

An Analysis Of Traditional Forest Management System In Jaunsar – Bawar Area

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Abstract: Forests have always performed multiple roles in the life and livelihood of mountain village communities in Himalayan region. Forests contribute in the maintenance of soil-moisture, strengthen ecological stability, provide domestic energy, are source areas of fodder supply and organic manure and make availability of timber to the inhabitants of the region. Since many of the economic and domestic activities are based on forests, it is important to understand the forest management mechanism in the areas such as Jaunsar- Bawar, an area of Uttarakhand which is inhabited by Jaunsari tribal community.

As in other areas of Uttarakhand, there is variety of institutions that are engaged in forest management in this area. There are traditional institutions such as Dev Van (sacred groves) and Khat Van and there is modern institution such as forest department and there is community institution such as Van panchayat (Forest Council). Large part of forest being managed by Van Panchayat has been possible due to the tradition of informal and formal community forest management institutions. Some of well known community institutions are Dev Van, Lath (wooden stick) Panchayats, Van Panchayats, Mahila Mangal Dals, Maiti Sangathan and other community conservation organizations.

The paper highlights the background of traditional forest management systems in the study area. It brings out the salient features of both the systems and their present status in the study area. Finally the paper presents the views of community members on forest management in Jaunsar-Bawar.

I. INTRODUCTION

In case of Jaunsar-Bawar, informal arrangement to manage the forest was in place through Khat system in which the community at the village level or at the level of group of villages (Khat) used to decide about the extraction, protection and management of the forests surrounding the villages. Traditionally the area has been dependent on agriculture and livestock rearing, forests have been one of most important natural resource and people have always been concerned about these. The conservation and improvement of forests have been a question of life and death for the people of Jaunsar-Bawar (Joshi, 1995). Forest management in study area has generally been in accordance with management system that has evolved over time in Uttarakhand Himalaya which has been part of larger state of Uttar Pradesh prior to formation of Uttarakhand state in the year 2000. The forest management system had a significant role of local community prior the initiation of

scientific forestry in the area by the British. Even during the British rule, community in Uttarakhand had asserted itself and forced the government to constitute Van Panchayats and hand over a part of forest to be managed by village institutions. Thus the present system of forest management has evolved over long period of time and has mix of traditional, modern and community based systems in Uttarakhand. Jaunsar-Bawar as part of the region has some of these systems in existence such as Dev Van (sacred groves) but at the same time has unique systems such as Khat Van. The details of traditional forest management systems are presented in this section.

II. STUDY AREA

The study area, Jaunsar- Bawar, is in fact a part of Dehradun district and has two administrative blocks- Chakrata and Kalsi. These are divided in three tehsils of Chakrata, Kalsi

and Tuini. But traditionally and popularly people have been calling this area as Jaunsar-Bawar, Jaunsar to be more precise. People also refer it to as Chakrata region. The boundaries of the region are demarcated with Uttarkashi district of Uttarakhand in the north, with Tehri district in the east and with the Sirmaur district of Himachal Pradesh in the west. The natural boundaries are formed by river Yamuna in the east and by river Tons in the west, except in smaller part in the north. The geographical area of Jaunsar-Bawar is approximately 1002 sq.km. The total population of the study area is 1, 25,486 (2011 census) out of which population of Scheduled Tribe population was 63% and Scheduled castes population is 26 percent.

The study area has the typical characteristic features of a mountainous region. It has undulating terrain, steep slopes and deep river channels and with the altitude ranges from less than 600 meters to above 3000 meters. The temperature and rainfall conditions vary according to altitude, aspect and other natural factors. The vegetation of the region ranges from tropical deciduous to Himalayan temperate and sub-alpine forests. Economically the region is poor and more than 80% of the people are engaged in agricultural. The irrigation is available in only 13% of the net sown area and the agricultural fields are small and scattered. In this kind of geographical area, the study of forest management assumes great significance.

