

People's Participation in Forest Resource Management in the Uttarakhand Himalaya

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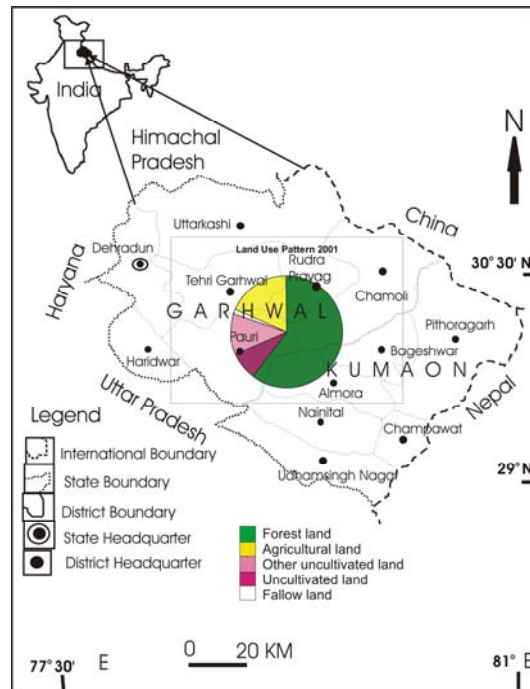


Figure 1: Location map of Uttarakhand Himalaya

Forests play a key role in regulating climate, maintaining ecosystems, providing livelihoods in the form of firewood, fodder, medicinal plants, wild fruits, feasible climatic conditions and other environmental services in mountain regions. Many mountain communities are directly and indirectly dependent on the forest for their livelihoods. In addition, mountains are the home of the major rivers, which is a lifeline for the downstream areas. The Uttarakhand Himalaya is located in the centre of the Himalayan Mountain System (HMS). Forest covers 60 percent of the land, where a rich diversity in forests is found which ranges from sub-tropical to sub-temperate, temperate and alpine.

Uttarakhand occupies an area of 51,125 sq km and a population of about 6 million (94.4 per square kilometre). This state lies between $28^{\circ} 53' 24''$ - $31^{\circ} 27' 50''$ N and $77^{\circ} 34' 27''$ - $81^{\circ} 02' 22''$ E (Figure 1). Of its total geographical area, about 47,325 sq km (92.6 percent) is covered by mountains, while 3,800 sq km (7.4 percent) forms *Tarai* plains. The total snow covered area of the mountainous region is 7,632 square kilometre (16.1 percent), with an elevation of over 4,000 metres. The mid Himalayan region (1,000 to 3,500 metres) has many high mountain peaks, fertile lands, meadows, rivers, streams and valleys. The entire region is geographically important and is comprised of the two distinct landscapes: the Garhwal and Kumaon Himalayas comprising thirteen districts.

The study is mainly based upon data collected from secondary sources of government records of the State Economic and Statistical Directorate, Dehradun. District data from 1974 to 2001 was collected and the exponential growth rate (EGR) and change in percent of collected data were calculated. Field visits to observe forest resource management were done to facilitate further interpretation of data. The main objective of the study was to assess the role of people's participation and government initiatives in forest management in this mountainous region.

Change in forest cover 1974-2001

District data from 1974 to 2001 shows the change in forest cover areas varied from one district to another (Table 1). The overall change in forest cover area in Uttarakhand Himalaya was 1.3 percent, which indicates that even though the high pressure of population on the land increased during the last few decades, the forest cover increased too. Only two districts, namely Pauri and Almora reported negative changes with -5.6 percent and -2.1 percent forest cover in Pauri and Almora respectively. In an area of very high concentration of population in the Doon valley, forest cover increased by about 10.6 percent. This was followed by Chamoli District (4.8 percent), which has the largest area under perpetual snow. Similarly, forest cover area increased in Tehri (3.2 percent), Uttarkashi (2.2 percent), Pithoragarh (1.7 percent), and Nainital (0.7 percent).

