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1. Title of paper: Cultural significance of indigenous institutions and forest management practices in the Indian Himalayas: implications for policy and sustainable livelihoods

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3. Abstract

Sustainable management of the rich forest resources of ecologically sensitive Himalayan State – Himachal Pradesh contributes significantly towards ecological stability and economical development of the state, region and the country. Forests are key to livelihoods to majority of people being dependent on forests for fuel wood, fodder, grazing, construction timber and NTFPs. Traditional customary rights of the people living in and around the forests allowed them to use the produce of the forests for their livelihood. The conservation and management of its forest resources have been possible with the active participation of local people. There are numerous traditionally in vogue successful cases of people active participation in forest resource management especially in the regulated collection and distribution of forest products in the villages of inner Himalayas. Examples of traditional systems of management by indigenous local institutions of commercially important forest products yielding edible pine nuts, cumin, the morels, medicinal plants and grasses from the villages and forests located in the inner Himalayas are discussed. These forest product use systems demonstrate combination of private, state and common property use and management regimes. These traditional systems are very appropriate community institutions under which rights are consistent with capacity of forests to yield income and livelihoods that can be sustained thus leading to sustainable forest management. There exist institutions of co-operative labour, sacred groves, informal village councils, and village deity system in Himalayas, present a strong evidence of survival of commons in Himalayan cultural landscape. The committees of local deities nominated and/ or elected members plan and organize their functioning without written procedures. Thus, each village in Himachal Himalayas is regarded as a village republic. Although the procedures vary from village to village but people have great faith in the decision-making and conflict resolution mechanisms of these committees that are neither political nor administrative bodies. These cultural (Deity) institutions perform multiple functions in the society and have diversity in belief, functions and organization activities across the Himachal Himalayas. This paper focuses on the management of commercially important forest products by indigenous institutions and conservation practices followed for maintenance of sacred/ temple groves in case study villages. The analysis of indigenous systems of management through local institutions reveals strong positive relationship between social capital and natural resource management at grass root levels. Traditional initiatives and systems in the participatory and regulated forest products by indigenous communities have implications for policy support and sustainable livelihoods through income

generating activities due to increased pressure on forest resources. The policy of creating village level institutions through JFM introduced should be assessed vis-à-vis these traditionally in vogue participatory approaches in the Himachal Himalayas for sustainable resource management. The latter have great merit of promoting equitable distribution of the produce of neighbouring forests. The democratic and decentralized management by small village communities themselves and their having evolved over a long period of time are a satisfactory system of exploitation as well as preservation of this common property resource in perfect harmony with each other.

Keywords: Indigenous institutions, traditional systems, forest management, Sustainable livelihood, Indian Himalayas, cultural traditions, Sacred groves, Co-operative labour, Indian Himalayas, traditional systems, institutions, management, livelihood,

Introduction

There is a wide recognition throughout the globe and across disciplines that regions of ecological prudence exhibit a symbiotic relationship between habitats and culture (Arizpe, 1996). This explicates that culture and environment are complementary in various stages of evolution. Traditional societies have co-evolved with their environment, modifying nature but actively maintaining it in a diverse and productive state based on their indigenous knowledge, socio-cultural practices and/or religious beliefs since antiquity (Gadgil and Berkes, 1991; Ramakrishnan, 1998). India stands at the end of a very long and illustrious tradition in which the importance of nature is recognised, celebrated and valued. In the cultural history of India nature has been admitted, respected, feared and loved both for its instrumental and for its intrinsic value (James, 2000).

Traditionally some of these mountain societies have many natural resources linked institutions. The concept of 'sacred species, sacred groves and sacred landscapes belongs to this category. However, the guiding principles that regulate the use of natural resources are embedded in the codified and often non-codified institutions that they have evolved. Modern economic and scientific rationality, however, precludes these socio-cultural practices, sometimes even amongst these traditional societies. It, therefore, warrants an integrated approach to natural resource management subsuming cultural, economic and ecological principles to redress developmental issues in a more holistic way. However, these traditional societies are no longer immune to the changes occurring in the world with time. The predominant culture of over-consumption of natural resources is making a dent into these societies resulting in erosion of their time-tested and valued institutions. At present, when the social fragmentation reaches to the family level and individual interests get priority, the community functions take a back seat. Gadgil and Guha, 1992 argue that the emergence of sacred institutions were intended more to boost social solidarity rather than promoting environmental consciousness per se, in contrary to arguments supportive of ecological prudence as traditional societies in the past have always operated from a resource-rich environment. However, while these religious norms explicitly foster social solidarity, the conservation values and ipso-facto are fulfilled.

The social institutions linked to biological resource management are often linked to religious myths and socio-cultural belief system. Such a concept of 'the sacred' often has spatial dimensions and specificities. One could conceptualize a broader hierarchy of social institutions or sacred entities,

i.e., spatially diffused sacred landscape, and spatially defined sacred landscape or sacred groves and sacred species. The top most in this hierarchy has institutions that have least specificity but has the greatest zone of influence. Least specificity means lower number of prescriptions and prohibitions in terms of practicing cultural norms. Next in this hierarchy would be spatially defined landscapes with well-defined institutional norms. The concept of sacred groves also falls in this category. Sacred species stand, as a class apart, though there may be restrictions on their usage (Sinha B., et. al. 2000; Ramakrishanan 1996).

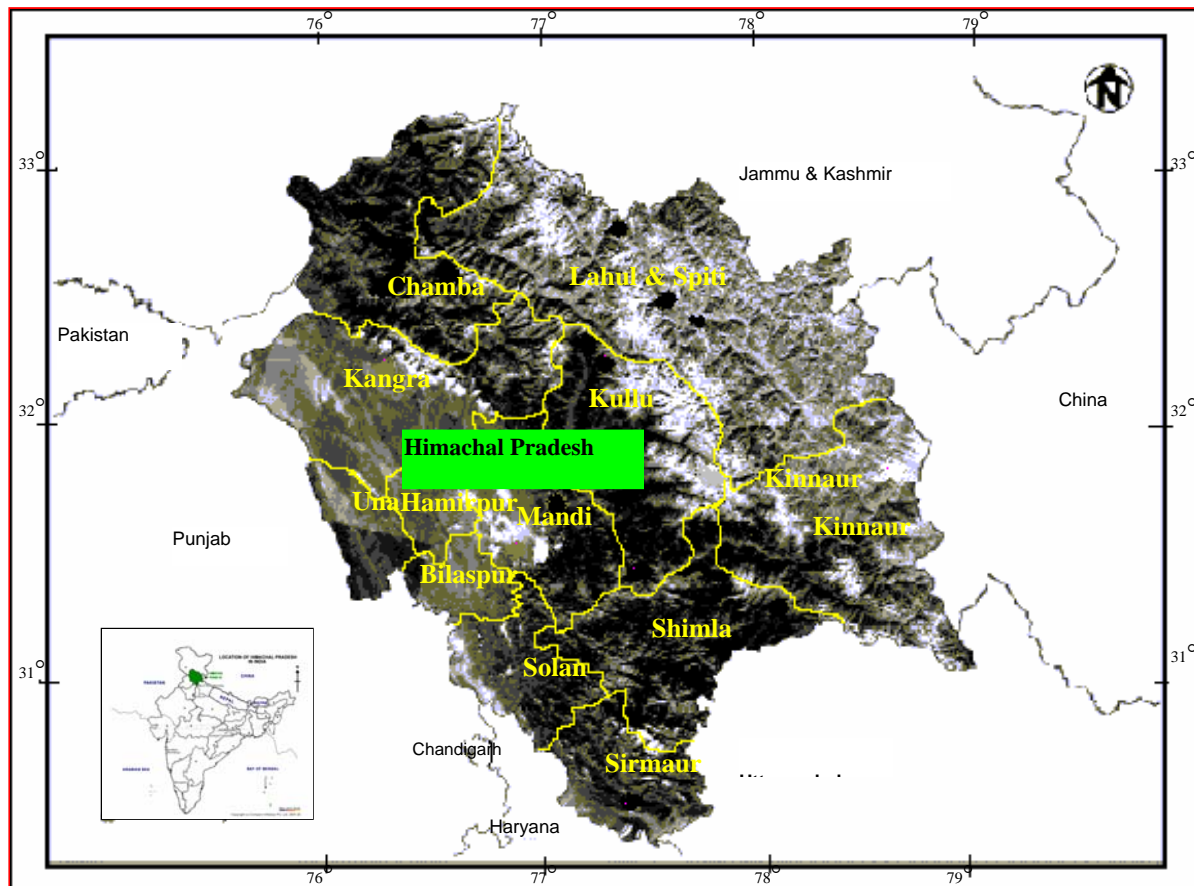
Sustainable forest management of pristine forest resources of the ecologically sensitive Himalayas contributes significantly towards ecological stability and the economic development of the area. Examples of traditional systems of management by indigenous local institutions of commercially important forest products yielding edible pine nuts, cumin, morels, medicinal plants, grasses, and willow coppice management are discussed. Local institutions play an active role in regulated collection and distribution of these forest products (Gupta 2005). Some successfully functioning cases are very old and the locals who remained active participants in their evolution and functioning do not know the period when these were initiated and matured to the present status. Such cases are widespread in which committees of local deities, with nominated and / or elected members plan and organize their functioning without written procedures. Participatory approaches vary from case to case but people have great faith in the decision-making and conflict resolution of these committees, which are neither political nor administrative, bodies (Dhiman, 2001). Traditional initiatives and systems in the participatory and regulated forest products by indigenous communities have implications for policy support and sustainable livelihoods through income generating activities, due to increased pressure on forest resources.