III. KHAT VAN

Historically Jaunsar-Bawar, the study area had a very unique social and administrative structure. Though informal in nature yet it was respected by all and the decisions taken regarding social and administrative aspects were followed by all the community members. As detailed in chapter 2, the numbers of villages were grouped in a unit called *Khat* and the area was organized in 35 Khats having 445 villages as per the fourth settlement of the region in during 1824-1827. There was a senior person called 'village sayana' (wise man) who used to be the head of the village community and was responsible for taking decision regarding all the social and administrative issues. Each village 'Khat' was headed by a 'Sadar Sayana' (Chief Headman), who used to be responsible at the level of Khat, the collective of villages for performing above stated duties and settling the disputes among villagers (Saksena, 1962). Among other functions at the level of Khat, the informal arrangement for utilizing and managing natural resources was also developed by village community. The arrangement regarding forest was one such arrangement through which an identified area of forest that was handed over to a Khat was managed by the community belonging to the villages of that particular Khat. This area was and is called 'Khat Van' and is still managed as such. These Khat vans are on civil soyam land and are considered a separate class of forest outside the reserved forest. These are meant for community use and are not directly controlled by forest department. At present there are 55 Khat vans in different parts of Jaunsar-Bawar with a total area of 10597 hectares as listed in table I below (F.D., 2007).

S. No.	Name of villages and Khat	Estimated Area (in acres)
1.	Jaindo, Bada, Tiprad, Khat Koru	420
2.	Bajau, Kuna, Ratad, Magati, Khat Seli	540
3.	Bayawa, Nagau, Khat Seli	400
4.	Chhataum, Khat Seli	320
5.	Echhala, Phatao, Thatau, Damta, Khat Samalta	1240
6.	Sawae, Khat Seli	50
7.	Chopradhar (Buraswa), Khat Seli	280
8.	Korwa, Khat Bamtad	150
9.	Maletha, Laharwa, Darwa, Khat Maletha	50
10.	Aara, Khat Athgaon	80
11.	Naraya, Buwa, Khat Bantad	60
12.	Kotha, Khat Bamtad	50
13.	Lorali, Astad, Khat Bamtad	70
14.	Magroli, Hodha	65
15.	Panjitalani, Tepau, Suraiu, Jisau, Khat Silgaon	120
16.	Bhanjara, Deiu, Khat Silgaon	70
17.	Jariyana, Dasau, Danda, Khat Vishail	60
18.	Haja, Desau, Sunaura, Khat Dasau	150
19.	Majgaon, Kujog and Gamri	250
20.	Desau, Khat Vishail	50
21.	Kherwa, Do, Dhamog, Khat Vishail	410
22.	Kesau, Timar, Khat Athgaon, Chandau	400
23.	Udpalta, Khat Udpalta	60
24.	Lachha, Khat Siligothan	1000
25.	Bisoi, Khat Bheladh	100
26.	Lakhwad, Khat Lakhwad	300
27.	Lalau, Khat Siligothan	60
28.	Lohari, Khat Fartad	65
29.	Kandoi, Thartha, Punig, Gorchha, Pinguwa, Begi, Kuhad, Udawa, Baila, Khat Bharam	738
30.	Mashak, Harthadh, Santadh, Rajanu, Binsan, Khat Bhisau, Koti, Tiuna, Khat Magthadh	303
31.	Jadi, Lohari, Bhangar, Ugad, sijla, Hiwai, Kachanu, Mundai, Supa, Baraila, Khat Ghanau	300
32.	Mohana, Sora, Sujau, Kandadh, Indrauli, Khat Mohana	200
33.	Kunain, Jhabrar, Amradh, Kharodha, Sainj, Khat Kaili	150
34.	Buraswa	7
35.	Nada, Khat Bondar	40
36.	Lakhamandal, Khat Bondar	120
37.	Guthad, Khat Chhultad	30
38.	Kandoi, Khat Bondar	57
39.	Miunda, Khat Bhondar	346
40.	Khabau, Khat Taplad	107
41.	Punah, Pokhari	210
42.	Kharsi, Khat Bislad	32
43.	Maindal, Khat Dwar	44
44.	Rawna	4
45.	Bunad, Koti, Chausal, Kuna, Koti, Bagi, Bastil, Khat Babar	190
46.	Mendrath, Ninus, Bagi, Khat Babar	175
47.	Sainj, Atal, Anu, Phidis, Khat Devdhar	250
48.	Mundhol, Radh, Kulaha, Pinol, Dhersa, Devdhar	285
49.	Bhatmudi, Jitadu, Chhumri, Ragi, Sainj Sodja, Bhangeet, Bhatgad, Devdhar	75
50.	Bhandrauli	10
51.	Chilhad	20

52.	Kerad	7
53.	Bhunad Khat Silgaon Babar	10
54.	Phanar	7
55.	Penua	10
	Total	10597

Table I: Description of Khat Forest in Chakrata (Pargana: Jaunsar-Bawar), District: Dehradun

