

Forest Commons Use in India: A Case Study of *Van Panchayat* in the Himalayas Reveals People's Perception and Characteristics of Management Committee

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Abstract *Van* (forest) *Panchayat* (hereafter *VP*) is one of the largest and most diverse experiments in common property resource management in the Himalayan ranges of the state of Uttarakhand, India. The idea of establishing *VP* originated in conflicts between people and the British authorities for controlling resources. The people of this region are dependent on the utilization of forest products, such as firewood and non-timber forest products for their livelihood. In this study, a field survey was carried out on *VP* in the village, named "D" village of Tehri-Garhwal district in the state of Uttarakhand, in order to investigate *VPs* impact on people's livelihood with a focus on the participation of the people in forest management. Two study objectives were examined as follows: first, to clarify the people's perception under the *VP*, and second, to reveal the characteristics of the *VP* management committee (MC), which is directly responsible for managing the community forests. We used the semi-structured interview approach to determine the villagers' perception for the *VP* activities and condition of the community forest. Results revealed people's satisfaction with the condition of the *VP* and common utilization of the forest resources. In case of the MC, people did not appear to show an overall interest such as not joining the meetings and activities. The reason for this can be related to the organization of the MC that was functioning for more than 20 years with the same leadership and almost unchanged MC members. To summarize, people's participation in the forest utilization was not only dependent on their own personal contribution towards *VP* activities, but also more importantly, on their involvement in the forest management via the MC.

Keywords *Van Panchayat*, Community-based Forest Management, Management Committee, People's Participation

1. Introduction

In the 1960s and 1970s, pressure on forests in developing countries intensified due to poverty and population growth, in particular India, leading the forest management authorities to recognize the socio-economic aspects of local population such as social forestry. During the early phases of social forestry policy, spanning the 1970s to the 1980s, the primary focus was on how to reduce people's use of forest resources. For example, programs were developed to provide local people with seedlings for creating woodlots on private land, to establish alternative energy facilities to reduce firewood use, to help in the construction of village infrastructure and / or to promote employment outside of the forests. These social forestry practices resembled integrated conservation and development projects in protected areas after the 1980s [1, 2]. Seemingly good on the surface, there was a drawback in these practices in that the local people were kept away from the decision-making processes regarding the public forests [3].

Until the late 1980s, national forest policies in India emphasized the optimization of commercial forestry, which prohibited local villagers' access to forests [4]. The result was a rapid and widespread degradation of forests, exposing the failure of top-down state forest resource management policies. Frequent conflicts also arose between the forest department (hereafter, FD) and local forest users, i.e. the villagers. It was then that the local government became aware of the important roles forests have and play in supporting the livelihoods of the local people [5]. In the 1990s, the forestry sector was gradually decentralized to

create greater efficiency, accountability, and cost cutting [6]. Hence, the government began to acknowledge a certain right and authority of local communities to the management of state forests. This idea of community-based forest management (hereafter, CBFM) has been observed in the developing countries, including India, since the 1990s. India was one of the first countries to introduce CBFM as the Joint Forest Management (hereafter, JFM) policy implemented since the early 1990s [5].

The state of Uttarakhand in North West India has been practicing decentralized forest management for almost 60 years before the initiation of JFM. This is the self-initiated forest protection group called *Van panchayat* (hereafter *VP*; “*Van*” means forest in Hindi, “*VP*” means “Panchayati Forest”), and which is governed by the *VP* rules, first published in 1931, revised in 1976, 2001 and in 2005. Accordingly, all the villagers are members of the *VP* upon its approval by the Sub-Divisional Magistrate under the Revenue Department (RD) of the state. They are collectively referred to as the general body (hereafter, GB) that selects the Management Committee (hereafter, MC) members through a democratic process. The *VPs* are best examples of age-old institutions [7, 8].^{see Note 1} Both institutions have emerged out of persistent conflicts between people and the government regarding their control over forest resources [9, 10].

The number of *VPs* has increased gradually and then more rapidly since 1990 (**Figure 1**). However, there is a steady decline in *VP* practice and a quantitative and qualitative decline of the once dense and well-managed forests in the Kumaon hills in the central Himalayas [11]. There are other aspects regarding *VPs* on the decline: it has been pointed out that due to the increasing control of the RD and FD and poor support system, *VPs* have been besieged by numerous conflicts and have difficulty in maintaining their proprietary rights [7]. Furthermore, heavy control by the FD over these people’s institutions and the loss of autonomy at the grassroots level magnified the conflict within MC. From

previous studies, it is clear that *VPs* had once increased the access of local communities to forest resources and demonstrated potentials for better forest management. According to Agrawal (2005) in his book “Regulatory Community”, *VPs* demonstrated good examples of decentralized resource management that benefited local communities [12]. Let us look at one example of when the control is taken over from the local community. The case of Pakhi *VP* (Kumaon hills) illustrates the effect of the top-down planning and implementation of a ‘participatory’ forestry project. In this case, the state government of Uttarakhand had tightened its control over the *VP* management [13]. It received a large amount of money from the state government along with more bureaucratic control over management. As a result, local governance over forests became disempowered. Local power in the *VP* system in general is in decline because of increasing control by the FD, resulting in the overall loss of autonomy and intensified conflicts within and among the MCs of the *VPs* [7]. Despite these literatures, there is still a lack of studies focusing on different cases of *VPs*, and the conditions behind their failure or success. This was one motivation for conceptualizing the study of *VPs* practice in the state of Uttarakhand.

