Community Forestry in Transition:
Sixty Years of Experience in the Indian Central Himalayas

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Summary

Many developing nations around the world have been promoting decentralization of natural resource management with the hope that by providing secure tenure to resource use, people dependent on the natural resources for livelihood will seek to conserve them. This study presents experiences in commons management from Kumaun in northern India, where formal local institutions of community forestry (*van panchayats*) were established in the 1940s. The paper provides a closer look into transitions in community forestry and other informal institutions of commons management as these are influenced by changing socio-economic contexts on the one hand, and changing state policies on the other. The study suggests that while local institutions, formal and informal, have had strong interest in conservation of natural resources and have been very successful in managing commonly held resources (particularly village forests) sustainably, and forest commons continue to be managed more effectively than private and government forests, the past two decades of socio-economic transitions taking place in this region is resulting in a rapid decline of local institutions of commons management and effectiveness of these institutions. Decentralization policies could benefit from greater attention to these socio-economic transformations and implications for local institutions and natural resource sustainability.

Keywords: Asia, India, community forestry, common property, natural resource management, decentralization

Introduction

Beginning in the 1980s, many countries around the world have been promoting decentralization of natural resource management. This incentive emerged as governments began realizing the high cost of centralized management systems. At the same time there was increasing recognition that local communities have managed natural resources often more effectively than central governments, and that communities had less incentive for sustainable natural resource use without tenure security afforded by these centralized systems. These realizations initiated a wave of decentralization, creating legal space for transfer of resources or use rights as well as management responsibilities and powers to communities, with the hope that natural resource exploitation would be curbed with greater local control.

Today, after two decades of these efforts, proponents of decentralization argue that success of the decentralization initiatives has been limited due to transfer of powers to actors that are not downwardly accountable (Agrawal & Ribot, 1999). These authors have also argued that government reluctance to give up control over management of these forests has resulted in incomplete transfer of discretionary powers to the local authorities, leading to decentralization of management responsibilities rather than critical decision-making powers (Ribot & Larson, 2005). However, little attention has been given to assess whether democratic decentralization (downwardly accountable) and transfer of discretionary powers to local institutions will lead to sustainable management of natural resources.

Meanwhile, the common property resource literature has contributed immensely to our understanding of local institutions of natural resource management and impact on collectively held resources such as community forests. Critiquing Hardin's (1968) 'tragedy of the commons' numerous authors documented successful cases of commons management (Bromley et al., 1992; Fisher, 1994; Ostrom, 1990; Berkes, 1989; McCay & Acheson, 1987). These authors noted that where there is local dependency on the resources and commitment to the region, people will take the initiative to form institutions for sustainable management of commonly held resources. Nevertheless, other scholars of common property regimes have identified numerous problems faced by local institutions particularly as they encounter markets. These authors note that market integration is changing the local socio-economic context in many rural areas resulting in reduced social cohesion and collective action, in turn creating open access situations where successful commons regimes existed in the past (Petrzelka & Bell, 2000; McCay & Jentoft, 1998). Some

authors showed that even within a defined region faced with similar market linkages as well as government policies, some local institutions are successfully able to regulate resource use and access while others may not (Baker, 1997; Richards, 1997). Given that not all local institutions are effective in managing collectively held resources, and that market linkages are creating new challenges for local institutions around the world, literature on decentralization of natural resource management needs to place greater attention on environmental outcomes of these initiatives. In addition, where market linkages are reducing dependence on local natural resources or introducing perverse economic incentives or both, the assumption of sustained local commitment towards sustainable management of natural resources will need to be revisited.

This study provides a closer look at decentralization of forest management in Kumaun, in the northern Indian state of Uttaranchal that took place in the 1940s in response to civic protest over reduced local access to forest resources. After decades of successful forest management by the local forest councils (*van panchayats*), these institutions are increasingly facing difficulties. In some villages, institutional failure has been so acute that beginning in 1992, thirty forest councils in the study area entrusted their entire community (village or *panchayat*)[1] forests to a local deity to ease the pressures of monitoring and enforcement of forest use.[2] Local fear of these ubiquitous deities and faith in divine retribution against unjust acts served as a means of enforcing rules of forest use. Further investigation revealed that the problems faced in this region were not uncommon and were being experienced in much of the oak zone of Kumaun. Along with these formal institutions, informal systems of commons management had already experienced a collapse in these villages. Authors documenting the problems of the formal forest councils have argued in line with the decentralization critiques, attributing local institutional failure in Kumaun to revisions in government policies and the centralizing tendencies of the government (Sarin et al., 2003; Ballabh et al., 2002; Singh & Ballabh, 1991; Somanathan, 1991). However, these articles do not place local institutional challenges within the changing socio-economic context. This paper attempts to understand the weakening formal and informal systems of commons management in rural Kumaun in light of both the rural socio-economic transitions as well as revisions in state policies. Since forest councils and other local institutions had successfully managed commons resources until the past two decades, the emphasis of this paper is on *changes* that are having a direct impact on institutional arrangements of commons regimes in Kumaun.

Decentralization of forests in Kumaun

British arrival in Kumaun in 1815 is a useful point in history for understanding decentralization of forests in the region, since the colonial authorities initiated numerous changes in forest policies and land use soon upon their arrival (Guha, 2000). In 1823, the colonial authorities initiated the land revenue settlement, known as the eighty-year boundaries (locally referred to as the *san assi bandobast*, corresponding to the year 1880 on the Indian calendar) that involved the demarcation of all village and forest boundaries, subsuming under government control all uncultivated lands (Singh & Ballabh, 1991). By 1842 wood began to be exported from the hills (Mehta, 1993).