Messerschmidt (1995) further argues that “perceptions and their control and management of common property and natural resources are best understood in the context of culture as it is through the acquired knowledge that people use to interpret experiences to generate social behaviour.” Moench (1986) also found that the success of informal forest management in the hills of Uttar Pradesh in India was due to homogeneity and a higher proportion of culturally rich groups in society. When discussing forest management it seems appropriate to view the existence of local institutions first as these are often the basis of collective action because forest management is not an individual enterprise as it concerns all potential users (Speth, 1990). According to Taylor (1871) (quoted in Rastogi, 1995) “Culture is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and traits acquired by man as a member of society. The culture denotes acquired behaviours which are shared by and transmitted among members of society.” Thus, culture is behaviour that is learned rather than simply inherited. Each culture is comprised of at least five classes of institutions: (1) language; (2) a social system, families, government; (3) ways to make a living, an economy, a technology; (4) a philosophy of life and religious beliefs; (5) aesthetic activities and standards, ideas concerning the definition of beauty or other experiences pleasant to the senses. Each family has distinct cultural traits, so does each individual. Each culture may be regarded as a variant of larger ones; a subculture within a more general culture. The forestry profession is a subculture (Duerr, 1993). An understanding of the socio-cultural background of the people may isolate cultural traits which impede or catalyse the process of sustainable management practices.

Social scientists argue that theological and cultural aspects have to be considered in planning and managing forests as many community forestry projects have failed since they did not consider these. Therefore, culture has a role to play in developing sustainable management

practices as an asset because shared values may generate higher levels of co-operation, commitment, communication and the participatory decision making essential for the process of e.g. Joint Forest Management. It may become a hindrance when shared values and beliefs do not conform to the needs of sustainable forest management (Rastogi, 1995). The cultural significance of indigenous institutions such as religious deity, sacred groves and co-operative labour and have been explored with its implications for policy and sustainable livelihoods.

2 The Study Area



Map Source: IIRS, Department of Space, GOI, Dehradun, Uttaranchal

Himachal Pradesh, the apple land of India, the abode of Gods, the land of snow, is situated in the north-west corner of India, right in the lap of the Himalaya ranges. It is bordered by Jammu & Kashmir on the north, Punjab on the west and south-west, Haryana on the south, Uttaranchal on the southeast and by Tibet on the east. The Location - 30° 22' 40 " N to 30° 12'

40° N and 75° 47' 55" E Long to 79° 4'20" E Long. It has geographical area of 55,673 km² and constitutes 1.69% of India's area and 10.54% of Himalayas. The climatic conditions are essentially determined by the south west and by the winter monsoons. There are three well defined seasons; summer, the monsoons and winter. Spring acts as a transition period between winter and summer, with autumn as an intermediary between the monsoons and winter. Average annual rainfall is 1111 mm, which vary from less than 500 mm in Lahaul and Spiti to 3400 mm and above in Kangra (Dharamsala). Its altitude varies from 350-6975 m include Sub- Himalayan Zone, Lower- Himalayan Zone, Higher- Himalayan Zone and Tibetan or Tethys Zone. Distinctly, four major agro-climatic zones are found in the state viz. Sub-tropical low hills (Shiwalik Range, below about 800 meters MSL), Mid-hills sub-temperate zone (between 800 to 2800 meters MSL), High hills temperate wet and sub alpine (above 2800 meters MSL) and High hills temperate dry alpine zone (higher reaches of inner and outer Himalayas and Lahaul & Spiti). It is inhabited by about 6,077,248 persons as per 2001 census in 19,000 villages and 70% of villages having a population below 200 persons. The state is almost wholly mountainous. The physical expanse of Himachal Pradesh is an intricate and fascinating mosaic of mountain ranges, hills and valleys. There is gradual increase in elevation from south to north and west to east. The high mountain region within the trans-Himalayan zone covers the districts of Kinnaur; Lahaul & Spiti and Pangi subdivision of Chamba with altitude ranging from more than 2000 to 4000 meters above mean sea level has a very steep, rugged and difficult mountain terrain. These areas are also known as the cold arid zone, with high hills, which is temperate and dry. It accounts for more than 30 % of the geographical area of the state. The winters are severe and receive precipitation in the form of snow. The temperature is low for most of the year and drops significantly below zero in the winter. The region is under snow for about six months of the year, restricting farmland use and production mix. This zone is divided into a sub- alpine zone and an alpine zone on the basis of altitude and type of vegetation. The sub-alpine zone lies at an altitude of 3000 to 3500 metres above mean sea level. The alpine zone lies over 3500 metres above comprises the Himachal inner Himalayas. The area under pasture is 80 %, this being the main land use, with cultivated and forested areas covering 3 % and 7% respectively. Tribal communities inhabit the area. Population density is low (5.6 persons per kilometre²) but the pressure on the 3% percent of arable land is high as human and livestock population is concentrated in a limited area (Bhati et al. 1992). Therefore, there are adverse conditions for livelihood and only one crop is possible each year. The dependence of people on forest recourses is therefore very high. The intensity of grazing is high during summer due to transhumance grazing by sheep and goats, which graze mainly on alpine pasture.

The people of Himachal Pradesh are bound by the ties of common religion, though religious observances differ. By and large, they have maintained their original form of worship. The large majority of people are Hindu by faith, devoted to traditional gods. The people have a firm, almost a blind belief in the village deities, whether the deity is a divinity, a hero, or otherwise, he is called *deota* or *devta*. He is a protector and a source of inspiration for all the villages. He is considered the '*ishth*' of the population inhabiting a village. Almost every village has a temple where they congregate for common worship (Mian 1999; Thakur, 1998).

The village deities are carried on palanquin on a number of occasions to the places of religious interest and to the fairs and festivals. The deities are propitiated to obtain timely rain or good harvest or other favours. People believe that their gods are generally well disposed towards the worshippers, and confer their blessings on them. If, however, they are not appeased in proper form, they become angry and, in their wrath, allow the evil spirits to prey on the people in the

form of epidemic diseases and other calamities. They believe that evil spirits live in the hill ranges and on the tree tops, and occasionally they disturb the peace. People protect themselves under the sheltering care of their village deities. Thus, a common belief to ward-off the evil effect of these spirits by propitiating the local deities is Himachal Pradesh was one of the principal centres of serpent worship in India. The cult of *Naga* (serpent) goes back to the ancient times in the western Himalaya and undoubtedly it is one of the indigenous cults of the area. Nagas have large number of worshippers. Their shrines are numerous, and there are also *Nagani* (female *Naga*) shrines, but the latter are not so common. The image in these shrines is usually of stone in human form with the figure of snake entwined around it and a serpent canopy rising over the head. The shrine also contains figures of snakes in stone, wood and iron. Water springs are believed to be under the control of the snake godlings. Many *Naga* godlings are believed to have the power to grant rain and in times of draught they are diligently propitiated. The *Nagas*, who are worshipped in the hills, have individual names, the origin and meaning of which are in most cases obscure. Sometimes, they are named after the village to which their temples belong. But it seldom happens that one meets with

3 Materials and Methods

The case study approach was adopted for the purposively selected villages from the study area. Most of the background information including description of the study area was obtained from secondary documents such as settlement reports and districts' gazetteers. The information from case study villages from Kullu and Shimla district with respect to sacred groves and villages was collected local people from forest functionaries and through interviews and observations and presented as case studies. This case studies of the 'traditionally in vogue' participatory approaches in forest resources management and institution of cooperative labour from Himachal inner Himalaya are highlighted in this paper.