In the present study, we have looked at a *VP*, which was suggested by the FD to be a successful case in terms of CBFM, to clarify the actual conditions of forest management and utilization as a case study. Two objectives were as follows: to reveal the people’s perception under the *VP*, and to unravel the characteristics of the MC, which is directly responsible for managing the community forests having power for decision-making and rule implementation. To do so, the study was examined using a semi-structured interview-based approach during field trips. We also identified specific problems being faced by the participants of the *VP*. By analyzing these conditions, the questions on MC’s responsibility and the local livelihood of the villagers are discussed.

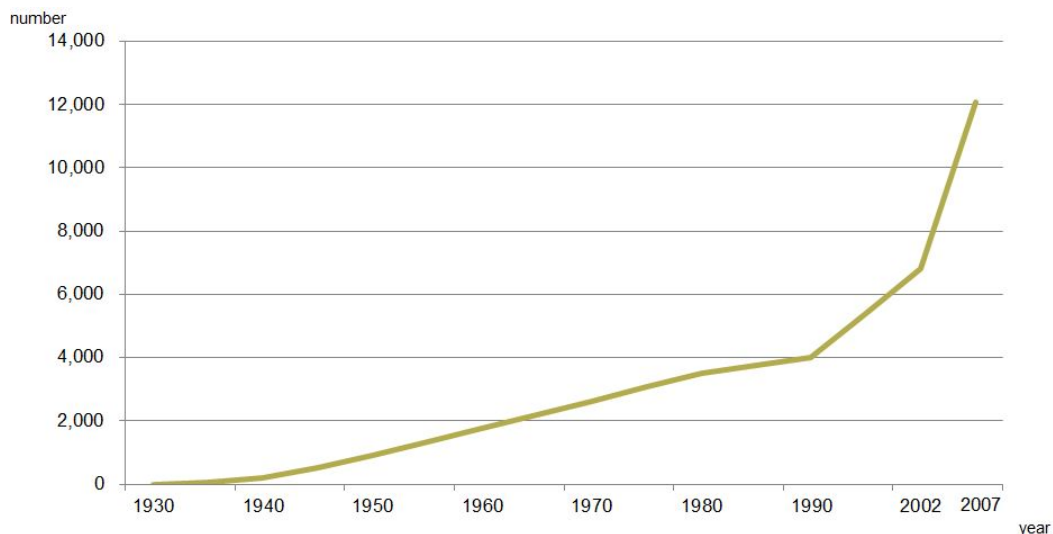


Figure 1. The change of number of *VPs* [22, 23]

Table 1. The number and area size of the *VP* forests in Uttarakhand

Division	District	Village no.	VP no.	VP ratio (%)	VP area (ha)	VP area/VP no. (ha)	Year				Area (ha)					VP area up 1990 (ha)					
							1931-1950	1950-1970	1970-1990	up to 1990	0-10	10-50	50-100	100-500	>500	<5	5-10	10-20	20-50	50-100	>100
							NA	NA	NA	535	796	375	24	1	0	222	185	100	25	3	0
Garhwal	Tehri	1863	1332	71.50	13180	9.89	NA	NA	NA	535	796	375	24	1	0	222	185	100	25	3	0
	Uttarakashi	707	644	91.09	7265	11.28	NA	NA	NA	293	504	112	20	5	1	157	88	37	8	2	1
	Pouri	3485	2431	69.76	52814	21.73	157	414	242	1607	1201	1011	153	62	4	510	494	344	220	31	8
	Dehradun	760	215	28.29	7659	35.62	NA	NA	74	NA	64	107	21	23	0	NA	NA	NA	NA	NA	NA
	Rudraprayag	688	574	83.43	20702	36.07	56	114	37	240	256	222	69	23	4	106	57	37	28	10	2
Kumaon	Chamoli	1246	1082	86.84	188355	174.08	48	180	109	491	144	422	136	107	18	32	88	129	129	63	50
	Almora	2290	2199	96.03	69853	31.77	207	348	447	544	778	1043	247	127	2	228	106	110	76	21	3
	Bagesywal	947	822	86.80	38783	47.18	152	189	186	292	369	323	69	47	14	108	68	64	35	12	5
	Champayat	718	629	87.60	31233	49.65	42	168	58	358	199	283	82	60	2	88	88	96	69	12	5
	Piutragal	1675	1666	99.46	87054	52.25	141	234	152	812	629	564	194	148	12	296	170	154	107	54	31
Nainital	1155	495	42.86	28068	56.70	64	109	21	301	155	200	64	71	5	82	64	66	59	18	12	
Total		15534	12089	77.82	544964	45.08	867	1756	1326	5473	5203	4662	1079	674	42	1829	1408	1137	756	226	117

Data compiled from *VP Atlas 2007*, Uttarakhand Forest Department; in Bold: the small *VPs* number and the areas

2. Materials and Methods

2.1. Study Design and Strategy

To achieve the above-mentioned objectives, the following approaches were undertaken. The first step involves clarifying the actual situation of forest utilization with local people’s livelihood activities hinging on the impact of *VPs* on peoples’ lives. The second step characterizes the MC who would be appointed in the context of the micro-plan, i.e. forest management plan under the control of the FD. The field survey was performed in a *VP* in the Tehri-Garhwal district of Uttarakhand state. **Table 1** shows the data for all *VPs* in Uttarakhand state according to the *VP Atlas (2007)*, and which reveals that many *VPs* were formed after 1990 [14]. The *VPs* in Tehri-Garhwal are newly formed and these *VPs* have a smaller area than other regions/district.