In 1894, increasing pressure of wood needed for railways resulted in new restrictions on local activities such as grazing, lopping, and collection of forest resources. Between 1910 and 1917, the colonial authorities designated large area of the commons as reserve forests, further limiting local rights to resources (Sarin et al., 2003). In addition, British authorities built on the pre-colonial designation of certain trees as 'protected,' trees that were limited in numbers and were of special value to the ruling authorities. These species of trees, irrespective of ownership or cultivating rights, and despite standing on privately owned land, were claimed by the pre-colonial authorities, and later by the British and the Forest Department officials (Singh, 1998).

Additional restrictions on customary use of forests and increasing marginalization and hardships posed by these legislations led to numerous mass protests by the rural and urban Kumaunis alike, often taking the form of incendiary fires in reserved forests. In 1921, the government was forced to appoint the Forest Grievances Committee to address local demands (Pant, 1922). It was upon recommendations of this Committee that the three legal sub-divisions of the forests in the Uttar Pradesh hill regions (including Kumaun) were declared resulting in the creation of the village forests, ensuring local rights to forests and pasture lands, as well as a share in the management of these forests (Rawat, 1998). Restrictions on lopping were removed from most forests, and cattle grazing was permitted even in the reserved forests. In 1927 an Indian Forest Act was drafted, which resulted in the current designation of forests into the village (panchayat), the civil, the reserve, and the private forests.

The village forests that emerged in the Forest Act of 1927 were carved out of primarily the mixed oak forests that were valuable for subsistence needs and had low commercial value. Management of these forests was placed under village jurisdiction and under the control of the

government Revenue Department. Village-level activities were regulated and monitored by forest councils that were formed under the *Van Panchayat Niyamavali* (Forest Council Rules) in 1931. According to these rules, members of the forest councils (*panchas*) were, and continue to be, elected by the user groups every five years under the supervision of the forest panchayat inspectors or the government revenue officers (*patvaris*). The forest councils then select the head of their respective forest councils, the *sarpanch* (Singh & Ballabh, 1991). The forest councils are responsible for the day-to-day management of the village forests, and have substantial powers of exclusion, monitoring, sanctioning, and enforcement. The forest councils are, nevertheless, bound by the overarching policies put forth by the government that places restrictions regarding resource use and management. Forest councils also work under the dual supervision of the Forest and the Revenue Departments. While the Revenue Department oversees the administrative functioning of the forest councils, the Forest Department is expected to provide the technical expertise.

Today, despite substantial funding for the reserve and civil forests, community forests in Kumaun represent one of the healthiest forest ecosystems among forests under the various types of tenure.[3] Most community forests in the mid hills of Kumaun remain highly diverse marked by a variety of broad leaf oak species, dense understories and closed canopies, although sections of the community forests lying closer to the villages typically have a more open over- and understory due to pressures of grazing and lopping. On the lower elevations (1800 meters and below) and on the south facing ridges the dry pine (*Pinus roxburghii*) forests are common. The pine is also a dominant species in most government reserve forests even at relatively higher elevations, as the British authorities converted mixed oak forests to pine to allow for valuable timber and resin extraction (Rangan, 1997). The pine forests are generally open, devoid of understory with medium to high tree density. Civil forests, technically under the dual supervision of the Forest Department and the villages, remain heavily grazed and lopped, with very sparse distribution of trees. The Forest Department guards typically patrol these areas, however, supervision remains lax, while villagers lack legal power to manage these lands or to claim proprietary rights of exclusion. A few large plots of private forests exist in Kumaun. While some of these forests form parts of army cantonments, others were given as land grants to retired army officers by the Indian government (Pande, 1993). In the study area (described

below), the private forests were also predominantly pine and in extremely degraded conditions, many of them supporting large tea estates.

Study site and research methods

Fieldwork for this study was conducted in 1998 and 1999 in the mid-hills of Kumaun in the Pithoragarh and Bageshwar districts, approximately forty kilometers west of the Nepal border and eight-five kilometers south of Tibet. This research was supplemented by site visit in 2004. The villages studied are located between 1500-2000 meters altitudes of the Lesser Himalayas. The village forests in the mid-hills are predominantly dry temperate forests between 1400-2000 meters altitude and temperate moist deciduous forests between 1800-3000 meters above sea level. As noted above, the dry temperate forests in this region are dominated by the chir pine (*Pinus roxburghii*), while the temperate moist deciduous forests by broad leaf species mainly banj oak (*Quercus leucotrichophora*) and its associates including rhododendron (*Rhododendron arboreum*) as well as numerous other *Quercus* species. The average size of village forests in Almora and Pithoragarh districts is approximately seventy-five hectares per village forest (Mishra, 1997), and according to the user groups adequate for local needs.

Interviews were conducted in fifteen revenue villages, in this case, corresponding to fifteen community forests located in the Berinag block of the Pithoragarh district and Kapkot block of the Bageshwar districts.[4] Average size of these villages was about 500 individuals while the average household size was five individuals per household. Primary data were collected through village and household surveys, and through interviews with relevant Revenue and Forest Department officials. Special effort was made to obtain a diversity of perspectives by interviewing men and women of various age groups, castes, and from various economic classes determined by land ownership and sources of cash income, as well as elected village and forest council members regarding changes in natural resource use. Participant observation provided an opportunity to compare rules versus practice of local resource use. Secondary data were collected from the relevant government offices. These included time series village and district level census data, time series livestock data, as well as population characteristics of the village populations collected from district and block offices and from local revenue officers (*patvaris*).

