Kusmal Forest Cooperative Society, Kangra

In Kangra, the conservator of forests launched the KFCS scheme on 18 July 1938, and in April 1939 a fully- fledged forest division called the Kangra Village Forest Division (based at Dharamsala) was created to implement it. The complicated forest settlements and the multiplicity of rights made it difficult to initiate proper schemes of management. The Forest Department and the registrar of the Cooperatives Department (CD) together evolved the bye-laws before the rules were finally promulgated in September 1941. A total of 72 societies were formed over a 12-year period covering 2,793 sq.km of Kangra District. The total amount of grant-in-aid to be paid to the societies was restricted to Rs 50,000 per annum. Societies that began earning a profit within five years of formation had to pay 10% of such profit towards the cost of the FD inspection staff. In 1971 Kangra District became a part of the newly-formed state of Himachal Pradesh (HP). The HP Forest Department refused to recognise the legality of the KFCS claim that they manage their own forests and insisted that they be managed as per the territorial WP by its own staff. What ensued was complete confusion over the schemes legal status, leading the different departments to withdraw their support of a PFM initiative they had hitherto accepted and sustained. Notwithstanding this, many of the societies are still functioning, and striving to regain recognition (Rajeev Ahl 2002).

95 year old Dhuj Ram served a long tenure as the President of the Kusmul Forest Cooperative Society in Bagotla Palampur. With a clear memory and sharp articulation, he quickly churns out the accurate figures and dates. 1942 was the year of registration of the Kusmul FCS falling under the Palampur Tehsil of the Kangra District. Forests spread over 318 acres of which about 191 acres was categorised 'forest land' (Ban Sarkar) and the rest 137 acres was under the category of 'Ban Muafi' – a category of forests where the muafidars or landed peasantry who paid revenue to the State also known as khewatdars had special user rights – these were mainly the upper castes. Additionally, there was 'Shamlaat land' or the village commons that were used by all residents including the landless peasants and service castes. A total of 587 acres of land was governed in order to access diverse resources for livelihood purposes which included grass, fodder, timber, resin, medicinal plants, fuelwood and wood for agricultural implements. Each of the resources were extracted seasonally with a proper system in place under the guidance of a working plan provided by the Forest Department Punjab Government (Kangra was still under the State of Punjab then). For construction timber, the DFO had the final permission to sanction the timber distribution if it was 'Ban Sarkar' and the DC for 'Ban Muafi' land, but the application still had to come to the FCS first.



DHUIJ RAM READING THE KFCS RULES IN URDU





The working plan, containing details of the nature and area of forests, geology, flora and fauna of the particular forest, was also available in Urdu for the committee of the FCS and local officials, along with a copy of the bye laws. 'There was flexibility in the way we implemented the bye-laws and little interference from the departments. The Forest department was the technical hand and the Cooperative department would be called in by us during elections. The department could not take decisions without consulting us. Our decision making process was clear – the committee of 5 to 7 members nominated from the General House of the shareholder would meet about twice a month. The entire general house would meet once in 6 months to pass the major resolutions. Members of other Scheduled Caste communities who did not own land but worked as agricultural labourers were at not shareholders and thus kept out of the cooperative membership in the initial years atleast. There were 36 shareholders initially in a village of 40 to 50 families. This number went up to 100. Elections were held once in 18 months then. Now the tenure is of 5 years.'

The structural and process clarity enabled the village to not just harvest resources for their sustenance and use, but also carry out auctions of resin, grass and timber. The highest collections were in the 1960s where the balance of the FCS went upto 4.5 lakhs. The entire sum from the Ban Muafi land auctions came to cooperative while from the 'Ban Sarkar' the FCS was to keep 25% of the fund. The funds were used for dividends to shareholders once every four years but the main advantage was that we had allocated financial resources for 'Forest Protection and Development' referred to as 'Van Tarrakki' and also for education and other welfare services apart from salaries. The key 'karmcharis' appointed by the committee were the secretary (to keep the documentary work); the guard or the *Rakha* and a 'forest officer' – who would supervise the working of the *Rakha*. The *Rakha* would typically be from a Scheduled Caste or landless family – someone who was needy of the money and was paid by cash. The *Rakha* is still appointed but is now paid in kind – 2 to 3 kgs of grain per family. The membership was entirely male until 1975 after which there was a provision for women to join the general house and one woman was also brought on to the committee as member.

After 1976, there was a shift in the powers through and the cooperatives were handed over to the forest department. After 1996, nearly all powers were taken over by the FD. 'When we had charge of the forest the department could not extract anything nor plant a tree without our involvement - that changed completely', said Dhuj ram. Society auctions were stopped. In 1996 we caught the forest department sanctioning timber without our resolution and we filed a case in the local court. 'Ganv ke logon ne lakdi zabt kar li. We told them that this person was given timber last year and he can only be allowed more trees after four years'. We filed a case against the DFO and won it too. After this the department also started exercising more restrictions with us. Now the main source from the forest is grass and fodder. 'Haq haqooq hain par aamdani khatam'.

What was the biggest change? Forest fire protection was better under the FCS, Dhuj Ram replied promptly. 'Now, fire has become a menace and no one wants to go to the forest to douse fires. 'Pehle to jimdaar khud jaate they chhek dene - fire lines were made by the peasantry. Apart from this we had a seasonal fire watcher – this was separate from the *Rakha*, who only ensured control of fire. Now the forest department has hardly any officials to control fires'. The golden period of the Kusmul FCS lasted about three decades before the withdrawal of political will and policy support led to a



downfall. 'We were never even informed of the reasons by the forest department or any state officials about why they did this – we have challenged this also in the High Court - as they took over the Van Muafi land, which belongs to us'.

Dhuj Ram is apprehensive about the future. 'With a shift in agricultural dependence and changing livestock patterns after the year 2000 we saw more alienation from the forest. The PDS system is responsible for the shift and partly the economic model also changed apart from the cultural changes - food and language being the main', according to Dhuj Ram. 'The type of forest has also changed now and the chir pine have taken over the oak area. 'Harad-baheda-amla ke pedh kam ho gaye hain'.

