

## CHAPTER 3

# Forestry

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The condition of Diyargaon's forest resources is characterised by the two diametrically opposed approaches of meticulous management and conservation, on the one hand, and deforestation on the other. As stated earlier, the local people have expanded their agricultural holdings by steadily clearing the land of its forest cover in the upper reaches of the region. This has been facilitated by the fact that different clan groups in the village have traditionally claimed specific areas therein.

A cadastral survey still remains to be carried out in the Karnali Zone. The ownership of the *pakho* (unirrigated land) is represented by the amount of homestead tax paid (*serma*) which is computed in terms of money, more specifically in terms of *paisa* and their constituent quarters, called *dam*. Therefore, this practice allows individual households to extend their farm area as necessary and still claim that their expanded holdings are within the limits of the tax paid. When a household is divided, the tax money is also divided proportionately, but the new households are under no restraint to clear new lands as necessary, as long as land is available.

## Dwindling Forest Areas in the Zone

At present, the possibility of clearing new lands is almost non-existent. As stated earlier, some seventy-five years ago, an epidemic had decimated the local population forcing them to withdraw from their cultivated highland fields for want of labour, and apparently one can still come across marks of terraces in areas with forest cover.

Although a few patches with forest cover still remain, its rightful owner is generally identified and no trespassing or encroachment takes place, except in a few known cases of *kamsel* ownership where the might of the more powerful *chokha* households had prevailed, resulting in the former's eviction from their uncleared lands.

It is said that, since the 1950s, increasing population growth in the zone has triggered a marked upsurge in forest deterioration which is now approaching critical proportions. Each Karnali household of six persons is estimated to have cut, collected, and consumed 6,100 kg of wood for fuel and heating in 1969/70. Based on the comparison of 1950 maps and 1972 Landsat imagery, it was suggested (although with caution as 1972 figures might have been underestimated) that approximately 50 per cent of the zone's forests were destroyed during the two decades, leaving less than 20 per cent of the Karnali Zone still under forest cover (Bishop 1990: 268-269).

The extension of cultivation to the upper reaches of the zone (estimated to be well above 4,000 metres) is quite visible when observing the surrounding mountains from the high altitude passes in Jumla district. As a result, the river waters, which otherwise are crystal clear most of the year, turn very turbid for a day or two following the rains.

The scarcity of land at high altitudes resulted in the seizure of even community property, commonly designated as *sandhi sarpan* in the vernacular (the property that is critically important to all the members of the community for its use as a common grazing ground, funeral ground, or religious property, etc), by the village elite. Where such an incursion was likely to arouse community hostility, they would gang up with other powerful households in the clan and appropriate the property collectively so that the resentment of the villagers was muted.

Although rival factions and centres of power exist in the community, they refuse to take a more public stand against such acts of encroachment on common property, because even their leaders have similar records of misappropriation and extortion. Hence, they pretend not to have noticed it. The entire cultural milieu has all along been characterised by a tradition of such fierce inter-personal competition and tacit collusions for securing resources.

### **The Village Forests**

At least in Diyargaon, however, the village forests are a different story. The village is surrounded by mountains on the north, east, south, and south-west, and they are either covered by pine forests or are in the process of being so. The village women, whose exclusive task is to bring firewood from the forest, do not have to walk more than twenty minutes to reach the forest.

The villagers use forest products rather liberally under the conviction, apparently borne out by experience, that the forests today are more dense than in the past. To substantiate their claim, they point to one of the mountain sides which was once known as *eklo sallo* or, "the lonely pine", and which had only one big pine tree on it. Today, there are pines growing in thousands on the slope. It is said that the villagers, under the influence of the government's Community Forestry Programme, abandoned the traditional practice of burning the slopes ten years ago, and this resulted in better grass yields for livestock and such, through nascent, massive regeneration of forest.