Local socio-economic context and integration into the wider economy

Villages in the mid-hills of Kumaun have been experiencing rapid change since the 1950s. Beginning in the 1950s, the region saw a rapid growth in population both at the district and village levels as reflected in the census data. In 1962, Sino-Indian War and perceived threat to national security in these national border regions prompted rapid construction of roads. With the development of roads, large market towns that were once days and weeks of walking distance from these villages, became increasingly accessible. Increasing mobility of goods and people has led to shifts in local patterns of resource use and institutions managing these resources.

With the introduction of roads, the region also began experiencing male labor migration. While male migration for non-farm employment has a long history in Kumaun, as Kumauni men known for their strength were recruited into the army since the beginning of the Gorkha rule in 1790 (Pande, 1993), the scale of migration over the past four decades remains unprecedented. Male labor migration is particularly prevalent among high caste (Brahmins and Rajputs)[5] households, in turn leading to significant economic differentiation in these villages. Today most household have at least one male member of the family working in an urban area, and in many Brahmin and Rajput households all young men have migrated to the cities, typically leaving their families behind. In such households the elderly men remain in the villages, many of them retirees from the Indian army. Increasing non-farm employment and male migration has brought about numerous socio-economic changes both at the household and the village levels.

Subsistence agriculture and agricultural change

Despite increasing links with the cash economy, and some variations based on occupational castes, the local economy continues to be almost entirely based on agriculture. Traditionally, while the Brahmins and Rajputs were subsistence farmers, most Shilpkars were artisans with the exception of the *halia* who traditionally worked to plough and clear lands of the higher castes. Today, as Shilpkars lose their various traditional professions due to the availability of market substitutes for their products, the non-halia sub-castes are also beginning to work on farms of the higher castes. Immersed within this social structure, are the Bhotias who were traditionally migrant communities trading between Tibet and India. Many of these households settled permanently in the mid-hills, during the Sino-Indian war when trade with Tibet was terminated.

Crops continue to be grown for subsistence needs, while agricultural residues provide an important source of fodder for the livestock. Over the past few decades, the region has experienced a dramatic decline in agricultural yields, perhaps primarily due to non-farm employment and male migration (Bora, 1996). With the absence of men, households are increasingly constrained in the amount of time allocated to farming and other daily household chores such as the collection of firewood and fodder or the tending of animals. Moreover, overall rise in population has led to cultivation on steeper slopes and marginal lands, and production per unit land remains low. The region is also experiencing farm fragmentation as land holdings pass from one generation to another. In the hill regions, division of land is based on the types of plots that include the irrigated, unirrigated, flat and fertile plots, and the infertile plots located on steeper slopes. Households ensure that each male member inheriting land receives title to pieces of the various land types. This has exacerbated the problem of farm fragmentation in the region. Some plots are now so small and located at such distances from the houses of the owners that these plots are no longer cultivated. Swarup (1991) and Gupta (1996) show similar patterns of land fragmentation in other parts of Kumaun. Gupta's (1996) study in the Bhakiasen Block of Almora district shows that the average minimum size of fields ranged from 0.58 to 0.85 nali (nali equals $1/20^{th}$ of an acre), while the maximum average size of fields ranged from 2.25 to 2.90 nali. The resulting decline in agricultural yields is increasing household reliance on markets for food and possibly increasing dependence for fodder on the local forests.

Pattern of livestock ownership also appears to have changed over the past two decades. While the district, block and village level data show no consistent pattern of changes in cattle numbers, the data and local interviews suggest an increasing number of goats.[6] This trend also agrees with the current market incentives and profitability of raising and selling goats in the region.[7]

Dependence on forests

Despite market linkages, local dependence on forests for fuelwood and fodder remains high and village forests remain central to local livelihoods. Fuelwood is typically collected in the form of deadwood gathered from the forest floor or dead branches lopped from trees and shrubs. Alternatives for fuelwood remain limited and expensive even for the wealthier

households. Kerosene stoves, and in rare cases cooking gas (liquid petroleum gas) serve as fuelwood supplements for the wealthier households, however, the use of these alternatives, particularly cooking gas, remains expensive and difficult to access, leaving most residents highly reliant on forests for fuelwood.

Fodder is the second most important resource derived from forests, primarily in the form of grass and oak leaves. Typically, cattle are grazed in the forests only when fresh grass is available and when a member of the household can be spared for the task, while oak leaves lopped from the forests form the main source of green fodder in the winter months. Residents have few commercial alternatives for fodder. Some households purchase feed composed of chaffed straws of various crops, however, people prefer using resources from the forests than spend much needed cash on them. Moreover, dependence on forest fodder in the form of oak leaves has been increasing over the recent years. Household labor shortage resulting from male migration and the time consuming nature of grazing, has made lopping of fresh oak leaves an increasingly preferred mode of fodder collection for the women even during the summer months when lopping is banned in village forests. Indeed, lopping of oak leaves through the year formed one of the primary reasons for violations of forest rules in this region.

Implications of rural socio-economic transitions on the commons management

In villages in Kumaun, all collectively held resources were managed by local institutions. After the formation of community forests and associated forest councils, management of forest resources was delegated to the formal institutions. All other commons resources continued to be managed by informal institutions known as *shramdan*, literally work donation. Villages managed and maintained collective resources such as irrigation canals and water sources through the shramdan. The socio-economic transitions described above have had major implications for local management of commonly held natural resources (linkages illustrated in Fig. 1).