Rajeev Ahal (2002) in his study of the Kangra Forest Cooperative Societies (KFCS) traces the evolution of community forest management in the district of Kangra. They provide a detailed analysis of the KFCS and how the role played by the various government agencies - FD and the CD along with the state government successfully created a CFM regime in the 1930s. It gives an outlook in a CFM regime created by a colonial government and the nitty-gritties of its legal framework wherein all stakeholders - state government, FD, CD and the members of the KFCS (khewatdars and lambardar) influenced the functioning of the Society. He critically assess the viability of the KFCS in a society where during the pre-colonial period property rights were hereditary and customary 'rights of use' were applicable to the nearby forests and pasturage.

In a socio-economic reality where the nambardars and khewatdars controlled the rights in the forest, they also look at individual examples of society and how the socio-economic inequality has led to conflicts and mis-management of the society's funds whereas, the primary goal of the society - to address deforestation and soil erosion, in some cases, were not successfully addressed. The research work successfully locates the locus of the problem which is the devolution of rights occurring with sustained control by formal power structures (The state govt., FD, CD and upper caste members of the society). The role of the FD is especially highlighted when the working plan (WP) had to be prepared by the gazetted officer of the FD after consultation with the KFCS members. The financial systems of the KFCS were also interrupted by the FD when societies that began earning a profit within five years of formation had to pay 10% of its profit to the FD for its inspection services. This meant the KFCs had to pay a fee for its technical services from the FD.



## B. Collective Chilgoza Harvesting in Jangi, Kinnaur

East of Kangra falling in the greater Himalayan region is Kinnaur with variations in altitude, aspect and climatic zones (wet, dry and arid), contributing to the diverse natural vegetation ranging from sub-tropical pine forests to moist and dry temperate forests, from alpine Birch forests to alpine meadows, from cold desert vegetation in the arid zone to grasslands and scrublands. The local tribal inhabitants, the Kinnauras, on these diverse though limited land and forest resources for their day to day lives and livelihood needs is another characteristic feature of the region. Land under cultivation constitutes a mere 1.35% of the total geographical area which indicates the scarce nature of its accessibility for human use, for the present and future. This also means that dependence on common lands (classified forest lands) is critical for local livelihoods and fulfillment of bonafide needs. Forests also hold socio-cultural and religious significance for the indigenous community of the region. In terms of legal classification 80% of the total geographical is under the jurisdiction of the Forest Department. While the ownership of this land is with the State, there are indigenous laws and state policy which grant rights and concessions of forest usage to local communities (Glover H, 1921). Further, these among other rights are enshrined in the Schedule V of the Indian constitution, giving them a special legal status (Asher and Bhandari 2021).

Amongst the rare and now endangered species found in the upper belt of Kinnaur is *Pinus Gerardiana* also known as *Chilgoza Pine* or in the local dialect *neoza* or *ree*. This evergreen pine is indigenous to the western Himalayan region providing edible nuts. The nuts have a high economic value selling at anything between 1500 to 2000 Rs per kilogram in the market. The nutrient oil-rich pine nuts provide a source of nourishment, especially during long winter months. Traded earlier for other goods today its use in international cuisine also has led to a rising market thus making a supplementary income source for Kinnaur which is today an apple based economy (Rahimzadeh 2020). Traditionally, for the Kinnaura people these nuts have held high socio-cultural value, strung on like beads to make garlands offered to local deities, relatives during marriage, festivities and celebrations (C. Negi 2017). Gifts given in the form of food products or medicinal plants are called *Tenfa* embodying 'love and sentiments associated caregiving' (P. Negi 2023). Chilgoza pines are becoming rare, and the gravest threats to the already sparsely found, are the changes in land use occurring due to developmental projects especially hydropower dams. Additionally, climatic factors, decreasing snowfall and soil moisture and incidents of fire have impacted the health of chilgoza pines with lesser fruiting over the years. The process of harvesting Chilgoza Pines has also undergone a shift with the dominance of the market economy. A communal harvesting method has over the years been replaced by contracting out the Chilgoza Pine forests in most parts of the valley. Auctioning of the forests to contractors, most of whom are local Kinnauras, is followed by extraction by Nepali labourers who work under the contractors (Rahimzadeh 2020).

The Jangram region comprising 7 panchayats of Moorang tehsil has the largest patches of Chilgoza forests. Here some villages still follow the customary practice of collective harvesting spread over a period of 3 to 7 days depending on the fruiting. The process of cone fruiting and formation is 18 months long. The cones are plucked in September every year. In Jangi village, which has the largest Chilgoza forest in the Moorang tehsil, the local deity or *Shu* called Gyang Khayung dombar ji, approves of the date to 'open' the forest for harvesting of the cones. 'We seek blessings not just for a



good harvest but also protection from any mishaps considering that we have to climb the tall trees to get to the cones' informed Dolma Negi. The *pooja* is referred to as *Ree tai khorsa* (accounts for chilgoza) where a member male or female from each household in the village has to be present. Not just absentees but also late comers to the event are fined. The village has divided themselves into four hamlets as per the settlement pattern and each *tol* with about 20 to 25 families has a representative he keeps annuals accounts for all socio-cultural events and rituals. It is only after the *puja* that the people, one from each and every family, caste and gender no bar, moves to the forest to start the collection. Each *tol* forms further sub groups and begin the collection using a *daraant* or hoe to chop the cones off the branches. Women do not climb the trees. Today it is mostly the men and also Nepali domestic workers associated with a family who do the climbing. All the harvest is collected in one place at the end of the day and divided equally per family. As the groups set out for the harvesting in the forest, a small group stays behind, one looking at the *hisaab kitaab* of the year (accounts) and the other to set up a fire and make tea. At lunch time people pull out their tiffins that they have brought from home and sit in their small groups to eat. This is nothing short of a picnic, as black tea is sipped with jaggery amidst generic banter and serious discussion. A woman pulls out a needle and start sewing a patch on her kurta. '*Ghar mein itna kaam rehta hain time nahin milta, yehin jangal mein time milta hai*'!