4 The institution of local Village God

India abounds in local deities who are specific to a given village or sets of villages or to a specific endogamous group restricted to a relatively limited geographical area or both. One often finds associated with such deities a rich body of folklore which can illuminate the history of human groups that worship these deities. Such folklore can be particularly fascinating when it appears to have its origin in conflicts of interests amongst the different human groups. (Gadgil, 2001)

The understanding of the institution of *Deota* (the Village God) is important in the local context with respect to natural resource management. The village gods control effectively, the social and religious system in a settlement. The institution of village gods is the major custodian of the activities in a village society and the village god is the symbol of village culture. He guides even marriages and deaths and even directs the followers to allow or disallow a new visitor to the village. With this cultural phenomenon in the background, the village society has grown like a family in perfect harmony (Sharma, 2005). The village deities in Himachal Pradesh are not simply objects of worship which governs all social, cultural, moral, economic, religious and political life of the village folk. In the faith of the people of which these deities are held and the manner in which this faith is expressed, they have large number of traditions and conventions governing their day-to-day life. These traditions, superstitions and conventions which, at present, prevail in these mountain areas show that the area might have been, once, infested with supernatural forces and what people could not understand, they began to worship. What is more,

any one who could propitiate the supernatural spirit or exorcize evil spirits began to acquire commanding importance and unique influence and was looked upon with awe and reverence and all bowed to his authority. The sorcerer, thus, became the leader and subsequently, his spirit or the spirit propitiated by him became sine quo none of the social life of these valleys (Mian, 1999). Thus, the village folk have a great faith and respect and are under the strong influence of local deity institutions. The deity has evolved out of the religious practices and beliefs of the various social strains, which made their way to these areas. The local deity is not remote beings, represented by idols in village temples for those seeking spiritual solace. They are more like the Greek or Roman immortals, possessing all the emotions and feelings of mortal men. The manifestation of the supernatural powers would have drastic consequences, in the first instance, and secondly might have remained in force for a sufficient longer period, that now, when centuries have passed since, the people are still sticking to follow the old traditions and they have force and sanction of social law.

Shuttleworth (1917), Rosser (1960) stated that in the village of Malana in Kullu, power and influence of the local deity *Jamlu* formed an integral part of social control generally and of the political and judicial machinery in particular. There are three permanent members holding hereditary office in hierarchical order- the *Karmisht* (god's manager), the *Pujari* (priest), and the *Gur* ("mouthpiece" of the god). The *Pujari* and *Gur* are powerful figures in the village society due largely to the fact that they possess a virtual monopoly in interpreting "the will of God"- a vital consideration to a local community, particularly when a dispute of any kind has arisen. The *Gur* at certain ceremonies goes into a state of possession in which he becomes the vehicle of communication between the god and the villager.

The institution of Deota has the following officer bearers in most of the villages in Kullu and they are described as:

Kardar (Manager): is considered as the head of the institution of *Deota* and plays a key role in the overall management of the whole system. He holds the keys of the temple and maintains cash accounts by keeping tracks of returns due from the *Deota* lands scattered in different locations throughout the village. He is also perceived as a sort of village headman and generally attends all important meetings.

Pujari (Priest): performs prayers to the deities and maintains the sacred fire, also offers prayers during local fairs.

Gur (Oracle): is the medium of the *Deota*. The *Deota* "enters" the *Gur* and communicates with the village people. The responsibility of invoking and representing the *Deota* has remained a hereditary feature with the privilege passing from one generation of *Gur* to the other. It could be immediate family or a blood relation. A hereditary *Gur* exists in the villages but in many instances may not be present due to various reasons.

Bhandari (Storekeeper): assist the *Pujari* in various ways by helping in preparation of sandalwood paste, arrangement of transport of *Deota* goods and maintenance of the sacred fire.

Chhatadi (Informer): informs the whole village of dates of religious functions and of meeting for conflict resolution. Except for the musicians who are tower caste men, all the other members of the committee are upper caste men. Men of the most powerful households within the village often hold the positions on the deity committee. Thus there are serious issues of the lack of gender and caste equity in these institutions. However, in the current situation the decisions of this committee on the management of the deity affairs, including the management of the *dev bans*, are generally accepted and endorsed by the entire community.

The Deota office bearers do not hold any political post. The village committee is responsible for coordinating all religious and social functions in the village (Rosser, 1960; Singh and Sikka, 1992). The institution of *Deota* in Kullu was comparable to the common scene found in the village communities of North Thailand as studied by Potter (1976) in which the village shrine was built for the guardian spirit known as Phi Sua Ban for protection against evil spirits. It was believed that efforts by individual villagers or by households were not enough to resist the spirits. Once the territory protected by the village guardian spirit is blended with the village's collective obligations, the residents of that territory also come to recognise standards of behaviour that have to be maintained so that no one in the village would act in a way that could anger the guardian spirit; for should it no longer protect the village, all the villagers could be in jeopardy. One villager's irreverent act is not just the problem of that individual; it is the problem of the whole village. Within this sphere of belief, the villages in northern Thailand can be recognised as territorial organisations in which the villagers have a feeling of attachment and obligation to their own village (Potter, 1976). For the above reason, membership of the villagers has to be clearly defined to be able to identify who belongs to which village and who does not. Similarly each village in Kullu has its own Deota who has a shrine and is comparable to the guardian spirit described by Potter.

Hierarchy of Deity institutions

Berremán (1963, 1972) in his studies in the Garhwal Himalayas, (Kak 2005) of Kumaon Himalayas and Himachal Himalayas (Sharma 2005; and Mian 1999) referred to the gods and goddesses as the most active class of supernatural beings. Gods indigenous to a village are referred to as '*Ghar ka Deota*' (household gods) or '*Kul Deota*' (family gods) and are thereby distinguished from gods of other villages and other regions. Any god to which local people are devoted is '*Isht Deota*'. These terms are loose and often interchangeable in the village. However, Berremán draws an analytical distinction to categories deities as household gods and village gods. Household gods are those gods worshipped consistently by the members of particular households as a group, usually within a house, where the shrines are kept, and not worshipped jointly with the members of other households, nor with the aid of Brahmin priests. Devotion to these gods is passed down in the lineage. Village Gods are those worshipped jointly by all or nearly all villagers at some central shrine called a temple in or near the village. The worship is usually under the supervision of a local Brahmin priest.

Functioning of Deity system

Every village in study area has a temple where a village deity resides. Deity is a very important part of village life and generally before starting any important work, village people take the deity's blessings. The priest of deity is greatly respected and consulted in case of difficulty. The *Gur* (the oracle) plays an important role in the decisions taken in the village. Issues regarding match making before marriages, sale of property, purchase of property, building of new houses and many such issues is referred to the deity and on receiving positive responses the work is undertaken. In the absence of the *Gur's* approval all transactions are truncated and

shelved. The deity system plays a dominant role in day to day affairs of the village people who have a great faith in it for decision making and conflict resolution. Richer persons, however, resolve their conflicts outside this system. However, the deity system is losing its dominance due to communication, infrastructure development i.e. roads, markets and media (TV, Radio) where influence in the social fabric is increasing (SPWD, 1995).

The social system is maintained by the rules of caste and the numerous visits paid by deities to each other, accompanied by their people, and by gathering on occasions of joy and grief. Some of the customs associated with deity represents a strong caste hierarchy. As far as their common deity is concerned there is no difference based on caste in terms of belief in deity. Only the higher caste (*Rajputs*) has the right to carry the palanquin of deity. *Harijans* (Scheduled Castes) are not supposed to touch the *Deota* idol but lead the possession with musical instruments. Similarly, *Harijans* are not allowed into *Rajput* households during visit of deity. A collective gathering is only in open space and not under any common roof. *Rajput* does visit *Harijan* households but accept only milk but not water or grain food (Alhuwalia, 1966; SPWD, 1995).

5 Sacred Groves: Intersection of Resource Management and belief systems

Sacred groves are defined as small patches of native vegetation that are protected by traditional communities based on cultural/ religious beliefs (Gadgil and Vartak, 1976; Chandrakanth et. al. 1990, Ramakrishnan 1996). Groves of trees are treated as sacred by virtue of their place, content, history or relations with other social functions. This represents the third level in the hierarchy of sacred entities. They are widely distributed all over the world (Ramakrishnan et al. 1998). Sacred groves are specific forest areas of varying size and quality that have been accorded a 'sacred' status and have thus remained protected over centuries by local communities. These are often oases of dense forests in areas of intensive forest use. With a variety of nomenclature and equally diverse belief systems these groves are widely distributed in the Indian regions also, the institutional mechanisms govern these groves also differ widely e.g. Village councils or temple management committees, depending upon the location.

Sacred groves form a major component of environmental protection in the Himalayas. They are said to be part of traditional societies of pre-vedic period and the Aryans assimilated this value system and attached sacredness to species. Buddhism and Jainism which branched out of Hinduism as revivalist religious beliefs professed environmental protection in terms of not killing any living organism (Digambara Jains) and maintaining sacred landscapes.

In Himachal Pradesh, the tradition of sacred groves is generally known as “*dev ban*” are a unique natural resource in this region. The tradition is reported from Shimla, Mandi, Kullu, and Lahaul and Spiti districts. All these districts have dense forest cover as per Forest Survey of India except Lahaul and Spiti where groves are useful in maintaining the perennial source of water in harsh environmental conditions (Chattre et al., 1998). These groves range in size from clumps of a few trees to forest tracts spread over hectares. However, larger groves spread over are used for controlled use of resources by local people. There are about 10,000 temples in the state with well defined management committees and ‘*Biradari Panchayats*’ (caste councils). Almost all the major deities in the state have their own groves and hence the state can be called as Land of deities and sacred groves (Sharma, 2005). In fact, in the Western Himalaya, where penetration of the government forest department is more than a century old, sacred groves constitute the only ecosystem whose management is still vested with local communities. They are significant for their ecological value as well as the social sustainability of the institutions that

support them. These institutions that are still a centre of significant power and influence in rural society are crucial for local forest management (Vasan, 2002). e.g. Shipin, about 12 km from Shimla, is believed to be the biggest Cedar grove in this district and is home to trees that are hundreds of years old. Villagers who pass through the grove dust their clothes to make sure they do not carry anything belonging to the grove. Trees in the area cannot be cut or felled, and all deadwood found in the forest is used in the temple located in the grove.