Khat Van is an area of forest demarcated by the forest department to be utilized and managed by the villagers of a particular Khat. The decisions are taken collectively by the community members and utilization of forest produce is also decided jointly. The rights in this forest are neither of an individual nor belong to a particular village of the Khat. The people manage this kind of forest by formulating different rules and regulate access and use of these community-managed forests. The strict rules and their implementation have resulted in maintaining good forest cover in Khat Vans. The forest is managed by the villagers through an informal mechanism set by the villagers. Normally the villagers follow the traditional practices and the rules decided by earlier generation in managing these forests. Generally meetings are held to decide about the time and quantity of use and a member from each family participates in the meeting. Khat Sayana or Sadar Sayana used to chair the meeting and all those present have equal right to speak in the decision process.

Khat Vans used to be protected very strongly by community members and entry was regulated. The forest used to be opened only for limited period decided by the whole community. It was normally the winter months when this forest was opened for use. A system of security either through a guard or protection by villagers turn by turn used to be in place. At the time of decision regarding opening duration of the forest, the area to be opened was also indentified. Lopping of the trees for fodder and collection of dry wood for fuel is allowed to the households of the *Khat* during particular period of forest opening. A kind of rotation was maintained for different areas so that forest can regenerate by the next round of extraction. The system has been useful in good growth of Khat forest and the entire community gets benefit in this process.

Khat Van of Chakrata continued to remain in the control of local people even during the British rule. Initially in 1851 all the forest area, outside the cultivated area, was declared as government forest but villagers were allowed to fulfill their genuine grazing, timber and fuel wood needs. Subsequently in 1869 the forests were classified into three categories- First, Second and Third and the third class forest were handed over to villagers for their use and management. In fact this class of forest has been the part of Khat Van (Singh, 1992). It will be interesting to know that at the time of classification of forest in three categories in 1869 the area of class third forest (75,609 hectares) was more than double of the area (36,655 hectares) classified as government forest and forest department has no concern with this area which was used by village community (Rawat, 1998b). While in 1981 when distinction between class I and class II forest was abolished and forest rights of local community were redefined, the status of class III forest was not made clear. It has been stated in Management Plan for the Chakrata Forest Division for 1987-88 to 1996-97 that legal status of such forest was still not clear (WPC, 1987).

IV. LATH PANCHAYATS (WOODEN STICK COUNCIL)

This traditional institution is a very old system in Uttarakhand and the tradition of protecting forest from one generation to next has been in existence from pre-British control of the region. This was a tradition of managing forests surrounding the villages. In this system wooden stick locally called *Lath* is used as a symbol in two ways, one to indicate that the villagers will save their forest with the help of *Lath* and Secondly a particular village household who has been given that wooden stick will save the forest for certain period of time. If it was used private benefit, the power of that stick would vanish and village society would disintegrate. The boundary of the forest was fixed and each family was made responsible for the protection of the forests. The holy stick would rotate in every family as a symbol of power for the whole year. In front of whose door that particular day the stick was kept was responsible for protection of the forest. Afterwards as the time passes this system was known as the *Lath Panchayat*.

Lath Panchayats worked as an informal arrangement created by village elders to regulate use and protection of forest. These panchayats were also concerned about conservation of forests which was done by making informal rules for forest produce utilization. Though the *Lath Panchayats* having village elders as members were informal yet they had great respect and authority to regulate village forest use and conservation by imposing customary limitations (Somanathan, 1991). The important characteristics of *Lath Panchayats* were that it's unwritten rules and regulations, its informal functioning and variation of rules from one Panchayat to other and changing of rules from time to time according to the needs of a particular village (Pratap and Rawat, 2011). These institutions had emerged from the traditions of the local hill society and had the backup of the whole community. It has been underlined that the community in Uttarakhand had been highly dependent on forest which is also reflected in local folklore and traditions. Since forests were considered common property, the community in this region had 'developed a unique, simple and informal system of forest management called *Lath Panchayat*' to conserve and protect forests through strictly regulated norms.