CHILGOZA HARVESTING IN PROGRESS



THE HARVEST OF THE DAY

Before the division takes place, a meeting is held to take an assessment of the quality and volume of cones in the forest. Chits were made dividing randomly the forest into four parts and each *tol* picks up and chit. It would then be the responsibility of the sub groups to carry out the harvesting on the rest of the days. The harvest would be divided subgroup wise then on. After keeping a small quantity for annual household use, the rest is sold off to contractors. The money collected is deposited in the *kosh* of the *tol* or sometimes divided. The fund can be used for common activities or can be given as a loan – and so in a way the *tol* also functions like a self-help group. Prem Chand, a member of a *dalit* family in the village informs us about the reducing harvest. 'Earlier the harvest was nearly 1.5 to 2 quintals per family and now this has gone down to 20 maybe 25 kgs'. Climate change, especially the reducing snow fall has been a reason. Further many villages have lost their Chilgoza forests to transmission lines and other hydropower assemblages. There are 10 projects for which 415 hectares of forest land from



the Chilgoza forest belt has, either been diverted or will be diverted, in the future.<sup>11</sup> There are currently 4 TLs passing through the Chilgoza forest belt. Six villages in Tinala Forest revealed that they had collectively lost 80% of their Chilgoza trees due to construction activities and debris dumping.



MEETING TO PLAN THE HARVESTING



CHILGOZA FOREST IN JANGI THAT CAUGHT FIRE IN 2022

Given these pressures and in the absence of opportunity for regeneration, through both natural and artificial means, this species stands under severe threat of extinction. (Malik et al., 2016). Natural regeneration of Chilgoza is difficult and even the Forest Department attempts at Chilgoza Pine plantations have met with failure and poor sapling survival rates. Prem Chand talks about the birds Ree-tod which is a large-spotted nutcracker, a specialized feeder of the pine seeds responsible for its dispersal. ‘Ye neoza ke daane chhupa ke rakhte hain’, he adds. ‘Studies pertaining to the Western temperate belts have established that these nutcrackers have excellent spatial memory. They harvest tens of thousands of pine seeds and bury them in small caches for later retrieval during winter, spring and parts of the following summer. Their caches function as seed dispersal, as seeds that are not retrieved germinate in favourable years and congenial microsites’(Sarkar 2020). Forest fires are another threat which the Jangi forest faced in the year 2022. The fire raged on for nearly a week affected about 2000 bighas of coniferous forests in Jangi and neighbouring Akpa. The entire village was on fire control duty and every household had to send in a member else they would be fined. They set up long water pipes to extinguish the fire, made fire lines and also used sand and mud. ‘The forest department could not do much except send us the pipes. It was the village and actually also people from the neighbouring villages who came to control the fire. Finally we brought in the devta on the 10th day and a puja was performed to mark a boundary – ‘humne devta ko bola ki isse aage aag nahin jaani chahiye’.



REE-TOD, THE LARGE NUTCRACKER SOURCE, CURRENT CONSERVATION, [HTTPS://WWW.CURRENTCONSERVATION.ORG/FAITH-IN-A-BIRD/](https://www.currentconservation.org/faith-in-a-bird/)



### C. Mahila Mandals of Lahaul Valley

Mahila Mandals were created across India by the government as a village level entity in the era of the 1980s, when 'gender empowerment' was one of the pillars of the development agenda of bilateral international funding agencies and national policies. Across Lahaul's 28 Panchayats, there are more than 100 Mahila Mandals or women's collectives at the village level. Most Mahila Mandals have their own space for meetings. These *bhavans* where meetings are held were functional with a bukhari/tandoor for heating and a functional kitchen equipped with utensils. Through these mandals, women continue to engage in social production roles that may be apparently different from those performed historically but have bearing on the local economy and polity both. There are caste based 'Mahila Mandals' which also function as Self Help Groups (SHGs). With the rise in tourism, Mahila Mandals have been organising 'safai abhiyan' (cleanliness campaigns). In instances where tourists are stranded, they participate in rescue operations, often serving meals and tea. In the Lahaul valley, the role of Mahila Mandals includes governance of the forests as well. In a recently published study carried out by Himdhara Collective it was found that Mahila Mandals had a clear system of self-imposed regulations around the access and use of forests. This included full closure of the forest for lopping of trees for fuelwood through the year except for a collectively decided period in the month of October when the forests are declared to be open by the mahila mandal. The same rule also applies for collection of leaf litter and shukpa. Since sharing of boundaries and forest resources existed in many parts of the valley, 'restraint had to be exercised' first by the villagers themselves, before expecting 'outsiders' to stop, as we were informed through discussions with different Mahila Mandals in Lahaul.



WOMEN GATHERED OUTSIDE A MONASTRY IN LAHAUL



JUNIPER FOREST IN QWARING VILLAGE

The motivation behind the regulation of felling juniper in the Tod Valley, were the large-scale avalanches which hit the region and claim many lives back in 1979. 'Puri Lahaul Ghaati mein hahakar mach gaya tha,[people across Lahaul were in a state of shock and crisis]' the elders of Billing narrated. Mahila Mandals took the initiative ahead in the 1990s through further regulations on collection of leaf litter and needles for incense. Following Stingri and Kawaring of Yurnath panchayat lies Billing village, just downstream of Keylong on the right bank of the Bhaga. This area flanked by steep mountains is mostly pasture lands covered with junipers. These forest patches are also considered to play an important role in arresting the flow and the impact of avalanches.