Deo ban are managed on the basis of rules of use which are specific to each and there is a significant distinction made between using the forest for the deities own use such as in temple repairs and in communal cooking during *deotas* fairs, and the use for human needs like fuel wood, fodder, poles and timber. Human use is believed to be determined according to deity's willingness and wishes. There is no one set of rules which is operative for all *dev ban* or for all time.

Sacred Forest Groves of Kullu District

The paper describes the conservation status and usage of the sacred groves of Hallan and Railla by the local people in Kullu in Himachal Pradesh.

Origin of Forest Groves

Generally in the forests of deities like *Nagas* (snake), *Vanshiras* (forest guardians), and *Joginies* (fairees), which are manifestations of animistic and natural spirits, rules regarding use of their deobans are more stringent. The forest grove located in Upper Hallan village is dedicated to '*Basuki Nag*' who, according to ancient legends, is regarded as being king of all serpent gods in Kullu. The second forest grove associated with '*Ringu Nag*', is located in Railla. Forest groves have been named as '*Nagauni*', '*Nager*' or '*Nage re Baun*' in local vernacular which associate them with *Nag* (Serpent/Cobra) and may be translated as 'Forest belonging to snake god'. The association of these groves with '*Nag*' may confirm that they have been in existence for many centuries, probably from the hunter-food gathering stage based on evidence that:

- *Nag Deota* are worshipped in the form of God from the days when Nature worship began.
- The *Nag* was a tribe who lived in this part with a village structure adapted to exist in forested area with lakes.
- *Nag* is descended from a *Brahimincal* caste that lived in the mountainous region.

The gods of the grove do not conform to the classical Hindu pantheon, although they are equally revered by all Hindus. The evidence is supported by studies from Kosambi (1965) who contended that *Naga* became a generic term for forest aborigines (although not exclusively so) not necessarily connected or interrelated, who adopted a *Naga* (Cobra) *totem* or worshipped the Cobra. The Cobra is also regarded as the symbol of eternity in the Indian cosmos. The *Nag* tribe worshipped Shiva and regarded the figure of the snake as a religious symbol. *Naga* were food gatherers before the food producing societies cleared the forests. They came over to agriculture by gradual absorption as the forests disappeared.

Case study of Hallan Sacred Grove

The Hallan grove is an 'Undemarcated Protected Forest' of approximately 30 hectares of old-growth forest. The boundaries are marked with boulder stones and bushes, but as there are no fixed boundaries the area of the grove it is slowly increasing due to non-interference. The grove is free from any biotic interference due to the fear of the local deity (*Basuki Nag*) and is called '*Nagauni*'. Within the grove, there is a small water-logged area locally known as a '*saur*'.

The water coming into the 'saur' forms a small pond fed by a waterfall. It is a prohibited place where only authorised persons can go. There is no temple inside the grove; this is located in the nearby Hallan village.

Rules and sanctions for access and usage of grove

- i) No forest produce can be removed from this grove.
- ii) Usage of axes or any such tool in the grove is strictly prohibited and they should not touch the vegetation inside the grove. If a person knowingly or unknowingly does so, the transgressor has to offer a goat or sheep for sacrifice.
- iii) If any bushes are to be removed, only authorised persons with bare hands, locally known as *Jati*, are allowed to do so.
- iv) Leather shoes or goods are not allowed inside the grove. Only rubber or canvas shoes can be worn.
- v) Persons of all castes, including children, can go inside the *Nagauni* but they are prohibited from entering the *saur*.
- vi) Transgression into *saur* area is forbidden to women.
- vii) Women during their menstrual periods are prohibited from grove.
- viii) Local people are allowed to bathe near the, 'saur' either to get a wish granted or for curing skin disease. There is a separate waterfall for bathing for members of scheduled castes and they are prohibited to go near the waterfall which is reserved for upper castes.
- ix) Normally nobody stays inside the grove during the night. However, shepherds given special permission of stay during the night or during the worship period and can collect wood manually but without the use of any metal tools. Such tools are stored on stones and must not be allowed to touch the soil lest it may cut some grass accidentally.
- x) The hunting of wild animals and use of narcotics is strictly prohibited inside the grove.
- xi) Domestic cattle are allowed to graze inside the grove. If an animal dies inside the grove *Jatis* are allowed to remove it. A ceremony is subsequently performed by local priests to purify the grove. The owner of the dead animal has to bear the expenditure of such a ceremony and must also sacrifice a goat or sheep.
- xii) The sacrifice of a goat/sheep is not carried out regularly but only for the following reasons a) as a punishment for breach of rules, b) on fulfillment of the wish of any person, c) visit by other deities for taking holy bath, and d) for defecating or urinating in 'Nagauni' and dropping blood from wounds, etc.
- xiii) There are also rules associated with the visit by the deity to the grove. The visits are generally during the local fair held in the month of September and for three days of special worship performed by the *Jatis* during April every year. The people of the whole Hallan village, comprising 13 hamlets, organise special worship at regular intervals. The expenditure is collectively borne by the people of the whole village.

Belief about the sanctity of groves

There are many beliefs held by local people regarding the sanctity of groves. For example:

- (i) There are no reported incidents of attack by wild animals upon domestic cattle while grazing inside the grove. It is believed that the behaviour of wild animals towards domestic cattle is modified due to the sanctity of a grove.

- ii) The grove offers a legitimate place for the adjudication of intractable disputes between two parties. In such cases both parties are asked to bring a goat to the ‘*Deota*’ for settling the dispute. Flowers and holy water are thrown on them in a ceremony locally termed as ‘*pauchi-pauna*’. The goat of the person which trembles first is deemed to have won the dispute. The *Deota* committee fixes the punishment on the loser which must be followed in both letter and spirit.
- iii) It is also believed that excessive rains/ drought may be caused locally due to desecration of the grove, e.g. due to bone/meat etc. accidentally being brought in by crows, jackals etc. In such events *Jatis* search for such defiling materials and remove any such material which they believe is associated with the abnormal weather conditions. A ceremony is performed to consecrate the area and to please the deity who would help either to stop excessive rain or bring rainfall.
- iv) These beliefs and faith in supernatural powers of the deity together with fear of punishment to the erring individuals means that rules and sanctions are obeyed by the local community.

Sacred grove of Ringu Nag, Railla

The sacred grove which falls in Upper Railla village is an ‘Undemarcated Protected Forest’ of approximately 8 ha. One side of the grove has a stream; the other three sides have village paths. 14 hamlets consisting of 109 households (84 belonging to *Rajputs* and 25 to Scheduled Castes) surround it. The nearest and adjacent hamlet to the grove is ‘*Ghat*’ with 12 households with easy access.

Rules and sanctions of access and usage of grove

- i) Rules differ from Hallan grove. Dry fallen wood and leaves are extracted by the people to be used as bedding material. These leaves are generally collected by the children in the morning hours. Sheep and cattle grazing is allowed for a limited time.
- ii) During the local fair celebrated every year in August, use of axes and sickles is permitted for a day. The villagers will extract the wood prior to eating and this is distributed equally among all households including SCs. All the extracted wood is collected in a nearby fair ground for equal distribution. On the following day an animal sacrifice is made in order to purify the grove and appease the god before the rules are reinstated for the whole year.

Belief about the sacredness of Grove

The local people, for whom ‘*Ringu Nag*’ is the presiding deity, believe that in ancient times their deity faced hardships and worshipped and prayed inside the grove which provided tranquility and serenity. It is for this reason that the patch of forest is sacred to the grove with a limited entry to the grove. It is believed that any desecration and violation from permitted rules is severely punished by the deity, who has a very fierce nature.

Evidence for common property resource management

The case studies of Hallan and Railla groves show that the rules and sanctions of access and usage vary within similar ecological settings and ethnic groups. It indicates the appropriateness and adjustments of the institution to the site-specific local conditions. Those

groves which are found near villages are community protection areas in spite of their legal status as UPFs. Though they yield several direct benefits to the community the harvest of resources is restrained. It is important to stress that the dependence which is institutionalised through cultural and religious mechanisms has enabled the forest dependent people to maintain their existence since ancient times. The tradition probably goes back to the customs of food gathering societies who venerated nature and the natural resources on which they depended for their existence. The sacred grove arrangement is an example of a common property resource management system which has not broken down even with the intrusion of market forces (Singh et. al.1998).