The formal system of commons management – the forest councils

In the study region, the community forests and associated forest councils were formed in the 1940s. Apart from the rules imposed by the government, the forest councils prescribe all other rights, restrictions, and rules of forest use. Through occasional village wide meetings

forest councils ensure that the rules of forest use as well as penalties for rule violations are clearly specified to the user groups.

For most forest councils in the study region, improper and excessive lopping of trees for fuelwood and fodder posed a significant concern. Therefore, while no restrictions were placed on the collection of dry and fallen leaves and twigs, lopping in community forests is strictly regulated. Lopping for firewood was permitted throughout the year but restricted to the dry branches. Lopping of oak leaves for fodder is permitted only in the winter months when no other green fodder is available for the cattle. In the study site, users were permitted to lop fresh oak leaves two or three days a week during the winter months under the supervision of the forest guards. Lopping was strictly banned during the spring, when trees produce flowers and new coppices. In fact, many residents believe that lopping in the spring is sinful and could lead to divine retribution. Livestock grazing was for the most part unrestricted in most village forests, although use of grasslands was strictly regulated.

Encroachment

In the study region, members of the user groups rather than non-members were primarily responsible for encroachment in the respective community forests, since most community forests had adequate resources within them to meet user needs and neighboring community forests were typically less accessible in terms of distance. Moreover, violations by non-members were more easily detected and reported by all users, keeping instances of non-member encroachment low.

Forest councils noted a significant increase in instances of encroachment over the years, making the task of the forest guards increasingly difficult. The rise in encroachment may be explained by the increasing size of the user groups due to rise in population and hence greater possibilities of encroachments, as well as greater pressure on women to engage in practices that were time saving but destructive to the forest.

Monitoring

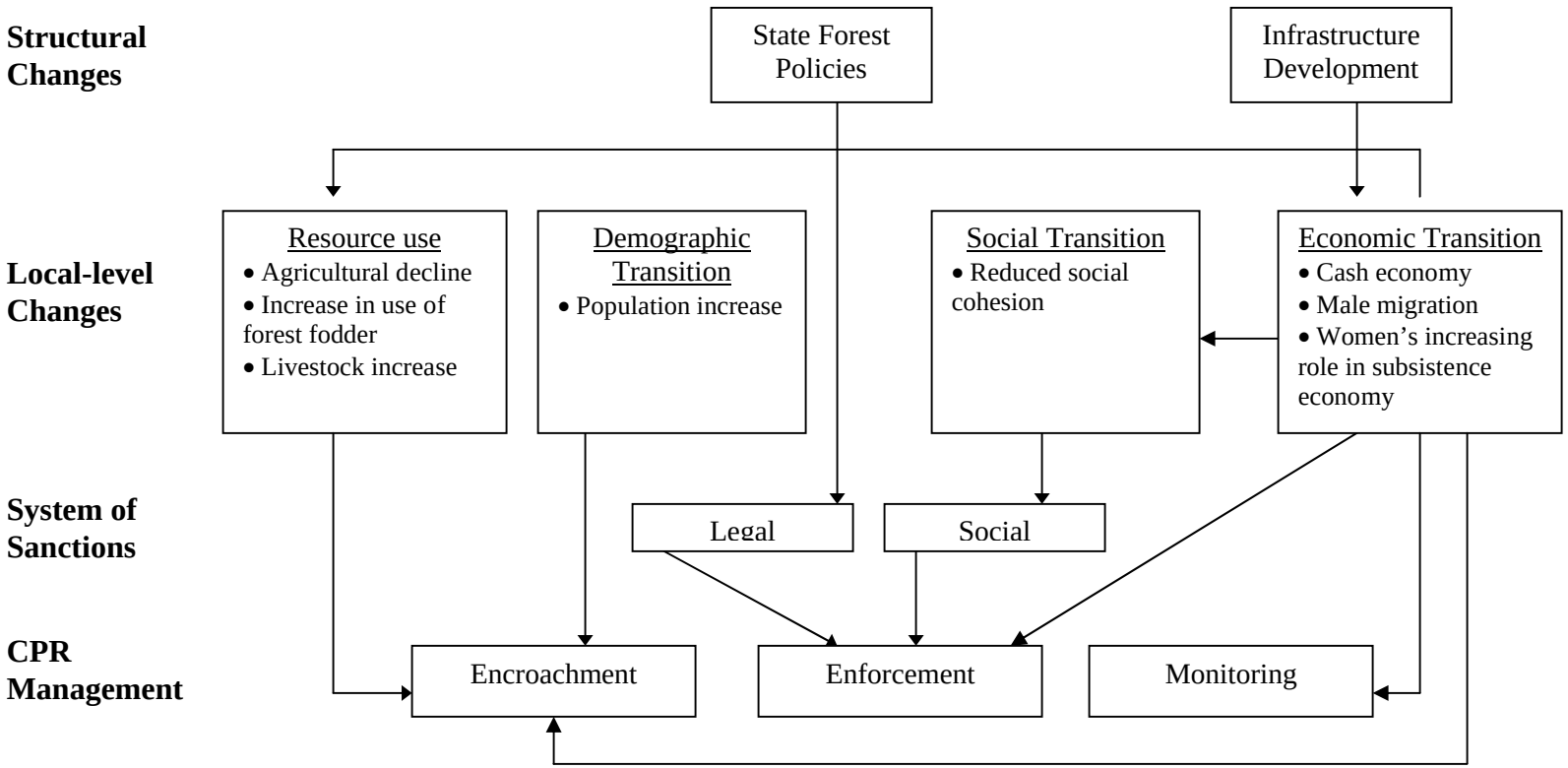
Monitoring violations and enforcing rules may very well be the most difficult aspects of local management. Since the formation of the forest councils in the study area, monitoring had been instituted through a forest guard system. Initially this involved an unpaid guard system where male members of each household participated in patrolling the forest on a rotational basis.