As *Lath Panchayat* was informal institution, no official record is available on the number and their present status. However some studies have shown that this institution is still in existence in parts of Uttarakhand. A number of examples of functioning of *Lath panchayats* in Bageshwar, Almora, Rudraprayg, Uttarkashi and Tehri have been given by (Nagarkoti, 1998). He has pointed out that in some cases people have preferred *Lath panchayats* in comparison to Van Panchayats as these are based on tradition. Similarly, Sarin et al. (2003) have pointed out the prevalence of community management forest systems of informal nature including *Lath Panchayats* engaged in regenerating and managing different forest lands based traditions of community resource management in Uttarakhand. A study has mentioned that the system of *Lath Panchayat* was mainly confined to middle Himalayan zone and primarily in the oak dominated mixed forest. Increasingly the system of *Lath Panchayats* has been largely replaced by other forest management systems in the

area mainly Van Panchayats (Pratap, 2009b). While during our field work we did not come across any lath panchayat yet in the discussion with elderly people existence of a system of protecting forest by similar method was mentioned. However Khat Van system has been prominent in the study area.

A brief description structure, rules, conflict resolution and use etc is presented below based on a detailed study by Agarwal and Nagarwalla (2009a).

STRUCTURE

There is a general body and an executive body in lath panchayat. In the general body, all the households are represented through the head of the family of a revenue village. Whereas in the executive there are 5-7 people who deal with the daily affairs of the panchayat. They make some formula for the use of forest produce and resolve the disputes among the members.

RULES AND REGULATIONS FOLLOWED

Rules of lath panchayat vary in different villages. The use and control of forest produce is decided unanimously. These rules are made on the requirement of people, their awareness, carrying capacity of the forest. Rules are unwritten and can be changed. Villages protect their forest's patches on a five year rotational basis. Green timber and large branches are not allowed to cut. No extraction is allowed from the part of forest during the closed period. Hunting and grazing is prohibited in the forests.

CONTROL AND PROTECTION

Rules in all lath panchayat villages are made to control outsiders and livestock from entering the protected patches. Forest guards are also appointed by some villages and the salary is contributed by all the families. Voluntary patrolling is also carried out by the villagers on a rotational basis.

SYSTEMS OF PUNISHMENT

The punishment given depends on the nature of offence committed. There is difference in punishment given to local villagers and outsiders who are charged higher fine for same offence.

CONFLICT RESOLUTION

At the village level, the panches of the lath panchayats preside over disputes between the parties. If the dispute is between two villages, the panches and pradhans of both the villages sit together to hear the case. Only in a few instances, when decisions are not acceptable to all concerned, disputes have been taken to court.

DISTRIBUTION OF PRODUCE AND INCOME

Usually equal amount of forest produce is distributed amongst all members. If there is a surplus the members are allowed to sell their share to other members. The amount to be distributed is decided based upon the need of the people and

the availability of the forest produce. In case of excess availability of grass and fodder, it is shared with neighbouring villages, usually in exchange for food grains. The legal status of lath panchayat forests is not very clear, as these forests have not been categorized under any existing class. Only the executive committee of lath panchayats can sell, that too only when forest products are in surplus and people of the neighbouring villages have a pressing need for them. This fund is used for community expenditure, such as purchase of utensils, loans to the members, salary of chowkidars, or plantations. It has been observed that the utilization of produce from the forest under this traditional management system remains by and large sustainable. Broad-leaf species are most prominent in these forests. They yield fodder leaves that are an important biomass for the hill people. However, the harvesting of fodder leaves is done under controlled conditions once a year and often areas are harvested on rotation. For agricultural implements and housing purposes, two or three trees are cut every year.

V. DEV VAN (SACRED GROVES)

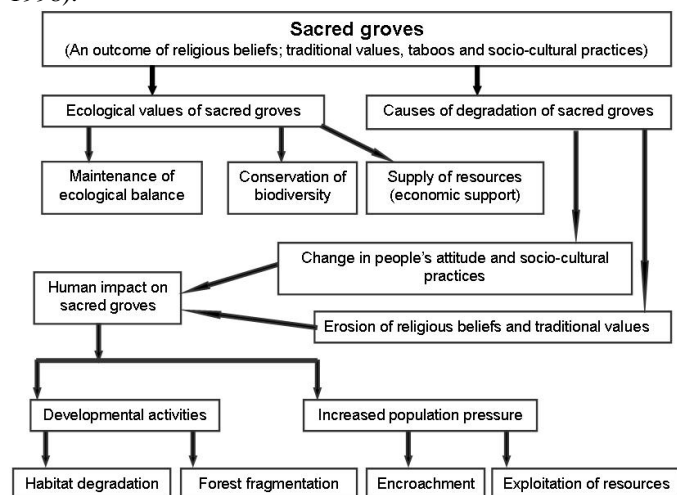
The practice of assigning a patch of forest as the abode of gods or goddesses is not new (Chandrashekara and Sankar, 1998). Conservation of natural resources has been essential part of indigenous communities. It is because they are closely related to their environment which has been protected by their ancestors. In India many plant species such Tulsi (holy basil), Peepal (*Ficus religiosa*) and Rudraksh (Utrasum beed tree) are believed to be sacred and are protected. Other than plant species, there are sites that are also protected in the name of local deities. These sites are known as *Dev Van* (sacred grove). Sacred grove has been defined as "A segments of landscape containing vegetation, life forms and geographical features, delimited and protected by human societies under the belief that to keep them in a relatively undisturbed state is expression of an important relationship of humans with the divine or with nature" (Hughes and Chandran, 1998). The origin of sacred grove is believed to be in the areas of shifting cultivation regions where patches of forests might have been spared from slashing and burning and have been left for the local deities in the form of sacred groves (Gadgil and Vartak, 1976, Hazra 1975,1980). The role of such natural sites for conservation of biological diversity is well recognized and emphasized by international organizations such as UNESCO and WWF. The responsibility of managing the sacred groves has many variations. It may be done by one or number of families or may be a temple committee or by the whole community collectively but sacred groves have many stakeholders who have an interest and role to play in effective management of such systems (Chandrashekara and Sankar, 1998).