The forest to the north, on the mountain ridge, locally called *thapala*, immediately above the village, is as stated earlier, even more assiduously protected. Some twenty-five years ago, a landslide destroyed a Hamal house in *Bahun bado* situated immediately above that of a man who was important locally. The people realised that cultivation of this ridge must be prevented at all costs, and that it must be protected by permanent forest cover. Therefore, despite the fact that it too carried marks of previous cultivation, it was given the status of *sandhi sarpan* and was entered as such in the government land records. By doing so, not only were attempts, by some land-hungry *Od Kami* in the village, to till it successfully held in abeyance, as mentioned earlier, but also the more muted, and obviously more justified, claim over it by a neighbouring highland village which

apparently had cultivated it way back in the past and which, more recently, had lost a considerable portion of its holdings elsewhere to the Wildlife Park.

In an incident that took place 18 years ago, a young wife of an old Hamal, in one of her outbursts of fury, set fire to this forest to punish the whole village. However, the entire village was immediately mobilised, and they managed to control the fire with the help of a pine bush.

Last year, in March 1991, a grassy slope to the west of the village accidentally caught fire. At that time also, the villagers put it out through similar means and organisation.

Local people take pride in the fact that this forest has been growing steadily and the tree line has now approached the ridge. Since pine trees grow and spread faster than most other species, they claim that the denudation and desertification of the mountain slopes will never occur here. While of late, a local elite is suspected of having stealthily registered a local forest in his name and of deliberately encouraging the excessive cutting of trees in order to clear it; most of the villagers agree that forest cover has been increasing in the meantime.

### **Deterioration of Village Forests**

Despite the improvement in terms of firewood availability and timber supply for house construction, the big tree trunks necessary for making planks for doors as well as for wooden grain storage bins are no longer available in the nearby forests. The *Kami*, who make the bins, recall their fathers saying that such large trees were available much closer to home in the local forests. But today it takes six days of work between eight in the morning to six in the evening, which includes several hours of walking to and from the forest, to collect a sufficient number of planks to manufacture a regular bin measuring five feet in height, eight feet in length, and two feet in width.

With population growth and the need for more houses, combined with the fact that every 20 to 30 years the houses need to be rebuilt, increasing pressure will be exerted on the forests for timber. But the local inhabitants do not seem alarmed by it.

A drastic reduction in beekeeping is another consequence of the deterioration in forest quality. The temperate climate of the Karnali Zone is suitable for peaches, and some half a dozen different varieties of the peach such as *chame*, *jhuse*, *galane*, *goru*, *ophde*, and *chule*, each with different characteristics, grew wild in the mountain foothills across the river and provided necessary nutrition to the bees that once nested in the numerous hives in the village. However, with the expansion of cultivation and increased availability of irrigation facilities in the area, the land has been cleared of these plants to make room for agriculture, particularly paddy cultivation. This has since resulted in a drastic reduction in bee population, the number of hives, and the number of households that kept them.

### Forests and Agriculture

An important reason for the protection and maintenance of forests is one of its major products, the *piral*, i.e., the fallen pine needles. These are used as bedding for the animals which is changed every four days. Later, it decomposes into manure which is used for *gyula* and *ghaderi* fields.

The *piral* is used particularly for agricultural purposes and, according to the local custom (*ritithiti*), it is collected jointly by village women once a year in *Baisakh* from small forests and twice a year from larger ones in *Baisakh* and *Mangsir*. Specific dates for collection are decided by the community and are timed to coincide with periods of lighter work loads for women and the possibility of five sunny days in a row, which is the time normally required for collection, ending with a picnic. However, its interruption by rain causes the community exercise to be called off in the middle, because the needles are no longer dry and loose enough for raking.

The decision-making process is informal but strictly obeyed. The decision as to the day on which to begin collection for *Baisakh* 2048 (April 1991) had informally originated from the women of one of the richest and largest households in the village. On that particular morning, all the village women wait in anticipation for those from that household to make the first move towards the forest, after which it turns into a sprint for all of them. People generally agree that these decisions are heavily influenced by households with large landholdings and political influence in the community.

While nobody even conceives of bringing *piral* home at other times, apart from an occasional load or two for use in roofing, there is stiff competition between women in bringing home the largest number of loads. Starting around seven in the morning, each woman stakes a claim to a patch of forest from where she collects pine needles, and, by nine, the first, immense load will already have been carried home. Some even dare to cheat by entering the forest earlier.