The three villages including Keylong share their forest boundaries. Livestock from Stingri used to graze in Billing's forests and the people of Billing used to source their timber from Stingri. Women in Kwaring and Stingri as well as the elders in Billing spoke about the over use of Juniper as a threat which emerged decades ago. In Stingri women spoke about the conflict with Billing over closing the forests. They had to hold protests and even guard their forests at the time. Discussions in Billing revealed that people had to give up their customary rights in Stingri forests, even though the demand for wood emerging from the construction of the district capital was the major cause of deforestation. Now, systems are in place for lopping the branches and bringing only two loads of juniper annually per family for the local New Year festival and religious purposes in the village. 'These forests cannot be planted, they can only regenerate through protection. Now the forest has regenerated and is thicker. With a rise in temperatures, its growth seems to have improved a bit,' speculated one elder.

For Mooling, a tiny village of 30 families, the forest has also been a source of leaf litter, medicinal plants, and the bark of the bhojpatra (jhaadu), and blue pine cones. Here too, an active women's initiative had regulated forest use for over three decades. 'Ek TD sanction hoti thi to uske saath teen ya chaar aur pedh kat ke chori chhupe le jaate they' (While only one TD was sanctioned people used to steal off three or four more trees'). In the mid-1990s, they were told that the timber distribution was closed by the government and the panchayat decided that this decision was appropriate. 'This was good for us since the forest was beginning to degrade. It was after this, that the Mahila Mandal felt that a restriction on fuelwood lopping was necessary to allow regeneration. This was bound to be difficult considering the number of villages that relied on the Mooling forests. How did the Mahila Mandal then achieve this? 'First we had to stop our own selves before instructing others to do the same', said a Mahila Mandal member. 'Following this, the neighbouring villages too closed down their forests.' Thefts, if any, are reported to the Forest Department. When probed further on the role of the forest officials in this, one member said, 'Chowkidari to hum kar rahe hain, lekin salary unhi (Forest Department) ko milti hai...unhe to aaram hai' (We are the ones guarding the forests, and they [the Forest Department] draws the salaries), said a Mahila Mandal member.

Fuelwood collection is regulated through a system whereby the forest is opened one time a year around the end of October— post farming season—where members from all households can enter the forest. Preference is for picking up dried and fallen fuelwood. The loads are then divided amongst all the families in order to ensure that the distribution is equal. Chits are placed on each load for random distribution. But how does that meet the winter heating requirements? 'Since now we have a deficit of fuel we buy from the depot as the willow forests are also drying up.' Soodi or the pine needles are essential to be used as animal bedding during winters. It is collected once a year in the month of October, just before the onset of winters when the forest is open for 20-25 days. 'The more the leaf litter the better the quality of manure.' Around March-April men and women begin removing the compost that has accumulated in the animal shelters through winters. 'Some families do not have enough members and others have four or five adults who come to work and lift off a larger share. So we decided to make a rule of a member per family and collecting together rather than individually.'



During this time, villagers also collect juniper or shukpa which holds a sacred value and is used for purification purposes during the rituals. Every household is allowed to collect one kilta, or a bamboo basket that can carry about 15 to 25 kgs, of shukpa for use throughout the year. Kaala jeera (black cumin), guchhi (morels), kadu patta are found in the forest, but are collected only for personal use, setting a good example of 'sustainable harvesting practice. When asked if they see visible changes in the forest, the women promptly spoke about the increase in population of the Ibex. This forest has been home to musk deer, snow leopards, langurs, ibex, and bears. 'Abh itna ghana jangal ho gaya hai akele jane mein dar lagta hai. Ibex to niche tak aa jate hain', remarked one Mahila Mandal member. However, despite putting in place the systems, it has not been smooth sailing for the women.

#### D. Pasture Management in Kibber, Spiti



KIBBER VILLAGE OF SPITI VALLEY SURROUNDED BY PASTURES

Kibber village falls in the eastern end of the trans Himalayan district of Lahaul-Spiti in a region locally referred to as Shilla Yargat, with its own distinct cultural and topographical identity. It is pastures and scrubs that are dominantly found in this landscape known for its agro-pastoral value in local society. Kibber has about 80 Buddhist families inhabiting it and it falls in the Chicham Panchayat along with Kye village. Each and every household here is a livestock keeper- holding a pair of Yaks, a horse or two, mules and a few sheep and goats. Earlier livestock herd size was dominated by small bodied animals and now its mostly the large ones. Domestic animals were an important contributor to cash income – horses were traded in Changthang (Ladakh) in exchange for other household items. Yaks were and continue to be, despite the entry of power tillers, the ploughers of the fields where once only barley was the mainstay with black pea. Their wool was used to make blankets and mats for the long snowy winters. Horses and mules serve as draught animals – even used to bring dung and carry drinking water in the winters. 68 year old Changez ji quipped of a saying in Spiti which goes, '*Kibber ke khote mein janam nahin Lena, Dankhar ki ladki mein janam nahin Lena*', indicating the arduous labour expected of the two – the comparison also reflecting on the amount of labour women have to put in.

In a landscape nearly bereft of forests and woody species, it was the dried dung collected from the wide that was the main source of fuel in addition to the thama stumps – both gathered from the pastures referred to as jangal implying the 'wild' or 'wilderness' in general conversation. The



DOLMA BERTITH SPEAKS ABOUT LIVESTOCK REARING AND HERDING

community's relationship with the pasture lands and commons (which include the glaciers and springs – a source of water for the village) was and to some extent still is governed by a set of rules and regulations evolved by the landed families in the village. The key unit of governance was the family which follows the primogeniture system whereby land was the property of the oldest son, or the *khan-chen*. The younger male sibling was expected to live under the aegis of the older one and would be a cultivator but not owner of land. The youngest would be the *thuthulma* with the lowest status. The younger siblings could opt for giving up all worldly duties to adopt monk-hood/nun-hood and become lamas. This birth based division of land and duties was a socio-ecological system or a mechanism to ensure survival in a landscape where agricultural land was scarce and fragmentation needed to be prevented. The girls also had these titles but the eldest girl child would inherit jewelry – gold and silver – instead of land.