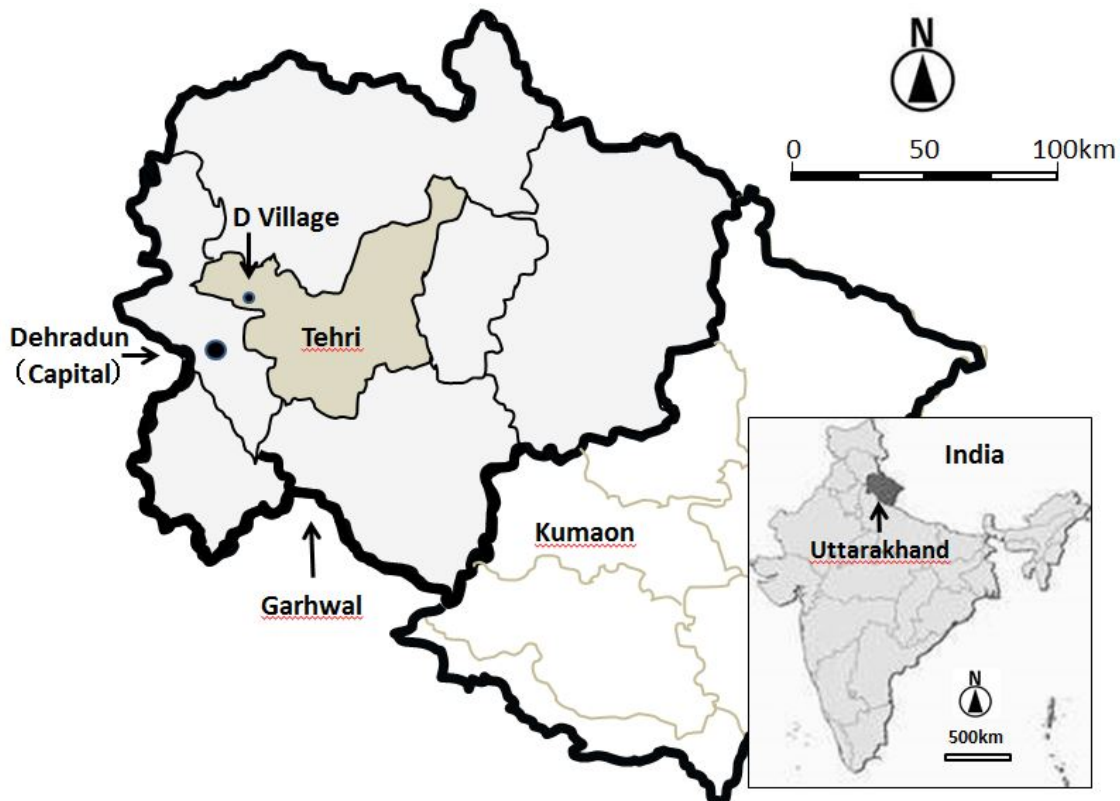


Figure 2. Study field site

Table 2. Interview with the *Sarpanch* (*Van panchayat* leader) at Tehri-Garhwal district

District	Tehri - Garhwal				
	VP (Village)	D	M	B	S
Household	51 (OC: 19; SC: 32)	40	85 (OC: Brahmin 60%, Rajput 40%; SC: 1)	42 (OC: 37; SC: 5)	140
VP established year	1993	2005	2003	2006	2007
Type of forest	Oak (<i>Quercus</i> spp.) dominated forest with some patches of <i>Chir</i> pine (<i>Pinus roxburghii</i>)	Some broad-leaved forest trees and <i>Chir</i> Pine	Oak	ND	ND
Codition of forest	Fair	Slightly fair (less trees)	Fair	Slightly fair (less trees)	ND
Woman's self supporting organization group	No	Yes ("Nagrajya Soyam" and "Saita Samu")	No	No	No
Support from NGO / Government	Bamboo project from Uttarakhand FD	Campa (government)	Government agriculture scheme to Gram Panchayat	No project	Microplan from Agibica (NGO)
Area of VP (ha)	21 ha	29 ha	8 ha	11.8 ha	18.5 ha
Distance to VP (km)	0.5 km		2~3 km	0.5 km	4~5 km
Area of plantation (ha)	15 ha (Bamboo, 10 ha; Oak, 5 ha)			8 ha	10 ha
Managed before the VP	Civil/Soyam land	Forest Department	ND	ND	JFM: 1999-2003
MC (gender)	Male: 5 Female: 4 (SC: 1)	Male: 5 Female: 4	Male: 6 Female: 3 (SC: 1)	Male: 6 Female: 3 (SC: 1)	Male: 5 Female: 4
MC (caste)	OC: 6; SC: 3	OC: 7; SC: 2	OC: 8; SC: 1	OC: 8; SC: 1	OC: 7; SC: 2
Land holding	Landless: 0 Small land holder: 50 (everbody has same size of agriculture field)	Landless: 0	Landless: 0	Landless: 0 0-3 ha: 10 3-5 ha: 32	Landless: 0 0-3 ha: 25 >5 ha: 10~20
Microplan	Yes	No	No	Yes	Yes
Reason for VP	Demand from community	ND	Request from Gram panchayat	Proposal from Uttarakhand FD	Demand from community

Abbreviations: OC, other caste; SC, scheduled caste; NGO, non-government organization; JFM, joint forest management; FD, forest department; ND, not determined

2.2. Selection of the D Village in the Tehri-Garhwal District

In the Tehri-Garhwal district, multiple villages (and *VPs*) were visited in the year 2011 (June to July), out of which five villages were selected for preliminary random sampling by talking to the village head (*sarpanch*^{see Note 2}) and some villagers including GB and MC, and is indicated in **Table 2**. To communicate effectively in the local language (Garhwali) an interpreter was used. A village (and *VP*) was selected and named "D" village (hereafter, D village) (**Figure 2**). The primary reason for selecting *VP* at D village was because the *sarpanch* was an organizer of the *VP* at the village and had been involved in pioneering work to sustain the *VPs* since the early 1990's, in this district. Further, the *sarpanch* was also a block committee leader of the 151 *VPs* in Mussoorie division of the Tehri-Garhwal district. In addition, the D village *VP* had the village document^{see Note 3}, written in the Hindi language, which was prepared by the Mussoorie Forest Division (hereafter, MFD) [15]. The document was eight pages in total and described some projects during the period 2003 to 2007.