Beginning in the mid-1980s, however, the forest councils began transitioning to the paid guard system where one individual was selected to serve as forest guard for a specified number of years. This guard was paid a monthly salary through funds collected from each household. At the time of the initial research, only one among the fifteen villages interviewed continued to institute the unpaid rotational guard system.

As the head of one of the forest councils explained, the transition from the unpaid to the paid guard system became necessary due to non-farm employment that left few young men in each household to participate in the rotational guard system. Moreover, the few men who remained in the villages found themselves under greater pressure to assist with household level subsistence activities. This necessitated the abandonment of the unpaid forest guard system. The paid guard system that followed, however, faced problems not too long after it was instituted primarily due to problems of salary collection. It would appear that greater participation in cash economy would allow for a well-functioning paid forest guard system, on the contrary, the numbers of households evading timely payments began increasing over the years, making fee collection extremely difficult. Forest guards began personally visiting these households to collect payments. When this proved to be unsuccessful, the head of the forest councils intervened. Nevertheless, fee collection continued to pose a significant problem in the paid guard system.

Other monitoring problems experienced by the paid guard system were also shared by the unpaid guard system. Typically, one guard is appointed to monitor activities in the entire community forest. Since guards normally patrol forests only during the day, violations would peak at dawn and early evenings when the forests remained unguarded. Some violations would also take place *during* the presence of the guards, as users simply violated rules when the guard was not in the vicinity. In villages with large forests, the presence of one guard was inadequate. However, appointing additional guards was not feasible given problems of salary collection under the paid guard system, and the faster rotation of duties among the households under the rotational guard system. Multiple guards patrolled village forests only in late fall when users were permitted to lop fodder. At these times all elected forest council members patrolled the community forests to ensure proper lopping. This procedure, although effective, was limited to two to three months of the year because of the significant commitment required on the part of the elected forest councils for this voluntary work.

Figure 1: Socio-Economic Transitions and Implications for Commons Management



Enforcement

In village forests, rules of forest use are enforced jointly by the forest guards and the forest councils. When an individual is caught violating forest rules, forest guards confiscate the individual's tools (sickle) and then fines are levied by the forest council. Forest councils ensure that fines are collected from the concerned households. When this is ineffective, councils may take legal action by filing complaints to the Revenue Department. Heads of the forest councils however rarely file such complaints since it may impair relations with specific households. Filing complaints may also cost the head of the forest councils considerable time and personal funds since many forest councils, particularly in the study region, have no earnings and hence lack adequate funds to use on such occasions. Even when the sarpanch and forest councils may choose to file a complaint, the Revenue Department may not act on the case for several years, or revenue officials may resolve the case by accepting bribes. Rawat (1998) noted numerous cases of encroachment pending in courts, many of them for several years, and some for as long as ten years. Thus, with a weak system of legal sanctions, and a lack of effective alternate mechanism of enforcing forest rules, numerous community forests in the region have been experiencing close to open-access situations, a phenomenon noted by Somanathan (1991) in other hill villages in Kumaun and neighboring region of Garhwal.

Issues of equity

Equitable distribution of resources is a key aspect of management of any commons regime. In the study region, forest councils considered it too cumbersome to specify resource collection based on the size of households and the number of livestock owned. Therefore, each household was allowed to collect an equal amount of resources. Fodder collection was limited to specific amounts per household. Lopping of fresh leaves for fodder was limited to one person per household, an amount of one load (*gatha*) each.[8] No restrictions were placed on the collection of fuelwood. In some villages, redistribution of resources took place informally at the household level. Households that owned smaller herds of livestock needing smaller quantities of fodder would give part of their share to neighboring households that owned larger herds.

In some villages, there appeared to be a certain degree of discontent over equity. Households that owned smaller herds were unwilling to pay user fee equal to fee paid by households with larger herds of livestock. Although in some villages the head of the forest

councils seemed to be aware of this problem, concerns regarding equity may not have been adequately addressed.

Decision makers versus forest users

Male labor migration and participation in non-farm economy is increasing women's responsibility for the collection of forest resources, however, the elected members of the forest councils continue to be primarily men. While new government policies require increasing representation of women in the forest councils, and some forest councils responding to the policies have elected women as heads of the forest councils, these women are typically elected because their spouses are considered ideal for the position. Thus, the role of women in decision-making continues to be limited despite government policy (Lieten & Srivastava, 1999). Among the forest councils studied, only one council had a woman sarpanch. This woman sarpanch was illiterate and unable to maintain village records that the sarpanch duties required. However, the elected women are typically not even expected by the forest councils to perform any of the functions of the sarpanch. Women, therefore, remain for the most part disengaged with the local political systems and the decision-making processes. While many villages in the region now have *mahila mangal dals* (women's organizations) initiated by non-governmental organizations, in the study region, natural resources such as forests have received low priority by these groups, as they tackle more pressing social concerns such as alcoholism among men.

Changes in government policy regarding forest councils

Simultaneous to the local institutional transitions, numerous laws and legislations have had an impact on local institutions as well as local use of natural resources in community forests. Some authors have argued that these changes in state policies have weakened the powers of the local authorities in the management of community forests, rendering them ineffective.