The village collective traditionally was the '*thal*' – and included as key decision makers and members the *khan-chen*. Kibber had the largest number of *khan-chen* in Spiti at one time – about 21. This has gone up to over 34 now as land was distributed to other brothers post-independence with land reforms. The *khan-chen* in rotation take on the role of the *lumberdar* (or *numberdar*) or *gaypo* in the local dialect. The *gaypo* leads the village in all socio-economic matters in coordination with a few helpers called the *gele*. The spiritual matters of the local deities (separate from the monastery) are handled by the *limis* again of *khan-chen* families. Every decision from when to sow or harvest, opening of pastures, management of *kuhls* (irrigation channels) to a detailed system of fines and fees is handled under the leadership of the *gaypo* instrumentalising the labour and participation of every household. Present day Scheduled Castes included families who made agricultural implements – wooden and metal works or were temple musicians were also given land for cultivation from the *khan-chen* as tenants or were offered diety's land for cultivation. There are a few Scheduled Castes who are also *khan-chen* as the same family division exists amongst them – in cases where there is land with an SC family. But the Scheduled Caste would not be allowed to take on the role of the *gaypo*, reserved for landed upper caste men.

A well organised system of livestock management involves taking some animals to the pasture every day, while others remain in the high altitude pastures through the summer. Earlier a *Lugzi* or head herder was the main in-charge who would be a *Khin-chen* or someone from the Scheduled Castes. In return for their labour they were fed both meals by the families and given grain/cereal (barley) per animal. The *lugzi* would be accompanied by *rayok* who played the role of assistants and they would be members from each family rotating on a daily basis. The *Lugzi* was powerful and always a man and the *rayok* could be either male and female and would have to follow the *lugzi*'s instruction given that they were aware of the territories and the pasture quality and quantity of the grasses. 'These



days there is no one willing to be *Lugzi*” informed Dolma Betith. This system was also followed for taking the livestock to the fields when the harvesting and threshing was complete. Each house has a pen outside and also inside the house. While the Yaks are free ranging for most part of the year - unless there is a very heavy snowfall, then all animals are put in the pen. A winter grass stock is also maintained for stall feeding during bad weather. For this there used to be a grass cutting rule of *khan-chen* going to cut grass for 4 days, *khin-chen* for 2 and *thuthulma* for 1 day. This also seemed fair given that the livestock herds maintained were higher for the landed families.

In the late 80s, and prominently 90s, offseason commercial green pea cultivation became a central part of a burgeoning cash economy. This brought rapid shifts in the dependence on the pastures with a reducing herd size. Labour was diverted more towards the farm, herders were hard to get, reliance on plant biomass also reduced as the market brought urea and pesticides. Many items including fuelwood were purchased. ‘Now people don’t prefer to slaughter their own animals and buy meat from Kaza market’, said Dimdul ji. Changez ji, a *khan-chen*, shares how the post of the headman (*gaypo*) is losing its sheen in the modern world, equivalent to that of the Pradhan in the Panchayat. Both these structures coexist with some degree of understanding, where the Panchayat handles the developmental activities and finances that come for it through the State and the *gaypo* handles the social and occupational matters of the village. Tensions do exist between these two systems especially as people became aware of their rights. ‘*Aaj kal naukri aa gaya to Khan-chen wale fail hain*’.

The other significant development that led to a shift in the lifestyles and brought in a new avenue of cash income was the declaration of the Kibber Wildlife Sanctuary for the conservation of faunal wealth of Snow Leopards and wild ungulates – Blue Sheep (*Navo*). ‘*Shikar par pabandi laga aur jangli janwar navo, aaj kal kutta bhi badha hai*’. The Nature Conservation Foundation (NCF), a conservation NGO, worked towards the creation of a reserve pasture land exclusively for blue sheep which apparently led to a rise in their numbers and also the sightings of the Snow leopard (Nature Conservation Foundation, Mysore, Snow Leopard Trust-India With support of the Wildlife Wing 2011; Nature Conservation Foundation, Trust-India, and Wildlife Wing 2011). This became an opportunity for winter tourism over recent years, in which nearly every household is involved barring about 8 to 10. There are porters, guides, spotters and scanners and home stays. ‘NCF has helped with the formation of a committee and we are in constant dialogue with them. There are 8 to 10 people employed with them. Researchers and photographers visit through the winters when earlier we had nothing to do (*velle they*). We have restricted trekking companies from outside as they brought large groups of tourists and even dirtied our water sources. The village has to be paid 1000/- per tourist by the home stay operators and so does the forest department (have to be paid the same amount).’ People expressed their disappointment with the Wildlife Sanctuary, unaware of the notification nor consulted about boundaries. Now there is apprehension about future restrictions even as there is participation given the livelihood benefit. Kibber happens to be a village that has claimed the largest area under Community Forest Rights as per the FRA 2006, perhaps in the whole country. When pasture dependence has changed why do they see the rangeland as important? ‘Grass, grazing, medicinal plants, mud, stones, fuelwood, water sources everything is here. What is the future of peas or even tourism – we don’t know. We need to have this option of going back to livestock rearing for our future security’. FRA is seen as a tool for asserting ownership and securing access to the forest for the future – and not just for community but also individual rights so that people can continue to pursue agriculture.

#### IV. DISCUSSION AND CONCLUSION

Community-led forest management and restoration have gained significant attention in recent climate change adaptation and resilience-building strategies, especially in the face of the global environmental crisis. While Community Forest Management (CFM) policies in countries like India began to emerge more prominently in the late 1980s, the renewed focus on nature-based solutions is now shifting attention to forest areas in the Global South, with particular emphasis on the role of Indigenous populations in ecosystem governance. These conservation ideas have operated within the larger context of colonial structures and economic growth-driven development policies, which have been primarily responsible for forest degradation and rapid shifts in the traditional lifestyles and livelihoods of Indigenous peoples dependent on commons in the first place.