2.3. Field Research in D Village, Interviews and Data Collection and Analysis

The field research in D village was conducted between July and August 2012. The lead author had been in local accommodation with a native family during the field work. This fieldwork intended to confirm whether *VP* governance was active in this region, and questionnaire surveys (semi-structured interviews) for the householders with the help of two local interpreters who could understand the local Garhwali language, were conducted. The interviews were carried out from 28th of July up to 10th August in 2012. There were a total of 51 households in the D village, out of which 41 households responded to the interviews. Each household consisted of a householder, usually a male member, termed the household head, who was interviewed. In case the household head was not present, the other main member of the household was interviewed. In total, 38-household heads and three household members including six women were interviewed. Of the 41 respondents, eight were MC members. The reason for non-interviews with the remaining 10 households was either migration or absence due to work and study outside the village. The data were hand-recorded and later transferred to the computer for analysis using the Excel program (Microsoft Corporation Ltd., USA).

3. Result and Discussion

3.1. People's Perception

Table 3. The questionnaire for the interviews (n=41)

Type	Questions	Sample no.	Average	High	Type	SD	
I	MC	No	33				
		Yes	8				
	Family profile	HH number	41	6.76	15	3	2.67
		Migration	40	0.70	3	0	0.79
		Study outside	40	0.43	4	0	0.87
	Caste	SC	22				
		Rajput	10				
		Bhramin	9				
	Properties)*	TV	41	0.63	2	0	0.54
		Car	41	0.12	2	0	0.40
		Moble phone	41	1.98	7	0	1.41
		Refrigerator	41	0.07	1	0	0.26
		Dish TV	40	0.33	1	0	0.47
		PC	41	0.07	1	0	0.26
	Infrasttucture)*	Clean water	41				
		Electricity	41				
		Firewood	41				
		Kerosene	3				
	Main livelihood)*	LPG	24				
		Agriculture	35				
Livestock		2					
Forest activities		5					
House construction)*	Employer	5					
	Wood & manual	25					
	Wood & cement	19					
livestocks)*	Wood & straw	1					
	Cow	38	2.21	10	0	2.02	
	Bull	41	0.27	4	0	0.84	
	Carf	38	0.32	2	0	0.70	
	Goat	38	2.50	20	0	5.00	
	Buffalo	39	0.74	3	0	0.88	
	Ox	36	0.64	4	0	1.05	
Donkey	37	0.19	2	0	0.52		
II	Distance to VP forest	26	0.38	1	0.1	0.23	
	Collecting firewood)**	Yes	32				
		No	2				
	Collecting hours (per week)	20	7.60	9	2	1.93	
	Grazing)**	Yes	7				
		No	17				
	Firewood)**	Increased	22				
		Same	3	2.88	3	2	0.33
		Declined	0				
	Fodder)**	Increased	20				
Same		2	2.91	3	2	0.29	
Declined		0					
III	Forest condition)** after VP was formed	Highly improved	34				
		Improved	3	4.92	5	4	0.28
	Benefit of the VP)*	Remain	0				
		Degraded	0				
		Badly degraded	0				
		Forest recovery	21				
	VP effect on the forest)**	Forest products	4				
		Village development	23				
		Employment	16				
		No idea	2				
	Expectation before the VP was formed)*	Large positive	37	4.97	5	4	0.16
		Small positive	1				
		No effect	0				
		Small negative	0				
		Large negative	0				
	Impact after the VP)*	Forest recovery	26				
		Benefit forest product	8				
		Village development	30				
		Employment opportunity	19				
	Name of VP leader	No answer	2				
Increased forest product		29					
Regenerate forest		33					
Employment opportunity		29					
Social aspect change		27					
Forced by FD		2					
Participation of VP meeting)**	Others	3					
	Known	37					
	Not known	4					
	Yes	20					
	No	10					
	Meeting days /year	33	1.67	4	0	1.41	
	Attitude at meeting)**	Be present	13				
		Ask opinion	1	2.12	5	1	1.30
		Express opinions	7				
		taking initiatives	7				
Microplan)**	Have voice, influenced decisions	3					
	Ask to undertake specific tasks	1					
Participate in microplan)**	Not know	18					
	Know	14					
Transparency of MC activity)**	No	16					
	Yes	12					
	No	20					
	Yes	6					

*: Multiple answers allowed.

** : The total answer is less than 41 I: Characteristics of the questions; II: Perception of the VP; III: Management of the VP.

Abbreviations: MC, management committee; SD, standard deviation; HH, household; SC, scheduled caste; TV, television; PC, personal computer; LPG, liquefied petroleum gas; VP, van panchayat; FD, forest department.

The semi-conducted interview (Table 3) revealed that more than 90% of the interviewee's were satisfied with the condition and management of the VP, which was formed in 1993. The satisfaction with the VP was due to the establishment of an orderly system for forest use, decreasing entry of outsiders from the village, and recovery of the forest resources. As for people's impression of the VP, 81% of the

respondent answered current VP condition has greatly improved since the VP was formed. The reasons mentioned were that the forest was for future generations, increased access to forest products and wage payment from forest-related activities, and social aspects in utilizing the VP. A few respondents had some reservations related to the household impacts such as usage and/or damage of some part

of their land and the felling of fruits trees in order to construct new roads for improved access to the *VP*. Despite, these minor issues, all the respondent answered that the *VP* was necessary for all of the villagers for village development and improvement. The villagers had been granted access to the *VP* area (20 hectares) without constraints, except for the non-felling of trees. It was found that the average distance from *VP* forest to their residences was 0.38 km. Nine-households had easy access to the *VP* forest because of its close proximity to their residences. The longest distance need to be travelled to the *VP* forest by a household was about 1 km. In all, villagers had no major difficulty in accessing the *VP* forest.