Relevance for Policy and Joint Forest Management

Sacred groves form a religious system of forest classification and represent an institutionalised expression of criteria which define social behaviour in a particular area. They symbolise the needs that people believe forests satisfy. This classification embodies values, motives, capacities and manifests institutions that govern the behaviour of local people. They co-exist on land also classified in legal, economic or ecological terms, e.g. groves in Kullu are UPFs. The religious classifications of patches of forest and trees have a pervasive and powerful effect on how people perceive, allocate and use forests and differentiate land on its relative merits and purposes.

Although the religious classification is not recognised by the forest policy and state laws in India yet the consequences are more prominent due to simultaneous decimation of the nation's forests and preservation of local forests with religious value, commonly in the same place by the same people. However, the secular states do not recognise the religious content of forest institutions and ignore a possible significant factor in the exercise of forest policy. The religious codes for forests in India are deeply entrenched in the nation's history, landscape and culture as evident from the presence of sacred forests and trees. They are supported by an oral record of prescription, evidence, and judgment that extends several thousands of years (Chandrakanth and Romm, 1991). They appear to command more compliance in daily social life than to the state's forest laws and regulations (Gadgil and Guha, 1992). The success of commitment to JFM in order to achieve the goals of sustainable forest management depends upon increasing the recognition, the scope, and the support for choices that religious values encourage people to make to self-regulating conservation behaviour.

The JFM programmes in the Himachal Pradesh are focused partly on the development of co-operative plantations involving the state Forest Department and village institutions such as the Village Forest Development Committee or existing organisations. The success of JFM depends entirely upon the villager / forest user group willingness and ability to maintain any plantations and protect existing forests by regulating access to and use of them. These are precisely the choices important in maintaining sacred forest groves on which villagers are most likely to draw upon for the motivation necessary for JFM.

Religious order affects human interests and actions. Any JFM programme should be free to incorporate whatever rituals forest user groups may want to associate with the decision mechanism and rules of the formal secular arrangements of the state. By such deference the state/government does not commit itself to religious bias but it does allow the scope that the self-regulating conservation behaviour required for JFM. Thus, the state's needs for control and protection of forests can be satisfied in a more constructive manner.

For instance in '*Ringu Naga*' case study, all personal use is prohibited. No forest products, not even fallen logs or twigs can be removed for personal use. The sanctity of the

forest can be defiled by the entrance of women, lower caste people or animals, or by carrying leather objects or liquor into this forest. On the other hand other dev bans have more flexible rules. Enforcement of the rules of management of *dev bans* is primarily through religious beliefs of villagers. No separate institutions exist to enforce these rules or to punish transgressors, although the deity committee plays an important management role. It is believed that the deity itself punishes transgressors. The observance of these rules themselves constitutes a religious practice in the Kullu. This contrasts sharply from state forest management efforts which rely on legal entities, monetary fines, and threat of arrests to enforce management rules (Gupta 2005).

The resilience of sacred groves and the influence of the deity committee can be successfully used to enhance projects such as JFM. Rules of management of *dev ban* are often based on local conditions and beliefs and are locally specific rather than general. This diversity is a social and ecological characteristic that needs to be emphasized in the creation of joint management institutions. Villagers who do not use *dev bans* generally have alternate forests from which they are able to meet their needs. Closure of individual forests thus does not adversely affect provision of basic needs. This provision of alternatives is an important criterion in any local resource management. Community based management is crucially dependent on availability of livelihood alternatives. Another advantage of this model is that enforcement of rules is based on the membership of the individual in a particular community with collective beliefs. Thus there is little expenditure entailed in enforcement of rules. JFM can learn from this model by relying on social fencing based on collective decision making rather than establishing additional guards. Also, the deity committee is a strong traditional power centre that can and should be harnessed for joint forest management. Such indigenous institutions tend to be more resilient in the long run compared to externally initiated initiatives, although equity concerns persist.

Joint Forest Management, 'Sanjhi Van Yojana' (Community action in forestry) and Forest Development agencies (FDAs) are new institutions that are current experiments in Himachal Pradesh. A comparison of the characteristics of these institutions highlights the relative strengths of each. The negative aspects of traditional institutions are the equity concerns. Landless and lower caste villagers, migrants, and women are excluded for the most part. In contrast, the new forest management institutions are more broad based and give importance to equity at least in membership. They are more universal models that can be applied to the whole state. However, they are less participatory since the forest department retains control over many aspects of management and provides villagers with mainly powers to recommend. These *deo bans* are an integral part of the rural Himachal society. Their management by villagers and prospects of their future sustainability are functions of their social context. Changing social parameters such as villagers' religious beliefs, their understanding of the common good, and the influence of private property in the rural Himachal society and government forest policy have all influenced this institution in dynamic ways.

Decision-making process with respect to conservation and sustainable use of resources by stakeholders, in the context of the 'sacred' has always been determined by traditional institutions, in the past. Realizing that institutions incorporate changes as societies evolve through time, these institutions have to undergo changes and adapt to present day demands, adjusting to changing societal value systems. Understanding the dynamics of institutional arrangement in a historical/cultural context will enable us to adapt them to the present day needs. Traditional institutions available for natural resource management need to harmonize with modern institutions created by various governmental agencies. It is in this context, the concept of joint forest management

(Poffcnbrger et al., 1995) provides a general framework but with emphasis on traditional ecological knowledge and cultural perceptions of local communities, for conserving the sacred.

Case studies of Forest resource management systems in Himachal Inner Himalayas:

a) Edible Pine nuts, black cumin and grass management and collection in Kanam Forests

Kanam village is located 8 kilometres from Spiti on 42nd National highway in Pooh subdivision at 2800 metres altitude. It has a population of 1030 within 173 households. The village is in the cold arid region of the inner Himalayas where the vegetation is sparse and the people's dependence on natural forests is very high. Villagers have recorded rights on natural forests and use these forests for obtaining timber for house construction and repair under a timber distribution system. They also collect firewood, fodder and grass, edible nuts, medicinal herbs etc. to sustain their life and for economic uplift through sale of some of these products. The main products of socio-economic importance obtained from the forests and for which villagers have organized themselves for their protection, collective extraction and management are edible pine nuts, black cumin seed and grass through local deity institutions.

The deity affairs are managed by three village persons (locally called *mathas*) nominated by inheritance to look after property of a temple, orchard and a bank account. The *mohatmim* (there may be more than one) is the chief of the management committee and in the capacity of the shu *Mathas* petitions the deity on behalf of the inhabitants. The man locally known as a mate appointed on payment of about Rupees 1500 per month by the temple committee, informs the villagers about the meetings and other social activities undertaken in the village. He is assisted by other functionaries like the *pujaris* (priest) who performs the regular prayers, the *khazanchi* (treasurer), *kaithas* (accountant) and *bhandari* (storekeeper). The *grokch / gur* (oracle) is only the voice of the deota. Most of these offices are hereditary, conferred on the heads of eminent families. Offerings, of both cash and kind, are used to meet the expenses of everyday rituals and the special occasions when the deotas play host to their followers. Surpluses were traditionally given out as loans to devotees, to assist them in times of need. These days, cash may even be deposited in banks but the bulk of the gold and silver ornaments, coins and weapons are stored in chests kept in the temples. Most of the village affairs and disputes are settled in the meeting organized in the temple premises (Note: The deity institution varies in Kinnaur).

Chilgoza occur in compartment number 211 of Kanam forest for which only the local inhabitants have recorded rights over the produce. Chilgoza cones mature in the month of October. A meeting of the villagers to decide the collection of its cones is held by the deity nominees during October when the villagers feel that chilgoza cones are ready for plucking. The villagers assemble at a specified time, date and place, mostly in the premises of the temple. A senior deity nominee initiates meeting proceedings and the villagers collectively decide the system of collection and distribution. Generally one male and one female from each family are nominated for collection on the specified date. Teams of one male and one female (mostly of the same family) spread out in the forests and the male member climbs the tree and plucks the cones while the female member gathers the dropped cones. The trees contain three kinds of cones viz., old opened cones from last year's crop, freshly matured cones which contain ripe *neoza* nuts and the small immature cones which will mature in the following year. Only cones with ripe nuts are harvested. Collection starts in the morning and lasts until 4 pm when every party brings the collected cones to one place and the collections are entered in the record maintained by a person at the collection site.

In good seed years, a team collects about two gunny bags containing about 150 cones of 80 kilogram sugar capacity. Entire day's collection is heaped at a designated place and then distributed equally among all the collected partners by locally employed distributors. Distributors get about 50 additional cones for performing this job. On the second day, people also spread out in the forests to collect cones which are heaped near the collection site and distributed in the evening. The collection in the area lasts for 4 days. In some cases some families forego their share, as they do not participate in the collection while in some others they engage paid labour to ensure their share of the collected produce. On completion of the collection, some cones still remain on the more inaccessible branches and trees. The village then organizes an auction for collection of the remaining cones. Villagers generally do it for amounts ranging from Rupees 5000 to 10000 depending on the rough estimation of the leftover cones. The amount so realized goes into the deity account.