The success of CFM has been measured in various ways, typically focusing on social, ecological, and economic outcomes. However, in the case studies we conducted for these reports, our focus was on mapping the existing institutional mechanisms, understanding the motivations behind them, and examining the contexts in which these systems evolved. ‘Context’ itself is multi-scalar, extending over time and space. For instance, the colonial forest policy framework continues to exert influence through legislation such as the Indian Forest Act, 1927, the Forest Conservation Act, 1980, and the Wildlife Protection Act, 1972, as well as policies like Joint Forest Management (JFM), introduced in the 1990s. Notably, JFM initiatives often relied heavily on external control and funding. The lack of local ownership, coupled with financial dependency, meant that these initiatives were vulnerable to collapse once resources were depleted.

By contrast, long-standing local institutions such as the Kangra Cooperative Forest Societies (FCS), Mahila Mandals in Lahaul, and self-governance systems in places like Kibber and those managing Chilgoza pine collection in Kinnaur have demonstrated greater resilience and continuity. The persistence of these local organizations and resource governance practices largely stems from their need-based structure and clear resource ownership rights. For example, in the case of the Kangra Cooperative Forest Society, where legal ownership of forests has been contested, conflicts with the Forest Department have weakened the institution's stability. In response to the loss of control, ownership disputes, or conflicts—whether with the state or between villages—communities, especially the landed peasantry and livestock-bearing households in Himachal Pradesh, have consistently negotiated and adapted to sustain their governance systems. This adaptation is particularly evident in a challenging legal environment that has recognized customary boundaries and provided certain concessions and rights to continue traditional occupations. The most rapid changes have been driven by the neoliberal political economy, which has eroded the resource base for livelihoods and shifted dependency towards market-based systems. This overarching context has been evident in all four cases, where issues of resource protection, ownership, access, distribution, and alienation are prevalent.

Despite these shifts, as seen in Kibber, we observe examples of adaptation—such as the development of winter tourism—as a means of securing livelihood opportunities while maintaining a connection to the landscape. In Kinnaur, the collective harvesting of chilgoza pine continues, and in Lahaul, regulatory measures for the protection of Juniper forests are in place, recognizing their cultural and ecological value. In these higher-altitude areas, responding to climatic disruptions and environmental risks with contingency mechanisms has been part of the long-standing socio-ecological processes. In the lower



region of Kangra, the FCS, a colonial institution dependent on state law (such as the Indian Forest Act and the Cooperative Act), has continued to manage grazing lands (*Rakha*), even in the face of financial constraints. The withdrawal of state support in Kangra has negatively impacted the 'successful' functioning of the FCS. In contrast, in tribal areas, there is a stronger sense of "rights" over the commons. The socio-political framework in these areas, particularly the Indigenous character of local communities, has heightened the relevance and dependence on commons. Awareness of tribal constitutional rights has allowed communities in Lahaul-Spiti and Kinnaur to assert their claims over forest resources, using legal tools like the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 to link individual and community rights.

At the micro-level, collective action is governed by a strong sense of kinship, spirituality, and cultural values. This is evident in the governance of resources like the chilgoza pine forests in Kinnaur or juniper forests in Lahaul, where the involvement of spiritual entities like the devtas (local deities) influences management practices. These cultural practices extend beyond formal "rules" of commons management, shaping every aspect of life, from birth to death, and influencing relationships between humans and the more-than-human world. Conflict is resolved and cooperation is fostered within this kinship framework. Gender and caste dynamics and exclusions are common threads across the four case studies. However, Lahaul stands out as a bit of an exception, with significant participation from Mahila Mandals (women's groups). The dominance of the landed peasantry in decision-making has not been constant over time and has been impacted by shifting norms and state policies. For instance, *nautor*, the land redistribution legislation led to changes in the primogeniture dynamics in Spiti. In Kinnaur, the distribution and harvesting of Chilgoza pine initially occurred on a family basis but later shifted to a hamlet-based system as polyandrous joint families gave way to nuclear families. In much of the district, the shift to auctioning harvesting rights to local contractors illustrates the market's growing influence on resource management.

None of the cases show complete abandonment of resources and institutional mechanisms around them. Even in the case of the Kusmul FCS, an ongoing legal battle with the State Forest Department to retain communal tenure and powers highlights the perceived need to protect these resources for future usufruct rights. Knowledge sharing plays an essential role in these systems, as seen in Kangra, where the local Forest Department provided micro-level working plans in the local language to the FCS. This collaborative approach underscores the importance of local knowledge in forest restoration and resource management. Preventing resource degradation and working towards forest restoration in mountain areas for ecological sustainability requires not only basic dependence but also high levels of adaptation and checks against maladaptive responses and policies. Dependence on resources is not always purely economic; in some cases, the cultural or survival value of a resource—such as the Juniper forests in Lahaul—can drive collective mobilization. The choices made by individuals, families, and collectives are also shaped by affective factors and cannot be reduced to economic interests alone.

Attempting to assess the "success" of CFM initiatives in isolation and listing out 'community best practices' is a limited, challenging and somewhat futile exercise. Trying to 'outline a set of practices that can be standardized or packaged risk neglecting the political, cultural, and historical determinants

and underlying science–society relations that were central to the emergence of these in the first place’ (Goldman, Turner, and Daly 2018).

We could examine broader meta-structures—global neoliberal political economy, colonial legal regimes governing land and property rights, and the historical evolution of socio-ecological processes—along with the powerful actors within each sphere, who play a decisive role in shaping local governance mechanisms and institutional characteristics. The diagram below provides a rough depiction of the macro-level forces at play, including the status of tenurial and property rights, resource dependence (including productivity and distribution), labor division, collective choice rules, and territorial boundary clarity. Within this broader framework, key institutional mechanisms in CFM include decision-making, monitoring and regulation, conflict resolution, information and knowledge sharing, financial management, and benefit-cost sharing, often with a robust system of fines for violations of norms. These mechanisms are not rigid, compartmentalized, or concentric, but fluid and interconnected.