Considering the utilization of the *VP* forest it was found that the villagers were not allowed to cut standing trees in the *VP* without permission from the MC. The fact that cutting of trees was prohibited in the *VP* was well known to every villager. However, they could collect the branches and twigs from trees for firewood, leaves and grasses as fodder for their livestock, as well as non-timber forests products such as the fruits and medicinal plants for themselves. The *VP* forest was mainly covered with oak (*Quercus leucotricophora*) and some patches of *chir* pine (*Pinus roxburghii*). The other minor species were *binmal*, *kaffle*, *ayar*, and *thuner*; to note these are local names of the trees in Hindi language. Overall, results indicated that the main utilization of the *VP* forest was for firewood and fodder. As the oak tree products was mostly used as fuel to cook and heat in their daily life, this tree species could be considered as a necessary item for livelihood maintenance of villagers. Among the respondents 78% of them depended on firewood, and the remainder used liquefied petroleum gas (hereafter, LPG) as cooking fuel. Moreover, we also found that another fuel source, namely kerosene, was available to the villagers, it was not every household that possessed kerosene oil. The reason might also depend on its (LPG/kerosene) availability and / or the financial status of the villagers. It should be noted that nearly

90% of the villagers were listed up below the poverty line (BPL).^{see Note 4} in D village. This might indicate the use of firewood mostly for fuel. Moreover, the village (all villagers) had access to electricity which was often not available daily due to electricity/power cuts.

As to why the people's perception was good, a hint was provided by the *VP* leader (who is also the D village *sarpanch*), in his interview, which informed us that before the formation of the *VP*, it was a civil/soyam forest.^{see Note 5} The land was easily accessible to not only the villagers of D village but also could be used by neighboring villages, for forest-derived benefit. However, there was a problem in that this civil/soyam forest was over utilized in the past resulting in its degradation, and rules for protection could not be maintained well. This led to the formation of the *VP* in 1993 along with rules and regulations, which resulted in better access to forest resources for the D village. Due to an effective and strict enforcement of forest protection and internal regulation of forest use, the D village *VP* forest had started to regenerate.

Although, the villagers perceived that *VP* forest was good for their livelihood, it was not always believed that this could also be good for the environment. This might be related to the educational status of the villagers, who in general were educated at elementary school level (**Table 4**), mostly under 5th grade that is equivalent to primary school level.^{see Note 6} Moreover, as mentioned in **Table 4**, 63% of households belonged to scheduled caste (SC). They were rather less interested in forest management, as part of the MC, and more interested in the benefits provided the *VP* forest. On the other hand, through an interview with a householder who had a position as a teacher at the local school, it was found an interest in the environmental aspects of forest conservation was also important. The teacher, who was educated at the post-graduate level (Master's degree), mentioned, and we quote "more green would make better the environment in our forest".

Table 4. Population of D village (2003)

Caste	Family	Female (age 18 or over)	Male (age 18 or over)	Boy	Girl	Total Population
OC (Other Caste)	19	74	69	33	35	211
SC (Scheduled Caste)	32	93	112	52	38	295
Total	51	167	181	85	73	506

Data obtained from MFD, Mussoorie forest department

Education status of D village (2003)

Total	M.A (Post-graduate)	B.A. (Graduate)	Inter (12th)	High School (10th)	Junior School (8th)	Primary School (5th)
105	2	4	9	14	31	45

Data obtained from MFD, Mussoorie forest department. Abbreviations: M.A., Master of Art; B.A., Bachelor of Art