The second important forest produce of high economic value is black cumin (*Carum carvi*) seed. It occurs in about 250 hectares forest area and people collect it free of cost as per their recorded rights. It is collected during August / September. The mode of collection is decided the same way as that of chilgoza pine. Generally one person from each family is asked to collect on the specified date and collects the herbs and maintains a separate collection. On completion of the process, the individual carries away the day's collection. Collected herbs are then sun-dried and beaten for seed extraction. The extracted seed is then cleaned and stored for sale in the market. Each family collects about 5 kilogram seed / year and its value in the market is about Rupees 500 per kilogram.

An important product extracted from the forests is grass as fodder for domestic animals. It occurs in the forests surrounding the village. Villagers do not allow grazing in areas protected for grass cutting. Animal grazing is allowed at high altitude pastures commonly called 'Kandas' located at a considerable distance from the village. In the adjoining areas, grazing is strictly prohibited and the committee appoints a watcher on rotation basis for this purpose. Grass cutting is done in September before the onset of winters and the grass is used for feeding animals during the ensuing winters. Each family gets about 1 quintal (3 head loads of 30-35 kilogram having 120 hand bundles) grass having a market value of about Rupees 1400 per quintal. A family who deliberately indulged in grazing will be fined Rupees 1000 and the amount is credited in the deity account.

b) Extraction of the morels, medicinal plants and grass in Nathpa Forests (Kinnaur)

Nathpa village is situated about 5 kilometers from the 42nd National highway in Nichar at 2000 metres altitude and has 169 households comprising 589 people. The main occupations of the villagers are sheep rearing, agriculture and collection of Morels (*Morchella esculenta*) and medicinal plants for sale.

The local deity- 'Naag Deota' the serpent God and have a five-member committee of the deity that includes *Mathas* (head), *Pujari* (priest), *Mali* (oracle), *Mate* (supervisor) and a *Khajanchi* (cashier). Membership of first three of these positions is inherited whereas the other two are selected. The villagers take every major decision on social activities and common resource use collectively and the decision of the Deity Committee is final and binding on all. The committee organizes meetings of the villagers in advance of any activity in which all families participate and approve the decision of the committee.

Villagers collectively maintain around 8000 sheep and goats and send them for grazing on high land pastures known locally as 'Kandas' during May to September. During winters

families with smaller number of animals maintain them in their respective households whereas those with big herds migrate to lower altitudes for grazing. Families having over 25 animals attend them in rotation during summer grazing at higher reaches, whereas those with smaller numbers pay Rupees 10 per animal to others for grazing their animals. The deity committee decides the rotation of grazing.

The grass area in the forests is permanently divided among the families and the committee fines anybody grazing animals in areas reserved for cutting and the fine goes to the family whose share of grass has been grazed. A meeting of the villagers is held after the monsoon when date and time of grass cutting is decided. Grass cutting is started on decided dates. The Morels (*Morchella esculenta*) locally called Morels is a nutritious wild mushroom collected from the forests during May. Villagers hold a meeting before proceeding to collect the morels and decide the number of persons to be involved per family in collection and for taking protection measures for preventing fires in the forest during the collection period. Each family collects Morels of values between Indian Rupees 1000 - 2500 in each season.

The villagers from the forests extract two medicinal plants called '*Dhup* and *Karu*'. An auction notice is issued and on a specified date, the selling of the medicinal plants is conveyed to a contractor. Villagers themselves collect the medicinal plants and sell it to the contractor at pre-decided rates. Outside people are not allowed to collect medicinal plants held as common property resource. The entire amount earned out of sale of medicinal plants is divided into three equal parts out of which two parts are distributed equally among the villagers and one part is deposited with the deity. Each family earns around Rupees 7000-10000 each year. The areas are closed for 3 years and thereafter collection is made for 5 years to allow the stock of medicinal plants in the forests to regenerate.

c) Edible Pine nuts and grass collection in Luj and Dharwas forests of Pangri (Chamba)

Luj and Dharwas villages fall in Killar Forest Division of Pangri Forest Division of Chamba district at an altitude of 2880 metres and 2440 metres respectively. Luj village has a population of 608 people divided in 117 households and Dharwas village has a population of 703 people divided in 125 households. The villagers have a similar tradition of participation as is in Kinnaur district for collection of edible pine nuts. A village committee commonly called '*praza*' organizes the major social activities and those related to collective resource use.

Chilgoza pine forests occur over 40-50 hectares around these villages and their cones are collected during October. *Praza* organizes a meeting of the villagers under the chairmanship of '*pradhan*' (village headman) and decides the dates and procedure for collection and distribution of cones. At least one member of each family attends the meeting. Generally two members per family are sent out for cone collection on the designated date. Cone collection starts on the designated date and lasts till all cones are collected. These cones are brought to a common place decided in the meeting and are distributed equally to participating families.

For grass collection from government forests, a different system is practiced in the village. Grass is protected from grazing collectively by the villagers through instructions issued by the *praza*. A date is decided for cutting the grass in a meeting of the *praza*. On the designated date one person from each family goes to the forest early in the morning and earmarks the area having good grass growth which can be cut within that day. If area cannot be completely cut on that day, the *praza* fines him. Villagers under this system are supposed to cut grass over the entire area earmarked in the morning but he can carry home cut grass on following days.

d) Willow coppice management and use in Lossar village (Spiti)

Village Lossar situated at 4079 metres altitude is 68 kilometers from Kaza-Kullu State highway and is the last village on this route near the timber line. It has a population of 227 people divided in 53 households. Wild willow (*Salix fragillis*) is an arboreal shrub that occurs naturally on river and streambeds at high altitudes where no other woody species generally occur. Coppice shoots of the species are harvested and are extensively used as small timber, firewood, fodder etc. by local people. The demand for its sets (1 metre long branch parts) has increased since 1980s for their use in making new plantations by the 'Desert Development Project' Forest Department and other organizations. These sets are also used to support the mud-roofed houses locally made in the area.

The management of the willow forests and harvest of coppice shoots is done by a 3-member committee headed by '*nambardar*' (village head man) and two other members of the village who are selected from each house by rotation. The willows are managed under a coppice system in which coppice shoots are harvested in alternate years. The area is divided for harvesting and each year a different area is selected. All willow shoots are harvested from stumps during April by employing one or two members from each family. The harvested shoots are made into 1-metre sets, which are sold to different agencies for field planting. Lops and tops of these branches are equally distributed among the villagers for use as firewood; about 10000 sets are sold for about Rupees 30000 annually in Lossar village in the year 2004.

Besides the willow sets, villagers also work collectively in making plantations, irrigating them and in their watch and ward. The committee decides the number of persons to be engaged from each family for planting, irrigation, making stonewall fencing etc. Persons for watch and ward work are selected by drawing lots. Each family gets a job for 3-4 months in watch and ward in existing plantations. The total amount of sale of willow shoots and plantation work is received through '*nambardar*' and is equally distributed among the village families. Each family gets around Rupees 10000-15000 every year from these activities.

If any member violates the instructions of the committee, he/she is fined with having to provide / donate bottle or two of locally brewed alcohol. Offenders are asked to take an oath in front of the committee of not having done that violation what does this mean? It is believed in the area that taking a wrong oath results in some bad omen.

Besides these forestry operations, the villagers also conduct all other agricultural operations jointly through co-operative labour. Repair of traditionally and newly made water channels are collectively done by the villagers and are an important activity, as all agricultural and plantation activities in the village are only possible because of irrigation. Grass cutting, sowing and harvesting of agricultural crops in the entire village is governed by the time schedule given by the committee. Violators are fined in terms of local alcohol that is consumed collectively by the villagers during social gatherings.

Implications for participatory forest management and sustainable livelihoods: a discussion

In the trans-Himalayan zone of Himachal Pradesh, the inhabitants have recorded rights on forest use through legal forest settlements. However local tribes inhabiting the area are conservative and use collective participatory approaches (as described in case studies) in their management and use of forests and pastures on which their very survival and existence is dependant. Hence, people protect resources used by them. The control is exercised through their local institutions, for example, local deity committees for conflict resolution generally by consensus and fines. There is a strong commercial activity involved as edible nuts, cumin seeds,

morels and medicinal plants found in the area are highly valued and source of cash income. It demonstrates the sound forest-good livelihood linkages in HP (Morrison 2001).

These case studies of 'traditionally in vogue' participatory approaches in forest resource management and regulated use of their products are deeply embedded in local deity system as discussed. The different approaches to distribution of forest products by committees for collective collection is followed by equitable distribution; permanent distribution by area; number of trees by rotation, direct auction to contractors and equitable distribution of produce by members of the group as highlighted in the case studies. Therefore, the conflicts between individual families' castes and groups in level of participation in different operations and in distribution of forest products are minimal in comparison to those found in government introduced joint forest management (JFM) programmes. These systems have undergone time testing for several decades and indicate villagers' increased dependence on natural resources for sustenance on these land-locked valleys of inner Himalayas.