Table 1: Forest cover change 1974-2001 (Percentage of geographical area)

District	Forest cover (five year average)					Forest cover change (1974-2001)	
	1974-79	1979-84	1984-89	1989-94	1994-2001	EGR	%
Chamoli*	59.10	57.60	57.30	57.20	61.89	1.0017	4.8
Dehradun	56.50	65.80	64.89	64.45	62.60	1.0037	10.6
Pauri	60.89	59.02	58.70	58.30	57.50	0.9978	-5.6
Tehri	63.50	70.74	70.73	70.70	56.50	1.0011	3.2
Uttarkashi	85.04	85.01	85.01	85.40	86.93	1.0008	2.2
Almora*	50.33	49.35	49.12	49.11	49.29	0.9992	-2.1
Nainital*	48.22	48.41	48.71	48.72	48.58	1.0002	0.7
Pithoragarh*	47.18	46.96	46.97	46.96	48.00	1.0006	1.7
Uttarakhand**	59.17	59.80	59.67	59.63	59.93	1.0004	1.3

Source: Calculated from the secondary sources of Government records

*Chamoli District comprises Rudrapur District, Almora comprises Bageshwar, Nainital comprises Udham Singh Nagar, and Pithoragarh comprises Champawat District

** Data from Haridwar District not included

EGR= Exponential growth rate

Forest resource management

People's participation

Local people's participation in both decision-making processes and implementation of management plans is crucial for sustainable forest management. Local involvement is achieved in many areas. Extensive community grasslands and fodder trees are managed by local people themselves and they are also supporting the government forest department. During the eighties, the popular "Chipco Movement" was launched by local people in Uttarakhand and that movement spread throughout the state. People were able to preserve the forest of the region from the hands of the contractors appointed by the Forest Department for mass cutting of trees. In the basin, the Gram Sabha (village assembly), the lowest unit of governance in the federal system of India, works for taking decisions on the various developmental works including forest resource

management. It has control over community forestlands and grasslands and it has managed to meet the needs of the people. At the same time, for timber requirements of the inhabitants, a policy was framed by the Forest Department. According to this policy, application is made to the Forest Department stating his or her requirement for timber. The department then will evaluate the application with the help of the Gram Sabha and finally allot trees based upon need.

Government Initiatives

The Soil Conservation Department (SCD) was established during the 1980's as a part of Forest Department. State forest is controlled by the Forest Department; community and private forestland is negligible. Extensive grazing land is owned by community people. People plant trees to meet their specific household needs, which often change over time, whether on private or community land. The role of the SCD is to plan for areas where less forest cover is found. Tree plantation according to local conditions is carried out by the department. The department also has the responsibility to check on the illegal felling of trees. There are more than five sub-offices of SCD in each development block with one headquarter. Recently, most of the areas where complete depletion of forests had taken place in the past, reforestation has been possible with the help of SCD. These areas are located along the courses of small perennial streams. The Forest Bill (FB) of 1982 was successfully implemented and as a result of rigorous implementation, regeneration of forest is noticeable across the entire hilly area.

Discussion and conclusions

Tremendous depletion in forest cover areas in India has been noticed after independence where the forest cover area decreased from being about 21 percent in the 1940s to 19.7 percent in the 1990s. India as a whole registered tremendous growth in population including Uttaranchal State and depletion of forest land was obvious. Meanwhile in the Uttaranchal Himalaya, a 1.3 percent increase in forest cover was registered during the last three decades (1974-2001). There were various factors which led to this. The first factor was out-migration. People from rural hilly areas migrated to the other parts of the country for better living standards instead of extending their agricultural fields in forest land. The second factor was people's participation in conserving the forest. People felt the need of conserving the forest for their future. In the 1970s, large scale felling of trees was observed in this area, so the people started the 'Chipko Movement' against felling of trees. The third factor was government initiatives towards forest management where heavy fines were imposed on the community for illegal felling of trees. Due to these initiatives, an increase in forest cover was registered. Only in Dehradun District, was there a 10.6 percent increase in forest cover during the last three decades, even though the district is densely populated following heavy migration from all parts of Uttaranchal. The Forest Act of 1982 and establishment of SCD has also contributed to the conservation of forest in this hilly state. Reduced requirements of firewood and timber due to the availability of LPG for fuel and use of cement and bricks for the construction of houses has also paved a way for this increase in forest cover.

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