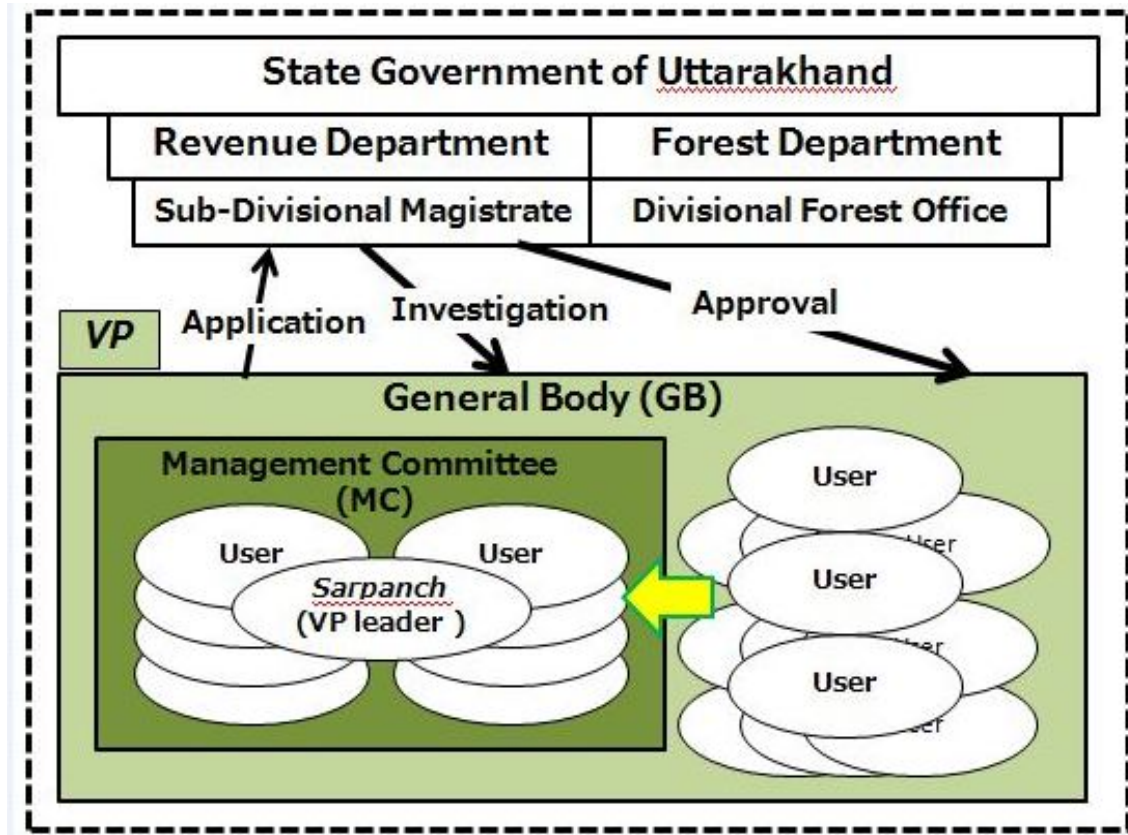


Figure 3. Formation of VP [16]

3.2. Characteristics of Management Committee

The VP MC in D village consisted of nine members, at the time of the study period (2012). According to the VP Rules of 2005 [16] which were issued by the state of Uttarakhand, the FD specified responsibilities of the MC (Figure 3). The MC consisted of nine members: eight were selected from the GB through a democratic process, and the ninth member was the *sarpanch*. Moreover, the secretary from the FD should be included in the MC; however, this was not the case in D village. It is to be noted that since the 2003-2007 and to the 2008-2012 periods, the MC members remained the same, including the leader of the VP, the *sarpanch*. The *sarpanch* was entrusted with a duty to convene all MC meetings, to control and transact business, to preserve order, to supervise the staffs and establishment, and to carry the resolutions of

the MC. Additionally, it was within the MC's jurisdiction to take firewood and fodder under their own rules and protect trees from damage; protect VP forest from encroachment; fix boundary pillars, construct boundary walls; protect forest from illicit felling, lopping, fire and other damage; and protect, conserve, and improve the forest in general. As per the interview with the villagers, it was revealed that the *sarpanch* in the D village has not changed since the VP was constituted in 1993. The reason is not only his selection by the villagers to this post, but also might lie in his expert knowledge of the village, and he was the person who established the VP in D village at that time. As can be seen from the hand-drawn map in Figure 4, the *sarpanch* had a detailed knowledge of the VP forest and the village.

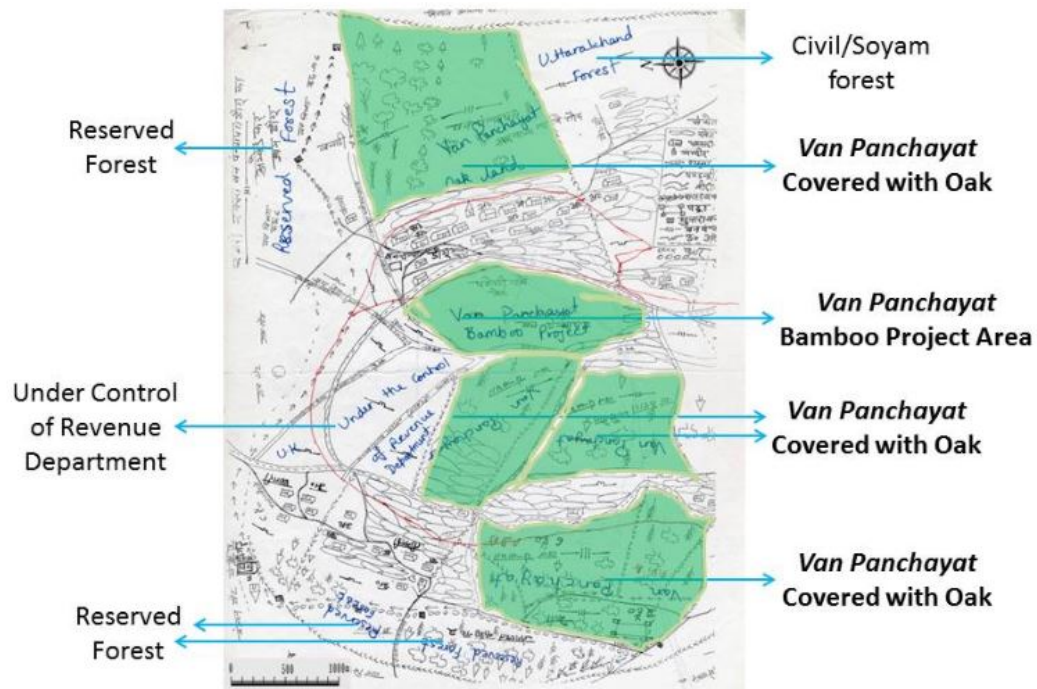


Figure 4. A sketch of the D village (redrawn from the original by the sarpanch in 2012)

Table 5. Relation between MC member's composition and factors

Factors	Explained Variable: MC members or not		
	χ^2 test	Fishers p	Result
Caste	4.04	-	Rejected
Migrant	0.303	0.27	Accepted
Outside study	0.74	0.23	Accepted
Cell phone	-	0.5	Accepted
Dish TV	-	0.17	Accepted
LPG	-	0.0003	Rejected
VP distance	-	1.32	Accepted
Collecting firewood	-	0.37	Accepted
Grazing animals	-	0.29	Accepted

Critical value: $\chi^2 > 4.06$ (5%), $p < 0.05$

From the investigation into the MC, two characteristics could be ascertained, first, selection of the MC members and second, utilization of the LPG among the villagers. Interviews regarding the selection of the MC members revealed that the consistency of caste was not fair in their selection. This was reasoned looking at the caste proportion of the villagers, where more than 60% were SC (Table 4). A higher caste status could be a factor for selecting the MC members. As for the co-relation between MC member selection and caste representation in D village, the significance probability of 0.044, and χ (chi-squared) was 4.04. These were over the critical value of 3.84 (using a level of significance of 0.05). This result indicated that consistency of caste was not fair in selecting MC members

when considering the proportion of the villagers.