A BROAD FRAMEWORK DEPICTING AN UNDERSTANDING DRIVERS OF CFM IN PRESENT DAY HIMACHAL PRADESH





### DIRECTIONS FOR FUTURE RESEARCH, CAPACITY BUILDING AND ADVOCACY

This working paper documents 4 case studies from Himachal Pradesh examining the current status of resource governance practices at the community level. More such documentation is required in order to outline and understand diverse socio-economic and cultural contexts in which such practices exist, adapt, evolve and survive.

Legal property tenures, both common and private, contribute to resource ownership as against alienation which is critical for the sustainability of socio-ecological relationships and governance practices. The case studies highlight the critical need for communities to hold legal ownership over forest resources to ensure successful, long-term community forest management.

The FRA 2006 could offer a valuable legal framework within which the government can recognize and secure the forest management rights and legal ownership over forest land for local communities. Awareness of the law amongst dependent communities and advocacy at multiple levels within the state government can take forward the implementation of this law.

Gender and caste based exclusions are an overarching issues that need to be addressed through community mobilisation and dialogues, identifying and supporting new and emerging leadership from historically marginalised sections of the community.

### Abbreviations

CFM – Community Forest Management

CBFM – Community based Forest Management

ES – Ecosystems Services

IFA – Indian Forest Act

IMF – International Monetary Fund

JFM – Joint Forest Management

FRA – The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act

KFCS – Kangra Forest Cooperative Societies

NCF – Nature Conservation Foundation

UN - United Nations

VP – Van Panchayat

## Acknowledgements

Research and Writing: Manshi Asher

Literature Review: Kaveri Choudhary and Aanchal Seth

## References

1. Agrawal, A., & Chhatre, A. (2006). Explaining success on the commons: Community forest governance in the Indian Himalaya. *World Development*, 34(1), 149–166. <https://doi.org/10.1016/j.worlddev.2005.07.013>
2. Agrawal, A., & Ostrom, E. (2001). Collective action, property rights, and decentralization in resource use in India and Nepal. *Politics & Society*, 29(4), 485-514.
3. Ahal Rajeev. (2002). The Politics of Cooperative Forest Management The Kangra Experience, Himachal Pradesh. International Centre for Integrated Mountain Development (ICIMOD).
4. Alam, Aniket. 2007. Becoming India: Western Himalayas under British Rule Becoming India: Western Himalayas under British Rule.
5. Anthias, Penelope, and Kiran Asher. 2024. "Indigenous Natures and the Anthropocene: Racial Capitalism, Violent Materialities, and the Colonial Politics of Representation." *Antipode* 0(0): 1–22.
6. Asher, Manshi. 2019. "Evolution of the Forest Rights Act: A Historical Perspective." *Indian Journal of Social Work* 80(4): 405–22.
7. Asher, Manshi, and Prakash Bhandari. 2021. "Land Use Policy Mitigation or Myth ? Impacts of Hydropower Development and Compensatory Afforestation on Forest Ecosystems in the High Himalayas ★." *Land Use Policy* 100(September 2020): 105041. <https://doi.org/10.1016/j.landusepol.2020.105041>.
8. Baltodano J. 2022. "Community Forest Management (CFM)." In *Studies in International Minority and Group Rights*, , 250–327. [www.foei.org](http://www.foei.org).
9. Berkes, F., Davidson-Hunt, I., & Davidson-Hunt, K. (1998). Diversity of Common Property Resource Use and Diversity of Social Interests in the Western Indian Himalaya. In *Source: Mountain Research and Development* (Vol. 18, Issue 1).
10. Brandt, J. S., Allendorf, T., Radeloff, V., & Brooks, J. (2017). Effects of national forest-management regimes on unprotected forests of the Himalaya. *Conservation Biology*, 31(6), 1271–1282. <https://doi.org/10.1111/cobi.12927>
11. Chhatre, Ashwini. 2000. "Forest Management as If History Mattered." Biennial Conference of the International Association for the Study of Common Property.
12. Elinor Ostrom. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action* (Political Economy of Institutions and Decisions). Cambridge University Press.



13. FOEI. (2015). WHY COMMUNITY FOREST MANAGEMENT MATTERS: A Background Briefing. [www.foei.org](http://www.foei.org)
14. Ghimire, P., & Lamichhane, U. (2020). Community Based Forest Management in Nepal: Current Status, Successes and Challenges. *Grassroots Journal of Natural Resources*, 3(2), 16–29. <https://doi.org/10.33002/nr2581.6853.03022>
15. Gilmour, D. (2016). Forty years of community-based forestry A review of its extent and effectiveness. Food and Agriculture Organisation of United Nations, Rome.
16. Gupta, H. K., & Gulati, A. K. (n.d.). Conflicting Policy, Institutional and Legal Framework for Natural Resource Management in the North West Himalayas, India. 1–30.
17. Gené, E. I., Scheyvens, H., López-Casero, F.; Institute for Global Environmental Strategies. (2012). Community Forest Management and REDD+: Opportunities and challenges. In *Greening Governance in Asia-Pacific* (pp. 85–114). Institute for Global Environmental Strategies. <http://www.jstor.org/stable/resrep00782.12>
18. Ives, Jack D. 2004. "Himalayan Perceptions: Environmental Change and the Well-Being of Mountain Peoples." 2(3):17–19.
19. Menon, A., Singh, P., Shah, E., Lélé, S., Paranjape, S., & Joy, K. (2014). Community-Based Natural Resource Management in the Central Himalayas: The Work of Doodha Toli Lok Vikas Sansthan. *Community-Based Natural Resource Management: Issues and Cases from South Asia*, 196–241. <https://doi.org/10.4135/9788132101550.N6>
20. Minang, P. A., Duguma, L. A., Bernard, F., Foundjem-Tita, D., & Tchoundjeu, Z. (2019). Evolution of community forestry in Cameroon: An innovation ecosystems perspective. *Ecology and Society*, 24(1). <https://doi.org/10.5751/ES-10573-240101>
21. Murali, R., Bijoor, A., Thinley, T., Gurmet, K., Chunit, K., Tobge, R., Thuktan, T., Suryawanshi, K., Nagendra, H., & Mishra, C. (2022). Indigenous governance structures for maintaining an ecosystem service in an agro-pastoral community in the Indian Trans Himalaya. *Ecosystems and People*, 18(1), 303–314. <https://doi.org/10.1080/26395916.2022.2067241>
22. Lal, Chaman and Parasher. R.S.. (2016). Traditional knowledge systems and conservation practices in tribal society of western Himalayas: a case study of district Kinnaur of Himachal Pradesh. <https://www.researchgate.net/publication/342764329>
23. Lok Sabha. 2023. UNSTARRED QUESTION NO. 2405 TO BE ANSWERED ON 18.12.2023. Vol. 13.
24. Naidu, S. C. (2005). Heterogeneity and Common Pool Resources: Collective Management of Forests in Himachal Pradesh, India. <http://www.umass.edu/resec/workingpapers>