These traditional systems are very appropriate community institutions under which rights are consistent with the capacity of forests to yield income and livelihoods that can be sustained, thus leading to sustainable forest management. These forest product use systems demonstrate combination of private, state and common property use and management regimes. The harsh climatic and living conditions of the inner Himalayas has helped to strengthen social capital by minimizing sources of conflict and has also strengthened equity consideration amongst the communities. The local institutions have ensured that they have a basic level of institutional and financial sustainability. Mutual trust and cooperation amongst the members of communities is a significant factor explaining the performance of local institutions. The internal norms, role clarity, equity in benefits flow, livelihood impacts and ability to resolve conflicts, lead to strong social capital formation in these communities and have a positive impact on forest management.

However, modernization and market forces, development projects, shift in belief system and increased tourism are posing threats. Since independence, forest resources have come under increasing pressure resulting from increased population, local needs, changing policies and the need for modernization in a rapidly developing state. Improved infrastructure and communication have further intensified the pressure through commercialization and economic diversification, including a rapidly expanding tourism industry. The splitting of joint families, partition and allotment of land and recent prosperity has caused additional direct pressures on forest resources and has undermined traditional local responsibilities towards forest resources (Morrison, 2001).

The conservation of forests in the Himalayas is in line with the current national forest policy with its focus on environmental conservation and the meeting of subsistence needs for forest dependent communities. The case studies demonstrate that forest and tree resources contribute to livelihood outcomes of the inhabitants through increased income (large number of inhabitants generates a proportion of their income from the forests). Improved well-being has reduced vulnerability and resulted in a more sustainable use of the natural resource base (Arnold 1998). However, it needs to be strengthened through modern nurseries to support plantation efforts where natural regeneration is not occurring and supplemented through value adding of harvested produce.

New joint forest management programmes initiated in Himachal Pradesh and other states have shortcomings due to two large committees, which unrepresented communities. There is an over-reliance on forest guards as animators and secretaries of committees. The committees are single-issue bodies with weak links to other community institutions. Micro-plans are too long

and complex, focused mainly on enclosure and replanting with no consideration of livelihood consequences for the poorest (Gupta 1999). The traditional participatory approaches and local institution in Himalayas based on sustainable livelihood principles hold promise for sustainable forest management. The decentralized system seems decidedly to be more effective at building partnership than centralized system.

It is significant to note that these traditional participatory and institutionalized approaches to managing common property resources such as the adjoining forests have clear implications for promoting the quality of the life of concerned communities. These approaches have an in-built system for ensuring income and employment for local people. The system is highly equitable and participatory and ensures conflict resolution without monetary cost or interpersonal rancor to the people and families of these tribal communities. It provides a simple yet very effective method for preserving environmental assets like the forests. These approaches clearly provide a system of perfect balance between exploitation of natural resources and their preservation and help in avoiding the conflict that arises elsewhere in India between tribal communities and the government when the latter tries to undertake development work on land inhabited by the former.

These systems provide improved livelihood opportunities while maintaining or even increasing existing social capital of the concerned tribal communities. This system of forest management ensures income and employment to the local people on an equitable basis. It helps to harmonize exploitation of these common property resources with their preservation and provides a democratic mechanism for conflict resolution. At the same time the system also perfectly jells with the religious beliefs and practices of the communities through their deity committees. These traditional approaches need to be replicated elsewhere because this method of empowering local communities to manage their common property resources can promote sustainable livelihoods on a much wider scale. The analysis of indigenous systems of management through local institutions reveals strong positive relationship between social capital and natural resource management at grass root levels. The importance of indigenous technological knowledge in the socio-economy of the mountain people and the need to link it with improved technology and practices is needed. Close proximity to natural resources, local control of resources, intimate functional knowledge about them (again largely because of the closeness of the system), and lower pressure of population helped the communities to evolve folk -technologies and institutional arrangements, and to enforce them without external interference, for the protection, regeneration and regulated use of their resources. In the process, attitudes and norms of socio-economic behaviour, which had gradually evolved for the use of biophysical resources of the community, helped in linking social system with ecological systems to ensure sustainable use of resources in a subsistence context.

Institution of Co-operative Labour (Juari):

The institution of co-operative labour exists among many communities with a subsistence economy in most developing countries. It is known by a range of terms such as reciprocal labour, exchange labour, traditional work groups, communal labour, collective labour, and festive labour and occurs in a wide variety of geographical, cultural and historical environments (Erasmus 1956; 1975). Moore (1975) defines co-operative labour as the joint performance of a task, or a series of sequentially-related tasks, by a group of persons practising a minimal division of labour whose relationship to the beneficiary, or beneficiaries, of their work is other than that of employer to employee. Local names are used to express it for example *Juari*, *Playdee* Kullu,

Himachal Pradesh, *Nogar, Parma* (Nepal) (Messerschmidt, 1981), *Ayni* (Peru), *Vuelta mano* (Chile), *Cambia de mano* (Colombia) (Erasmus, 1956), *Chovwirano* (Malawi), *Chigoneka* (Zambia) (Chipeta, 1982). Erasmus (1956) made the distinction between reciprocal farm labour as “festive” and “exchange” labour and reported that exchange labour survived among poorer farmers in most of rural western South America whereas festive labour was comparatively infrequent. The distinctions made between exchange and festive generally concerns the degree of obligation to reciprocate labour as well as the quantity and quality of the food and/or drink served to the workers. In exchange labour the obligation to reciprocate is very strong and any food or drink provided is usually considered ordinary fare. A day’s labour is expected in return for each day given; and if one is unable to meet an obligation due to sickness etc., someone must replace the worker. At festive labour parties the host wines and/ or dines his worker guests in an extra-ordinary fashion, and his obligation to reciprocate their labour is not only weaker and in most cases obviated. The existence of the institution is a cultural tradition to enable people to overcome difficulties associated with tasks which can not be accomplished individually. Scott (1976) portrays that in a peasant society co-operative labour or labour exchange is a variety of social arrangements designed to insure village members against subsistence crisis. According to Bennett (1979) (quoted in Messerschmidt, 1981) indigenous co-operative labour “consists of forms of reciprocal exchange and sharing which emerge in social life as a necessity for continuous survival patterned in accordance with principles attached to various social groupings and strata.”

Co-operative labour is classified along a number of dimensions: size of the work party, degree of disparity among in the economic or social status of members, the extent of reciprocity implied or required, the size of the reward, if any, given to workers by the organiser, the extent of overlap of membership of different work groups, the type of activities for which co-operative labour is used, the proportion of total labour used, the type of relationship among members (Messerschmidt, 1981).

Co-operative labour in Himachal Pradesh

The reciprocal labour relations are practised in two common forms in Kullu, locally called ‘*Playdee* and *Juari*’. A task was said to be done in *Playdee* if a select group of women take turns working in each other’s fields over a certain period of time, often within a week or a few days. An example is the weeding of crops in the busy agricultural month of ‘*Shard*’ (mid-June to mid July). Generally, five to six women might get together, all friend or neighbours and usually of the same caste, and work on one woman’s fields until they are done, possibly a day to two days work, and then move to the next woman’s field until all fields are done in this manner. *Juari* is an exchange of labour; however the reciprocal exchange does not need to happen within a set period of time. If an activity is done in *Juari*, people may congregate to help one household with a certain activity. The same household is then obliged to attend the *Juari* of the people who participated.

The field study has indicated that the existence of *Juari* is strong in the villages which are remote and comparatively less influenced by the market economy. The institution has weakened in villages located near roads and urban centres which in recent times have been affected by changes in the economy and have been replaced by ‘wage labour’. Therefore, *Juari* is a

temporary village-level association for co-operative agricultural field work on a seasonal or task specific basis. Systems of sharing labour through *Juari* for various works by the community in Himalayas is done mainly for activities relating to agriculture work, house construction, collection of water, timber and fuelwood and during marriage ceremonies.

a: Agriculture

Juari is practised in agriculture for operations like ploughing, for the application of farmyard manure, harvesting, threshing and cultivation of banjar (wasteland) land. The primary purposes are to plant wheat or maize, transplant rice seedlings, and weed and harvest the main crops. This is shared between 5-10 households depending upon the workload within a village. Thus, for example, at the time of manuring all villagers unite and work on one farmer's field till the work is over, then shift to the next farmers' field. *Juari* is also practiced between farmers of various villages whose lands are scattered in different villages. They help each other by providing fodder in exchange for compost.

b: House construction

Cutting and hauling of fuelwood, timber for construction purposes obtained as a right on concessional rate, repair and building of houses, repair of irrigation channels, etc. are included in *Juari* activities. Labour of cutting of trees under timber distribution into sleepers and transportation of these to the person's house is done by *Juari*. During house-construction, the person needing help asks villagers to help him transport the stones, timber and in the construction of the house. *Juari* for house construction is practiced both within the village and between villages. Food is provided by the person building the house. As a custom, if a villager is not able to attend the *Juari*, one tries to attend future *Juaris* without any invitation.

c: Marriage

In the village, people help each other in collection of fuelwood, drinking water, food rations and sending invitations to scattered and far of places.

d: Functioning of Co-operative labour

In case study villages, it was said that the number of people participating in *Juari* may vary from 5 to 20 and group size determines the duration of a task. Sex and age are sometimes criteria for *Juari* membership and there are occasional all-female groups but most groups are mixed. The age of members is flexible and depends on the personal relationship with the recipient of *Juari*. Neither different social status nor caste is criteria for joining an exchange work co-operative. The tradition of co-operative group labour within the community cuts across lines of kinship and caste. Such voluntary help is undertaken when someone announces a need for a task. On the appointed day, all those who are free to do so assemble at the place of work. The only people likely not to participate or to be asked to participate are those who have had a dispute with the person to be helped or with others closely identified with him. E.g. the principal occasion for co-operative labour in one of the village, is the transplanting of rice. Occasionally weeding of rice or of other rainy season crops is done cooperatively. Special songs, vigorous, rhythmic, and heroic in theme, are sung by those who participate in such co-operative agricultural work. Whenever there is a great deal of carrying to be done over considerable distances, co-operative labour may be employed, as when wood, slate, or sheet iron is to be brought for house construction. Roof beams are lifted into a place on a new house in this co-

operative manner. After the work is completed the “host” serves some refreshment, but no formal obligation to repay is incurred.