Another important factor involving the MC was the use of LPG. To promote forest conservation, the government has issued non-binding orders that both the MC members and non-members (GB) use the LPG provided under various schemes. Table 5 revealed how people were independent of firewood utilization between MC and the non-MC members. The interview showed that the MC members have less LPG possession than the non-members. From the Fisher's significance probability, the value for the relationship between MC and LPG was 0.0003, which is under the level of 0.05. Thus we could see a bias for LPG use and MC composition. In other words, those who did not use LPG were prone to use firewood. It was also suggested that those

who did not possess LPG were inclined to work and study outside of the village. Except for caste and LPG, no other specific household factors (such as proportion of migration, study outside of D village, possession of cell phone and satellite TV antennas, distance to *VP*, collection of firewood, and possession and grazing of livestock) affected the results of the statistical analysis as shown in **Table 5**.

We further asked the villagers about their participation in the MC meetings. All members of the GB could take part in the meeting that the MC organizes four times a year. Interviews revealed that 24% of the respondents had not participated in the meeting. Non-attending villagers were found to be involved in other more important works or in some cases the householders were absent from the village due to work outside the village or migration. Further, some villagers were not aware about such meetings. The **Table 6** revealed the villagers participation and involvement in the meeting. The MC members outlined their attitude during the

meeting: they expressed opinions, whether or not solicited; took part in presenting/discussing various initiatives; had a voice and influence in the group’s decisions; asking the members/villagers (or volunteers) to undertake specific tasks, which were usually asked by the chairman. It was observed that most of the participants were just present without saying anything at the meeting. When asked, as to the non-participation in the meeting, one respondent explained, and we quote “we cannot get money to take part in forestry”. Although the FD subsidizes tree plantation, which was the most expensive support for the forest-related activities from the government, the money did not go to the people who participated in the planting. One lakh rupee per year from FD was enough to prepare nursery trees but not to deliver income to the people in relation to work done during the plantation of trees. As the forest-related works were assumed to be voluntary that might result in a lack of participation among the GB in the meetings.

Table 6. The question, when you attended the *VP* meeting, how was your attitude?

Choice of Answer	Number of People
1. Just present at the meeting without saying anything	11
2. Being asked an opinion in specific matters without guarantees of influencing decisions	3
3. Expressing opinions, whether or not solicited, or taking initiatives of other sorts	5
4. Having voice and influence in the group’s decisions	3
5. Being asked to (or volunteering) to undertake specific tasks	1
6. Not answered	6
Total	29