Indeed, the revised Van Panchayat Act of 1976 that replaced the 1927 Act affected many aspects of local management, making forest councils increasingly dependent on the government (Singh & Ballabh, 1991). The revised 1976 Act required that the forest council request approval of the district administration prior to changing rules of distribution of forest resources, limiting forest councils' ability to modify and refine rules based on local conditions and resource availability. Restrictions were added on the powers of the forest councils regarding the sale of

more than one standing tree (annually) for domestic use. Under the revised rules, forest guards could be employed only upon approval from the district administration. The revised rules also required the agreement of the violator to indict the offense, thereby weakening enforcement and curtailing forest councils' authority to collect fines. Finally, under the 1927 rules income from fines collected from forest violations could be utilized by the forest councils for the improvement of the community forests or for other community projects, under the 1976 rules only forty per cent of the accumulated fines could be used by the councils. The remaining proceeds were allocated to the Forest Department and the district revenue office for the maintenance and development of the community forests. In practice, however, the forest councils rarely receive even the 40 per cent share allotted to them (Singh & Ballabh, 1991; Saigal pers. comm., 1999), neither do funds allocated for improvement of community forests get used for the purpose.

In 2001, the Uttaranchal Panchayat Forest Rules were revised again. While the changes are aimed at greater representation of the marginalized groups (women and the low caste) in forest councils, these rules served to further increase forest council management and administrative responsibilities. Under the revised rules, each forest council is expected to develop a five year microplan, annual implementation plan, and an annual report for the community forests. While the 1976 rules, required drafting of a workplan, the drafting of it was the responsibility of the Forest Department with consultation with the forest councils. Overall, the 2001 rules have increased vigilance to ensure sustainable management of community forests, however, the rules are also increasingly bureaucratizing community forest management without providing financial resources to the forest councils.

In addition to the Van Panchayat Act and rules of forest use numerous other statutes serve to restrict local activities in community forests. The Uttar Pradesh Tree Protection Act of 1976 prevents individuals from felling ‘protected’ tree species of commercial value without permission from Forest Department officials. While similar restrictions on protected tree species existed before, the 1976 Act also imposed a ban on felling of oak. The Indian Forest Conservation Act of 1980, in response to the Chipko movement in Garhwal, imposed a fifteen-year ban on felling green timber at altitudes above 1,000 meters in the Himalayan region. Prior to 1980, government laws restricted timber use to one tree per village forest annually for subsistence needs. This wood was typically used for the construction of houses, cattle sheds or for use in funerals or weddings, and was distributed on a rotational basis or provided to particular

households based on special need. Additional restrictions under the 1980 Act allowed for the removal of only dead or dry trees, thereby severely constraining local use of timber. In 1988, revisions to the Forest Conservation Act made it illegal for any forest council to engage in afforestation projects without permission from the Central Government (Mishra, 1998). Given that government officials are often unavailable when needed, and that a single Forest Inspector may have hundreds of forest councils under his or her jurisdiction, the task of obtaining permission or conducting tasks that require official presence of the forest inspectors often creates unnecessary difficulties at the local level.

Government policies versus local practice

While the above section illustrates difficulties posed by government policies on local institutions of community forest management and on local forest use, it is also true that many of these laws are not always complied with at the local level. At times limited knowledge of rules may render state policies ineffective. In the study region, while most forest and village (*gram*) councils were well-informed of forest policies affecting local forest use, and many elected council members were also aware of the proposed and unissued draft bills, a majority of the collectors of forest resources (primarily the women), were knowledgeable only of rules prescribed under the Van Panchayat Acts of 1927 and 1976.

More commonly, however, forest councils circumvent government rules to ease management of community forests. Indeed, as the heads of several forest councils acknowledged, dead trees are routinely auctioned without informing the Forest Inspector, despite restrictions posed in the Van Panchayat rules. This was noted by Somanathan (1991) in his study region where sarpanchas allowed user groups to fell trees without obtaining permission from the Forest Department in order to avoid the trouble and expense of obtaining permission. On rare occasions when a large number of trees are felled during projects such as road construction, Forest Inspectors may be informed and trees may be auctioned under his or her supervision to avoid conflict in the village. In such cases the Forest Inspectors may already be aware of the felling since these large scale initiatives are typically government projects.

Forest councils also routinely evade the Van Panchayat Act by charging fines of much larger amounts than specified in the Act. While the amount specified in the Act may be recorded in the ledgers, the additional funds collected from fines are often deposited in the village funds.

In the Nainital district of Kumaun, Sushil Saigal (pers. comm. 2000) encountered a number of forest guard records where the amount of fine collected from forest violations were nearly four times greater than the amount set by the Forest Department. Thus, laws do not always imply compliance at the local level. Lax supervision of the local government authorities offers opportunities for forest councils to evade some rules on a regular basis.

The informal institutions of 'shramdan'

While forest councils represent formal institutions of community forest management, informal systems of commons management always existed in these villages. As noted earlier, these village-based informal institutions of common property management were responsible for all community projects and existed in the form of shramdan and operated through voluntary contribution of labor. Many elderly male informants described fond memories of contributing to shramdan until two to three decades ago where they looked forward to returning from school and participating collectively in the construction of roads and walkways, forest protection, reforestation projects, cleaning of water catchments (*naula*), building and maintenance of irrigation systems (*gool*) and other resources that were of concern to the entire village. Today the concept of shramdan exists only in memories of the older generation.

Increasing participation in market economy has eroded the institution of shramdan. While male migration contributed significantly to the crippling of these local institutions, the economic logic of the cash economy also changed local value of time and labor even for those who remain in the villages. Thus the opportunity cost of labor reduced local incentive to engage in communal volunteer activities, while increased government assistance for village projects diminished local initiative of maintaining these resources independently.