Sacred groves have also been recognized as social institutions regulating access and control over resources. They are the places where rare, endemic and endangered species of flora and fauna flourish. Sacred groves also provide useful inputs in economic life of society particularly in mountains. For example the oak and mixed forests have been declared Dev Van because the oak tree (*Quercus* spp) is an important fodder

and fuel wood species and therefore of immense use to hill community. It is also considered an important component of the mountain forest ecosystem as it helps in conservation of water and improvement in the soil fertility (Anthwal et al., 2006).

A system of offering a forest around village to the deities for a particular period of time exists in many parts of Uttarakhand Himalaya particularly where heavy degradation has taken place in village forest and a need is felt to conserve the forest. The system operates in the manner that once the decision is taken to dedicate an identified village forest area to local deity for a particular period, a meeting is called to discuss the methods of forest use and conservation in the period of closure of the forest. Then the villagers go around the dedicated forest area. This conveys to the people of the village and surrounding areas that the forest is now in the protection of deity and should not be disturbed in any manner. The system is based on the belief that any one violating the rules will be punished by God/Goddess in whose name the forest has been dedicated. This has been considered a simple and powerful method of forest protection in the area (Pratap, 2009c).

It has been pointed out by a study that the Dev Van as a tradition must have evolved to put pressure on community members to restrain the use of forest and not to disturb the forest due to fear of God. The examples of Lohathal Oak Forest, Humkaki village Oak Forest, Jagthali village forest and Salsuna Oak forest have been sighted in the study (Nagarkoti, 1998).



Source: Khan, et al., 2008

Figure 1: Diagram of Functioning of Sacred Groves

Sacred groves or sacred forest have always had significant ecological and socio-cultural importance. Apart from direct benefits the sacred groves provide indirect benefits to local community through water and soil conservation. In the study area, there are several examples of sacred groves and a couple of those are reported below.

SACRED GROVES/COMMUNITY FOREST OF LAKHAMANDAL

Lakhamandal is an ancient settlement in the north-east of Chakrata block of Dehradun district. It has a population of about 1044 comprised of about 185 households. The place has historic value as it is said to be associated with the times of

Mahabharata. A village has an old Shiva temple in the center of the village, having sculptures of Hindu God and Goddesses. Lakhamandal exemplifies the traditional customs of Jaunsar-Bawar area inhabited by Jaunsari tribe claiming to be the descendents of the pandavas. The forests of Lakhamandal extend over an area of approximately 80 hectares. These forests are under panchayat land where communities have developed a typical resource use patterns to ensure sustained yield from the forests. The community has evolved practices to govern the access and use of the resources. These have been modified over the years, depending upon the changing economic, ecological and social scenario (RLEK, n.d.a).

The forests in Lakhamandal are closed during the summer months and in the monsoon seasons because the growth of the tree crown cover is the maximum in this period. This is the normal period of forest closure but sometimes it changes according to the requirement of local people and agreement among them. Every year a meeting of villagers is organized to decide about the dates for the opening/closing of the forests. A chowkidar (guard) is also appointed to take care of forest use during specific period of its opening for the community. The rules and regulations are framed to fulfill peoples' needs without having adverse effect on the forests. The community has evolved different methods to maintain and protect the forests during the closure period by way of different self-imposed, informal arrangements. For example, no one is allowed to lop the trees for green fodder. The villagers are allowed only dried, fallen twigs for fuel wood purpose and cutting of grass is prohibited.