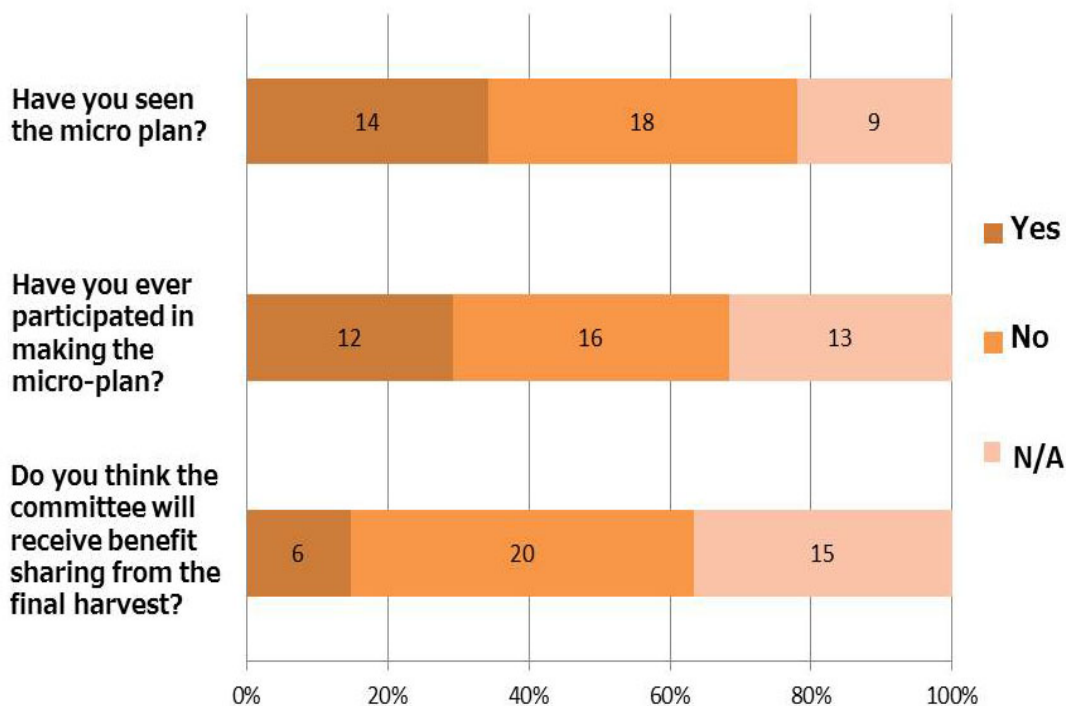


Figure 5. People’s recognition of the *VP*

Finally, we would like to briefly mention about the micro-plan, as part of the MC duties. As for the *VP* Rules, MC shall make their own decisions and rules on how to govern the *VP* forest for the next five years. Micro-plan was important for decision-making with the annual implementation plan. The interview with the *sarpanch* revealed that the current micro-plan was the latest one and that had not been revised since 2002. **Figure 5** clarifies people's participation in their micro-plan prepared by the MC. Results revealed that 34% of respondents answered in the positive regarding knowledge of the micro-plan, the remaining 64% had no knowledge of it. Twenty-nine percent of the respondents participated in the meeting to make the micro-plan. The proportion of the MC members in D village was 18%, which means 9% of the GB could take part in the meeting to make the micro-plan. Forty-nine percent of respondents believed that they received few benefits from MC work. However, 15% of respondents answered that the MC received benefits from *VP*. This suggested that the micro-plan was not released to all the villagers. Taken together, our results show a general lack of people's participation in the *VP* meetings and in the micro-plan discussion. This might be related to the functioning of the MC rather than the will of the people to not actively participate.

5. Conclusions and Future Prospects

This research presented the case study of a *VP* (D village) that was highly recommended by the FD officers. The presence of an active *sarpanch* in the D village, who had full knowledge of the land and showed strong leadership, made the D village *VP* successful, which was revealed by analyzing the people's perception. The good perception might be due to the presence of a large oak forest in the D village *VP*, which had a better impact for forest utilization. Prabhakar and Somanathan (1998) reported that dense oak forests were 15.6% more common in the *VP* than in other types of forests [17]. The *VP* of D village was categorized to that common *VP* covered by dense oak forest. The higher proportion of oak indicates that the *VP* plays an important role in conservation of forest in the Himalayas [18]. In other words, the *VP* forest dominated by oak trees provided better conditions for environmental conservation and the maintenance of people's livelihood.

Looking at the MC characteristics, we found that there were some issues regarding the management practices in the *VP*. It can be said that there is a need for more transparent MC, which might lead to better forest management and livelihood improvement. Even though the result of this case study is not a representative of the entire picture of *VP* management in the state of Uttarakhand, it is important to clarify the reality of *VPs* at the level of local people and aim at decreasing serious poverty among forest-dependent people. Moreover, as the regional differences exist in forestry management, old *VPs* practices in Kumaon and new

VPs in Garhwal are most different, thus requiring a district wise comparative study in the future.

The case of D village presents several issues and challenges in association with the forest management of *VP* as follows. First, the micro-plan should be prepared every five years according to *VP* rules and MC members should be elected every five years. In this context, the selection of MC members should consider fairly caste, gender and poverty. However, it is very difficult for lower castes to resist the wishes of higher castes even if they formally have the right to do so. Villagers also need to promote democratic elections for the MC and chairperson. Yet, the chairperson and the MC members have status and the strong existence of caste does not change this situation. Government affirmative action should expand to not only include gender bias but also caste. Second, to maximize the benefits for the MC, it would be desirable to promote the MC's participation, maximize the right of decision-making, and improve management ability. Furthermore, it is important to commit to the *VPs* and enhance the facilitation of MC for FD, which is necessary for obtaining administrative support particularly from the RD. Third, all the people have to be committed to the MC. This is important for the purpose of better forest management and utilization. Higher education may be a factor and the key to not only for participation in forest management but also developing village activity, that is, if the people who are educated remain and dwell in the village. Fourth, instead of firewood, local people need to consider a change to use more LPG under government support for obtaining and using modern access. Every household uses firewood as the main cooking fuel; most of it is gathered. A lack of clean fuel is a major problem facing most rural woman in India. Women's mortality risk from smoke-related infection is 50% higher than men's [19]. Even though the villagers possess LPG, they are not utilizing firewood, and it is also necessary for forest conservation. Fifth, it is important to understand and inform the readers that the model of participatory forest management depends on the situation of the ground reality and the regional status, as demonstrated in this study.

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Notes

1. According to Gairola (2009) [20], VPs have survived since 1931, and longest standing example, because the evidences such as Jammu and Kashmir, Rules for Villages Forest Management in 1934, Kangra Cooperative Forest Societies in Himachal Pradesh in 1941 to 1973, and Rudimentary form of Joint forest Management, Arunachal Pradesh in 1948, show that similar efforts at other places did not give compatible results.

2. *Sarpanch* who is the term used for the chairperson of the management committee is the leader of VP.

3. It was undertaken for the micro-plan of this village by *Sarpanch*. In general, the villagers in *Van Panchayat* have their own specific rules called a micro-plan, whereby they prepare the regulations and determine the methods of utilization. They may create monitoring, sanctioning and arbitration devices to resolve the vast majority of disputes within local spaces (Agrawal and Yamada 1997) [21].

4. D village members were listed up as under below poverty line at the website (Tehri Garhwal (Uttarakhand) District Administration (2008) *Fresh Below Poverty Line List(BPL-2002)*. Retrieved December 19, 2012, from [http://www.ua.nic.in/tehri.nic.in/\(pages/view/58/60-fresh-below-poverty-line-list-\(bpl---2008\)\)](http://www.ua.nic.in/tehri.nic.in/(pages/view/58/60-fresh-below-poverty-line-list-(bpl---2008))).

5. Civil/Soyam Forest is managed by the Gram sabha (village council), and usually people have unlimited rights and concessions for use, whereas the forest department controls the reserve forests where people have limited rights and concessions.

6. 5th: primary school: 6-11years old

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