On an average, each woman carries about six loads on the first day, and this drops to three the next day because of the rapid depletion of pine needles after the previous day's collection. While it is considered a sin to have married daughters carry manure, there are no such qualms in the case of pine needles because their application as manure is crucial to the high productivity of their *gyula* and *ghaderi* fields. Therefore, they are especially invited to their parents' homes to help them collect more. If the pine needles are not sufficient, women supplement the *piral* with other green leaves and grass collected during the month of *Bhadra* when vegetation flourishes.

### Forest Management System

As is the case for irrigation and crop protection, Diyargaon also possesses a traditional, institutional mechanism for the protection and management of forests. Different aspects of forest resource use are regulated through various mechanisms, which have become institutionalised within the specificities of the socio-political context of the village and which have either been handed down from generation to generation or introduced in more recent times.

While the *piral* harvest, as discussed above, is managed through a highly informal mechanism that exclusively involves women, the conservation of *thapala* forest above the village is carried out under a community land grant system under which a poor village *Kami* is given a plot of land at the forest fringe in return for his services as a forest guard.

This land grant system, while far from being a traditional institution in the village, had been initiated after the landslide and flood occurred. The number of such grantees and watchmen increased in ensuing years in order to provide jobs to the otherwise landless *Kami*.

There is a separate institution called *ban naralo* for the protection of the grassy slopes in order to grow nutritious fodder for livestock. The *ban naralo* is appointed every year. Either a new person is given the job or the incumbent himself is reappointed, if the latter's performance has been satisfactory to the villagers. As discussed in the chapter on livestock, the grassy slopes near the village have to be protected during the two monsoon months (the first of *Shrawan* to the end of *Bhadra*). During this time, the livestock are taken to higher pastures, away from the village. The *ban naralo* is expected to make sure that these protected areas, from which villagers later harvest fodder grasses, remain untrespassed. For this service the *ban naralo* is paid in-kind at the rate of five *lara* (a bunch of grass tied into a knot and held within two palms) of grass per household.

In the past, as discussed earlier, before important highland pastures were taken over by the National Park, the livestock went to graze on these pastures for longer periods and the local grasslands remained protected for a month longer than at present, i.e., until the end of *Aswin* (mid-October). Therefore, the households could reap a better harvest of fodder grass.

The local people have traditionally identified different forests as "Winter" and "Ashoje" (i.e., used during the months straddling the month of *Aswin*, also called *Ashoj*) forests for the purpose of properly regulating the movement of livestock. While the former are closer to home and are used during the winter months, generally from *Kartik* to *Baisakh*, the livestock are taken to the latter situated at higher altitudes during the warmer months. The movement of livestock is regulated to ensure that they avoid nearby grassy slopes during the two months of *Shrawan* and *Bhadra*.

### **Government Intervention and Local Forest Practice - Its Promotional Posture**

Government intervention for the conservation and growth of forests has come in two forms, promotional and restrictive. The Community Forestry Project was started in the area andm, about a decade ago, committees were constituted for the then so-called *Panchayat* Protected Forest by bringing the local forests under its jurisdiction. It was a two-tiered committee, the first and the main committee was constituted under the leadership of a local, progressive leftist belonging to the

middle class. A supervising committee was also constituted under the leadership of a village elite to oversee the activities of the main committee.

In addition to these, an exclusively female committee was also formed under the joint leadership of a well-respected and articulate local woman who was the wife of one of the local elites. Similarly, other young women from different *bado*, including *kamsel*, were also inducted as committee members. This committee had to supervise forest management, including the opening of forests for the collection of *piral*.

The women's committee has been anything but functional, since the death of its president a few years previously. However, transfer of power from the traditional centre, which, in this particular case, happens to be represented by the women of one of the richest and politically most significant households in the community, is highly unlikely, as shown by the *piral* collection decision-making mentioned above.

Similarly, other committees too have been hardly more effective. In one of the early meetings of the committee, it had been decided that the livestock should be kept away from the grasslands for three months between *Shrawan* and *Aswin* and should be allowed to come back only from the first of *Kartik*, but this decision was not followed through. The cattle graze on the grasslands soon after the first of *Aswin* and the committee has taken no action. In fact, it has not even met for a long time.

The attitude of the village elite on the so-called supervision committee has, at best, been lukewarm. While he does not want to be seen to be not cooperating with the president of the committee, he certainly does not approve of formalised power-sharing in a situation in which his economic prowess, combined with the large size of his household and his ability to pull strings in the district capital, make him the acknowledged arbiter, despite the resentment of his rivals in the community.