25. Nature Conservation Foundation, Mysore, Snow Leopard Trust-India With support of the Wildlife Wing, Himachal Pradesh Forest Department & Youth Groups in Spiti. 2011. "Management Plan for the Upper Spiti Landscape Including the Kibber Wildlife Sanctuary." : 299.
26. Nayak, P. K. (2002). COMMUNITY-BASED FOREST MANAGEMENT IN INDIA: THE ISSUE OF TENURIAL SIGNIFICANCE Victoria Falls, Zimbabwe.
27. Negi, C. (2017). Common Property Resources and Their Management: A Case Study of District Kinnaur in Himachal Pradesh Chaman Lal Solan (Nauni) Hp-173 230 India.
28. Negi, Pramiti. 2023. "Re- Nyoza- Chilgoza'- The Wonder Tree of Kinnaur That Is Also a Cultural Emblem - Voices of Rural India." Voices of Rural India.  
<https://www.voicesofruralindia.org/re-nyoza-chilgoza-the-wonder-tree-of-kinnaur-that-is-also-a-cultural-emblem/> (October 3, 2024).
29. Newton, Peter, Andrew T. Kinzer, Daniel C. Miller, Johan A. Oldekop, and Arun Agrawal. 2020. "The Number and Spatial Distribution of Forest-Proximate People Globally." *One Earth* 3(3):363–70. doi: 10.1016/j.oneear.2020.08.016.
30. Okata, J. (2022, February 24). In Kenya, a community regrew its forest — and redefined reforestation success. Mongabay.
31. Pagdee, A., Kim, Y. S., & Daugherty, P. J. (2006). What makes community forest management successful: A meta-study from community forests throughout the world. *Society and Natural Resources*, 19(1), 33–52. <https://doi.org/10.1080/08941920500323260>
32. Pathak, R., Thakur, S., Negi, V. S., Rawal, R. S., Bahukhandi, A., Durgapal, K., Barola, A., Tewari, D., & Bhatt, I. D. (2021 a). Ecological condition and management status of Community Forests in Indian western Himalaya. *Land Use Policy*, 109(April 2020), 105636.  
<https://doi.org/10.1016/j.landusepol.2021.105636>
33. Pluymers, Keith. 2021. No Wood, No Kingdom.
34. Poonam, D N, Bawa, R, Gupta, T. (2011). Agroforestry systems of Lahaul and Spiti District of Himachal Pradesh, Western Himalaya. *Indian Journal of Ecology*, 38(May), 129–131.
35. Rahimzadeh, Aghaghia. 2020. "Socio-Economic and Environmental Implications of the Decline of Chilgoza Pine Nuts of Kinnaur, Western Himalaya." *Conservation and Society* 18(4): 315–26.
36. Rani, S., & Agnimitra, N. (2021). Devbans, Caste, Gender and the State: Political Ecology of a Sacred Grove of Himachal Pradesh. <https://doi.org/10.1177/23944811211020370>, 7(1), 51–64. <https://doi.org/10.1177/23944811211020370>
37. Romanelli, João Paulo, and Raquel Stucchi Boschi. 2019. "The Legacy of Elinor Ostrom on Common Forests Research Assessed through Bibliometric Analysis." *Cerne* 25(4): 332–46.
38. Sabha, Lok. 2023. 13 UNSTARRED QUESTION NO. 2405 TO BE ANSWERED ON 18.12.2023 UNSTARRED QUESTION NO. 2405 TO BE ANSWERED ON 18.12.2023.



39. Sanyal, K., Kaur, A., & Dasgupta, S. (2021). So near yet so far: A narrative from a forest dwelling gaddi community in Chamba, Himachal Pradesh. *Ecology, Economy and Society*, 4(1), 123–128. <https://doi.org/10.37773/ees.v4i1.309>
40. Sarin, M. (1995). REGENERATING INDIA'S FORESTS: RECONCILING GENDER EQUITY WITH JOINT FOREST MANAGEMENT. *IDS Bulletin*, 26(1), 83–91. <https://doi.org/10.1111/j.1759-5436.1995.mp26001012.x>
41. Sarkar, Rinki. 2020. "Faith in a Bird | Current Conservation." *Current Conservation*. <https://www.currentconservation.org/faith-in-a-bird/> (October 5, 2024).
42. UN. 2021. The Global Forest Goals Report 2021 The Global Forest Goals Report 2021. <https://www.un.org/en/desa/global-forest-goals-report-2021>.
43. Vasan, S. (2001). Community Forestry: Historical Legacy of Himachal Pradesh. *HIMALAYA, the Journal of the Association for Nepal and Himalayan Studies*, 21(2), 8.
44. Vasan, S., & Kumar, S. (n.d.). Situating Conserving Communities in their Place: Political Economy of Kullu Devban (Vol. 4, Issue 2).
45. Wildlife Wing, HPFD. 2011. "Management Plan for the Upper Spiti Landscape Including the Kibber Wildlife Sanctuary." (September): 299.
46. Zhang, Yin et al. 2023. "Governance and Conservation Effectiveness in Protected Areas and Indigenous and Locally Managed Areas." *Annual Review of Environment and Resources* 48: 559–88.