Today residents have little interest in voluntary work, even for the benefit of their own village. It is expected that communal work should be supported by the government or rewarded with payment or both. Government block offices occasionally allocate funds for village level projects, however, given that each village has many needs that arise on a continual basis and given the numerous villages competing for the limited block office funds, many projects are never initiated or if initiated never completed. These projects often employ local labor, typically of the Shilpkar caste since the higher castes regard these jobs as too degrading. While the high caste households participated in the shramdan in the past, and may engage in similar work in

urban areas, they feel that participating in these tasks in their own village would diminish their social status.

A few decades ago, construction and maintenance of irrigation channels was also done through shramdan. Today many of the older channels are in poor condition, while new channels are built only when government funds become available. Similarly, water catchments were regularly cleared through shramdan, however, most of these catchments had not been cleaned for years and were therefore no longer in use. Government installed pipelines now provide water to a number of villages, however, many of these facilities remain in critical need of repair and maintenance which is considered government responsibility.

Somanathan (1991) and Sarin et al. (2003) note other village level informal institutions in the region such as the *lath panchayats* that were responsible for forest management in these regions. According to Somanathan, it was the decline of the lath panchayats that encouraged some villages to form formal forest councils over the past few decades.

Indeed, market integration and the consequent social transformations in this region are not unlike those documented by Polanyi (1944: 270) in nineteenth and twentieth century Europe. As Polanyi notes, the arrival of market economy has brought with it new ways of thinking that legitimized seeking gain and "restricting of labor to the unavoidable minimum" as natural human behavior; where expectation of payment replaced laboring for reciprocity, pleasure or social approval characteristic of pre-market societies. These social transformations have weakened the once self-sustaining informal systems of commons management and, as suggested below, the formal commons regimes as these functioned in the past.

Today, forest management is among the few collective activities on-going in these rural areas possibly due to the creation of the formal forest councils, although even forest management is increasingly becoming limited to enforcement of government rules rather than reforestation and other activities that in the past compensated for grazing and lopping pressures. Other collective activities that continue to take place are primarily of social significance (such as weddings or funeral) and are becoming increasingly kinship rather than village-based.

Concluding discussion

Community forestry in Kumaun represents one of the oldest examples of decentralization initiatives around the world (Agrawal & Ostrom, 2001), and presents a useful case to assess

likely outcome of decentralization initiatives and effectiveness of local institutions in sustainable management of natural resources.

This study recognizes the important role of local institutions in successfully managing commonly held resources over several decades, and agrees with other authors (Agrawal & Ostrom, 2001) that community forestry in Kumaun has been largely successful in managing these forests at least until the past two decades. This study suggests, however, that caution is needed in lauding past success, and that there is need to recognize that formal and informal institutions of commons management in Kumaun are either eroding completely or facing significant challenges over the past two decades.

While several authors *have* recognized challenges being faced by forest councils in Kumaun, these authors have argued that the problems of the forest councils can be understood in terms of the constraints placed by government policies and limited capacity of local governments in providing the support it promises, as for instance smooth access to legal enforcement mechanisms. Some of these authors have argued that it is the complex arrangement in management and distribution of responsibilities between the village, the Revenue Department, and the Forest Department that pose extensive logistical problems in management of community forests (Rawat, 1998). Indeed, while the complex dual arrangement as well as limited government capacity do pose problems for forest councils, these constraints have existed since the formation of community forests and do not explain the recent crisis being experienced by forest councils or why forest councils were able to function effectively in the past. The centralization of powers under the 1976 Van Panchayat Act better explain recent institutional challenges since it has increased forest council dependency on the often irresponsive government officials. However, as this paper illustrates, given the opportunity of independent decision making and circumventing of policy restrictions afforded by lax supervision of local government authorities, the role of government policies in undermining the effectiveness of the forest councils appears to have been over-emphasized.

From the perspective of the decentralization literature, Kumaun's forest councils present one of the better cases of decentralization of natural resource management. Under the 1931 Van Panchayat Act, important powers were devolved to the forest councils relating to day-to-day management of community forests. The forest councils were designed to be elected by the user groups and continue to be downwardly accountable to their constituents. As suggested above,

while the 1976 revisions to the Act and other government policies have served to restrict these powers, given the ability of the forest councils to routinely circumvent these rules, the policies do not appear to pose significant problems as might be expected. Therefore, this paper suggests that policy changes leading to greater devolution of discretionary powers is unlikely to solve problems of the forest councils as these are being experienced today.

As described in the paper, socio-economic transformations and current economic disincentives are having far reaching impacts on local institutions which are key to understanding problems faced by the forest councils and informal institutions of commons management. More directly, non-farm economic opportunities and rise in male migration are posing challenges at the local institutional and the household levels. At the institutional level, the wave of male labor migration has already led to the erosion of the informal system of commons management. Male labor migration is significantly affecting also the formal institutions as few young men are left to assist with duties of the forest councils or for monitoring and enforcement activities, both of which require significant commitment of time and effort. While greater participation of women in forest councils can help address some of the concerns of unsustainable natural resource use and reduce gap between the forest users and decision-makers, given women's increasing responsibilities for subsistence activities at the household level it is unlikely that forest council and guard duties could be adequately met by women, even if the women were not constrained by illiteracy or social norms.