The people have devised similar rules and regulations for use and access to the forest when it is opened. During this time, the villagers are allowed to cut the dried stems and branches from the trees for fuel wood. They are even permitted to cut a dry, old tree for timber. If the timber is limited and there are many users, the village panchayat decides upon the urgency of the need of a household or households and the timber is given to the neediest. The timber is allowed for personal use and not for selling it. Although lopping of trees is allowed during this period, there are several restrictions. The villagers can lop the trees without harming the top branches and shoots as this facilitates further growth of trees.

There is a system of fine for violators. The person who is fined is required to pay the fine before a certain date specified by the panchayat. In case the fine is not paid by due date, the penalty is increased and repeated offenders are socially ostracized. Thus the forest management system adopted by the villagers of Lakhamandal is very effective and it has been achieved because of the participation of the entire community in the management system.

SACRED FOREST OF BHATAR

The village Bhatar is situated in the Chakrata block of the study area. The village is inhabited by 57 families with more than 350 people. The village has an area of approximately 15 hectares of dense deodar forest which has been dedicated to the village deity, Lord Kedarnath. An old temple of Lord Kedarnath is situated in this dense forest. It is believed that surrounding area of the temple dates back to Epic

Mahabharata period and the village devta is worshipped with great faith by the villagers of Bhatar. Another belief shared by villagers is that a landslide once destroyed the entire village and since then, the local population left the area untouched believing it to be a sacred area. There has been good growth of the trees on that land and is considered to be of the sacred forest in this area (RLEK, n.d.b).

Strict rules and regulations are enforced in the sacred forest in Bhatar. Villagers are not allowed to cut or lop the trees but are permitted to collect the dry and fallen wood. The trees in the sacred forest are considered as belonging to Lord Kedarnath and therefore any harm done to the trees is considered as a harm done to the deity. While grass cutting is restricted, the villagers are allowed to graze their animals in this forest throughout the year. The villagers can collect the fallen wood from the forest. The dried trees in this sacred grove can be cut either for repair and maintenance of the temple or some times for the use of needy individuals on a payment after the panchayat agrees for it. Sometimes villagers from surrounding villages are also allowed to utilize the dry trees but only for religious purposes in their villages. This is also done on payment basis.

The village Bhatar also has another patch of forests that is managed by the local panchayats. This forest area has a good number of 'burans' and 'banj' trees and villagers fulfill most of their needs from this forest. The villagers can lop the trees occasionally and can cut grass for fodder. Animals can also be taken to the forest for grazing. Dead wood can also be used for construction of houses or other reasons, after this is approved by the panchayat. The forest is open only from July to October and is closed for regeneration at other times.

As for the protection of forest is concerned, villagers have strong belief that since it is a sacred forest, there is no need of a chowkidar (guard). It is believed that the Lord will punish anyone violating the rules and this belief keeps offenders away from the forest. While the faith in deity helps in protection of the forest, it is also because there is enough availability of fuel wood and fodder from nearby panchayat forest which reduces the dependence on this sacred forest. It also became clear during discussion with the villagers that they are well aware of the beneficial ecological effects of the sacred forest and the location of a big water source just below the forest area is sited in this regard. This good water source is perennial in nature and is considered the result of thick sacred grove. Thus the religious as well as ecological factors help in good growth sacred forest and its protection.



Photo II: Perennial Water Source at Bhatar Village

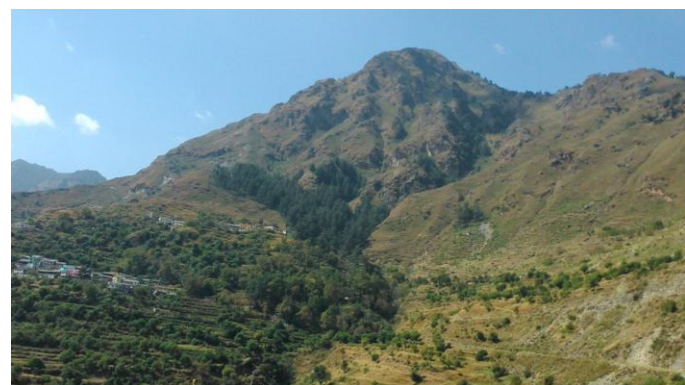


Photo I: Sacred Grove of Bhatar Village

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