At least one member from each household participates in a *Juari* group. So the number of participating people depends upon the number of households in the village and the quantum of work. It was observed that in cases where few households occur the people in the village engage labour on *Juari* from the adjoining village.

Both women and men of all age groups participate in *Juari*. For specific tasks like paddy cultivation (*Ruhani*) women form a *juari* group and while men gather for house building, timber cutting and transportation. Generally, the *Juari* participants are entertained to a sumptuous meals and drinks in the evening. For the *juari* purpose, the people have mutual agreements / conventions. For specialised work wage labour may be engaged. The existence of *Juari* shows strong social cohesion within and between villages. *Juari* is practiced within homogeneous groups whose benefits, resources and attitudes are common. These homogeneous groups can be identified during village fairs and in villages during major *Juaris* (as for house construction or marriage). This group can provide a platform for micro planning in community forest management.

Cooperative labour and Joint Forest Management

The institution of co-operative labour which has a survival role for the communities may have a role for developmental purposes such as JFM. The benefits of *juari* are that the tasks are done quickly and efficiently and allows the cultivation and strengthening of social relations within the community. It could be assumed that local opinion and a traditional form of co-operation might play potentially important roles in an attempt to organise and develop the institution of the Village Forest Development Committee (VFDC) for sharing forest management responsibility. The institution of co-operative labour preconditions the communities for developmental purposes such as participatory forest management. Berreman (1963) reported that in Garhwal Himalayas village property, such as the water supply and the trails, were repaired cooperatively when their condition deteriorated. Since independence there has been a tendency to regard that as a government responsibility. Government attempts at enlisting the voluntary co-operative labour of villages have met with little or no success, the common complaint being that the government servants who make the requests are paid employees, so they should do the work rather than asking villagers to do it.

“What right has a salaried official to ask for voluntary work from others? Pay us sixty rupees a month we will do voluntary labour willingly”. These attitudes relate to a larger area of attitudes towards the government schemes involving participation of people.

However, there is an increased apprehension that Some of the respondents were also apprehensive that *Juari* could not be done for government or state works even if it was of totally local importance involving the welfare of whole of their community. *“The worry was that particular government agents might illegally claim the work was done by co-operative labour and the wage money kept by the agent”*.

However, where people were sensitised due to regular contact with forestry staff co-operative labour might be possible for a day. Also the ambiguity in the distribution of benefits of community co-operative labour to individual households and dissatisfaction with the reciprocity of labour to the individual households, which is an inevitable feature in co-operative labour as compared to wage employment, is the constraints for co-operative labour to be incorporated into the participatory development process. The opinions of the people about state responsibilities

and distrust of state agents is particularly significant as it makes it difficult to involve people in the management of state resources by organising group labour exchange. However, the success in involving people through co-operative labour may be a positive social indicator of participation and trust to jointly managing the resource with a state agency. It can be concluded that where there is allegiance to one village god the institution of *Deota* could be an effective medium for rule making for forest use. It could also act as a medium for conflict resolution in villages. Further, just as the resources of a specific area are linked together, members of different endogamous groups were also linked together in a network of reciprocal exchange and mutual obligations. The overall picture is one of an ecosystem in which different human groups assumed specialized but interconnected 'niches', interconnected not only functionally but also culturally through time-honoured practices and reciprocal obligations.

Conclusions

The historical legacy of Himachal Pradesh is highlighted since zeal to create new institutions; often the rich experiences of the past are ignored or forgotten. It is emphasized that none of the traditional institutions described are highlighted because they are not perfect. Each of them had their own problems and challenges and perhaps none of them can or should be reproduced today. However, the problems identified in these institutions should serve as important lessons for current development efforts. For instance, none of these institutions considered seriously the issue of gender rights. Women, who use forests extensively, were most often ignored. Again landless people and migrants often had few rights to these natural resources. Religious institutions like sacred groves also tended to bias the upper castes and classes who had more authority and control. However, these historical examples are important both in their successes and in their failures as we can learn from their failures and emulate their successes as described in this paper. Another crucial issue is also the creation of multiple parallel institutions. In many villages there are parallel institutions working in the same field that often work at odds with one another. Every new development or conservation programme introduces a new and independent village institution. Each government department and each non-government organization also creates a new collective from the same group of villagers. For instance, there are several (women's groups) in a single village organized by the block for development programmes, initiated by the forest department for conservation, organized by local NGO's organizations for gender concerns, and created by various other government departments. Sometimes the multiple women groups are also segregated by caste and class. Apart from these, there are youth groups, cooperatives for different purposes, caste groups, the *panchayat*, committee, forest committees, etc. In this context, JFM has a mandate to create new village institutions called Village Forest Envelopment Committees (VFDCs). The creation of a new institution is often necessary since the older institutions tend to have various biases and pre-existing disagreements. However it is necessary today to seriously rethink the advantages and disadvantages of having multiple groups in a single area, with overlapping membership and varying objectives that often contradict each other. It is in this context that a rigorous analysis of pre-existing institutions becomes crucial. Depending on local conditions, these institutions may be co-opted, modified, or at least invited as collaborators to achieve the objective of sustainable forest management. Himachal Pradesh has a legacy of local forest management that can serve as models and guides to current forest management both in the state as well as elsewhere. While absorbing new ideals of participatory management that are expounded by experts in this field, it would serve us well to recognize the wisdom of our own past and also learn from past mistakes.

Dreze and Sen (2002) observations on cooperative action and social context are complementary and suggest that social development in Himachal Pradesh (and also, to varying extents, in other parts of the Himalayan region) has been facilitated by a relatively favourable social context, which includes the comparative lack of sharp social disparities in village communities and a strong tradition of local cooperative action. Although many studies have analysed various factors conducive to development in Himachal Pradesh, however, the role of the institutions of local deities in hill society have not been appreciated or noticed. Through these local deities, the primitive heroes become alive from folklore and mediate in the development and maintenance of cohesiveness among the people of the village and the region. There seems to be a great possibility that the institutions of local deities may serve as institutions for management. The indigenous institutions of local deities in the western Himalayas with reference to Himachal Pradesh, which have implications for natural resource management, have been explored and analysed.

Globalisation intends to bring homogeneous and uniform environment of management with number of specialised institutions for respective corresponding functions whereas in small scale societies single cultural institution performs multiple functions in the society. Cultural organisations maintain diversity in belief, function and organisation activities. The village deity institutions are one such cultural institution that provides many functions to the community in Himalayas. Sacred grove is a tradition multipurpose religious commons of the villages as common is governed and managed by traditional pattern. The case studies of 'traditionally in vogue' participatory approaches in forest resource management and regulated use of their products have deep roots in *deota* (local deity) system prevalent in these and other areas of the state. In local institutions explained conflicts between individuals, families, castes and groups in the level of participation in different operations and in distribution of forests products are the minimal in comparison to those found under joint forest management programmes. These indigenous system has undergone time testing for several decades and indicates the villagers' increased dependence on natural recourses for sustenance in these land-locked valleys of the inner Himalayas. New joint forest management programmes initiated in this and other states strongly underline the need for developing areas to produce sustenance-based products for the community. The cases presented a strong base of commercial activity through sale of edible pine nuts, cumin seed, medicinal plants etc. while still ensuring participation of local people in protection and management of adjoining forest resources.

The policy of Joint Forest Management village level institutions for formulation of forest use and management rules) introduced by the government has created institutions of village development committees that should now be assessed vis-à-vis these 'traditionally in vogue' participatory approaches in the Himachal Himalayas for sustainable forest management. The latter have great merit for promoting equitable distribution of the produce from neighbouring forests. The democratic and decentralized management by small village communities themselves and their having evolved over a long period of time is a satisfactory system of exploitation as well as preservation of this common property resource in perfect harmony with each other. However, these efforts need to be supplemented by supporting communities with modern nurseries, available technology for plantations, post-harvest technologies for value adding of products so as to increase income and livelihoods earning opportunities for dependent community.

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