In addition to the labor constraints, institutions of commons management (formal and informal) are coming face to face with socio-economic transformations and associated economic logic that is reducing value of unpaid labor and for village level volunteer activities. This reduced incentive to engage in the management of collectively held resources further explain the decline of local institutions of commons management. Institutions such as the forest councils that are formally recognized, that operate under government oversight, with legal forms of sanctions associated with them have sustained, but these are also suffering from reduced participation and cooperation. Given the ease with which forest violations have been taking place in recent years, it is clear that success of formal institutions was based on strong social sanctions since legal sanctions have always been difficult to enforce. Indeed, as these forest councils themselves acknowledge, when government rules pose difficulties in forest management it is not difficult to override them, but it is difficult to work with a rapidly eroding

spirit of collective action and social cohesion which are critical to problems being experienced by both the informal and the formal institutions.[9]

While value of conservation remains embedded in local way of thinking, as villagers continue to associate healthy forests with their own well-being and as a matter of great pride, this outlook is increasingly being challenged by the economic disincentives, a phenomenon visible on private as well as common lands in Kumaun. For instance, in many parts of Pithoragarh and Bageshwar districts, economic incentives have led villagers with urban livelihood options to quarry their entire terraced farms for soapstone (*khadia*), raising risk of landslides in these hill regions. Moreover, raising goats has become an increasingly lucrative profession, despite the realization that excessive grazing is preventing adequate regeneration of the village forests. Commons are relatively sheltered from such overt economic disincentives than are private lands since private lands are not subject to institutional restrictions. However, the same economic logic is also reducing incentive for managing of the commons as noted above.

In the emerging trend, villagers are become increasingly connected to the regional and national markets, and priorities and concerns are shifting from dependence on natural resources for sustenance to dependence on markets for survival, and from dependence and maintenance of social relations to reliance on cash income. Thus, where local dependency on the resources and commitment to the region existed in the past, current land and natural resource use patterns are less reflective of that local commitment. These trends appear to be common to many rural areas in Kumaun as in many other rural areas of the world.

Baker (1997) and Jewitt (1995) have showed that even within a particular geographic region experiencing very similar kinds of socio-economic transitions and policy changes, some local institutions may be resilient and adapt to changing circumstances and others may not. Within Kumaun, this paper describes villages that are experiencing problems in community forestry and commons management, while other authors have noted more successful cases of both formal and informal local institutions (Sarin et al., 2003). However, these successful cases often had behind them strong leadership instrumental in keeping the institutions intact. In the study region discussed in this paper, one village (Simgari) appeared to be particularly resilient and was relatively more successful in managing its community forest. In this case, the head of the forest council was a young sarpanch who having been raised and educated in a major urban area had chosen to return to life in the village, and was able to bring life also to the forest

council. Few young men return to the rural areas however, and forest councils today tend to be dominated by older men often retired from military or urban jobs. Given the more general trend of a move away from rural livelihoods, it is difficult to see how the village institutions will remain vibrant and resilient.

Many local institutions of commons management today could use assistance that would enable them to successfully confront the institutional challenges being faced today. In the case of Kumaun's forest councils, the government *has* inadvertently played a role in maintaining these institutions. This follows from the nearly complete erosion of the informal institutions of collective action and natural resource management on the one hand, and the survival of the forest councils on the other. Complete collapse or worse forms of degradation of village forests could have been possible without the formalized forest councils. Indeed, as Somanathan documents, in some cases informal institutions in Garhwal and Kumaun chose to resist decline and assert legitimacy by seeking a formal status. Recent policy changes, however, are burdening the forest councils with bureaucracy rather than providing them the support that they need. Indeed, new Van Panchayat policies appear to be blind to local realities and could lead to further erosion of the forest councils and adverse environmental outcomes.

Some form of institutional support could serve to strengthen local institutions and forest councils. Governments or non-governmental organizations could play that role by helping them adapt successfully to the changing socio-economic environments. They can facilitate communication and learning across forest councils, enabling weaker councils to learn from those that have successfully adapted to the changing socio-economic contexts. Local governments or non-governmental organizations can also ensure that forest councils adequately address concerns that they may not otherwise address, such as issues of equity and conflict. Finally, new policies regarding community forests could benefit from consultation with forest councils to ensure that they do not impede local efforts of management.

NOTES

1. The community, village or '*panchayat* forest' throughout this paper is used to refer to forests governed by a forest councils or a *van panchayats*. A single van panchayat may incorporate more than a single revenue village, that is, village as marked on a revenue map.

2. Details of sanctification of village forests and related ecological and institutional success are discussed elsewhere (Aggarwal 2001). This paper focuses on transitions in community forestry that led to sanctification of these forests.

3. See Aggarwal (2001), as well as other studies that attest to the good conditions of Kumaun community forests (Somanathan, 1991; Agrawal & Yadama, 1997; Government of Uttar Pradesh, 1984, 1960).

4. Within the government administrative set-up, states are divided into districts, and districts are sub-divided into administrative 'blocks' also called development blocks.

5. While this caste structure is a crude simplification of the various hierarchies that exist in Kumauni society, even within this simplified social structure there exist distinct patterns of land and livestock holding, resource use, and labor migration.

6. The government livestock data are collected by the Revenue Department every five years. The revenue officers (patvaris) responsible for collecting data at the village level have little stake in accuracy of the data collected, and as a result are not often careful in their efforts of data collection. The data, therefore, often have large errors.

7. At the time of this research, an adult goat could be sold for Rs. 2000 ($50), and a kid for Rs. 400-500.

8. Singh and Ballabh (1991) note more rigorous mechanisms of equitable distribution by weighing of the forest resource.

9. The reduced level of interdependence and social cohesion, and the shift from collective to individualistic consciousness are not unlike transitions described by Tonnies (1887) in nineteenth century Europe.

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