This tradition of allocating power in the community exists as a legacy of the *talukdar* system under which a revenue official, called a *mukhiya*, was locally appointed by the Government, in predominantly unirrigated areas (Regmi 1978: 126), to perform a number of

administrative and judicial functions within his area. These also include the management of forests and the issuance of permits to fell trees for building houses and making ploughs. While this office was abolished in most of the districts in the country following cadastral surveys, it continues to exist in a few, including Jumla, where such a survey has not been carried out. However, its non-revenue powers had long been overshadowed by the elective office of the *Pradhan Pancha*, created under the erstwhile *Panchayat* system. One of the village elite in Diyargaon mentioned above had enjoyed this office for more than two decades.

In its promotional role, the Government has, with the assistance of Canada's Rural Development Project, also set up forest nurseries in which local people are employed. But the people contend that their services would be better used in the protection of local forests than in running nurseries, because, whereas the nursery plants do not survive, effective protection of a forest area allows for the self-regeneration and growth of plants.

### Government's Restrictive Posture

The Government also established a sub-district forest office some years ago in a village about two hours' walk downstream. This office also has jurisdiction over Diyargaon. While this office does perform the above-mentioned promotional functions, it is, however, known better locally in its restrictive role. Technically, people have to obtain permission from the office to cut trees for building houses, etc. This permission is obtained by paying approximately eight to nine hundred rupees as fees.

Since the local carpenters, the *Od Kami*, use an axe instead of a saw to make beams, lintels, etc, they invariably end up using more trees than the 50 cubic feet allowed for a house. The forest officials know this very well and, allegedly, turn a blind eye, for a price. The forest officials have a notorious reputation among the local people. They compare them to a funeral priest who tells himself "I have nineteen cows now and, if one more were to die, I would have twenty". (This means that if one more of his *jajaman* [clients] were to die, the cow that would be received as a funeral gift would increase his herd to twenty.) Apparently the forest officials pass through the villages in search of bribes.

It is said that, in the past, during the hey-day of the *talukdar* system, people obtained permission from him to cut only dead or fallen trees and the good trees were left alone. But these days, since permission is procured with such large sums of money, they cut down the good trees causing even further damage to the forest.

Although the forest officials are not always that lucky, it, however, does not mean that trees are not being felled. They are; not only for the wood to repair houses or build new ones, but also to obtain the cores from the bottom part of pine trees trunks which are cut into tiny pieces and used as lamps or torches at night.

However, people generally agree that the restrictions imposed by the Government do have some positive effects because people are more circumspect about felling trees, thus discouraging the wanton destruction of forests.

### **Local Management of Forests as an Option**

People perceive local control and management as the only viable option for the conservation and proper exploitation of local forests. They cite the examples of the *thapala* forest above the village, which they have been protecting, and the one beyond *thapala* to the east to which they have stopped setting fire for over ten years now. They have also tried to enlist the support of the government forest office by formally requesting it not to issue permits to cut trees from the former. While the forest office has complied with their request for many years now, the people too are determined that, should somebody show up with a permit, they would force him to return empty handed.

The villagers also recall the teachings of their ancestors that forests help rainfall and prevent cold winds from blowing directly into paddy crops, a factor that affects maturation. They realise that the traditional wisdom regarding forests is fully consistent with the good forest management practices which are being advocated.

Ironically, despite this knowledge and despite also the fact that they had sought identical cooperation from the forest office for the forest across the river, today it is being rapidly depleted. It is properly protected neither by the Government nor by the people. A number of years ago, the forest was set on fire by a culprit from a neighbouring

village, but it is claimed that the forest official let him go in exchange for a bribe of six thousand rupees.

The villagers themselves use the forest extensively for timber and firewood supplies and, for the latter, they also share with some households from a neighbouring village. Some of the villagers suspect, as mentioned earlier, that one of the Diyargaon elites has already had it registered in his name and that, with an irrigation canal passing through it, he is quietly encouraging exploitation of its lower fringes so as to be able to turn it into a *gyula* holding.

But the villagers also have a common and important stake in the forest, namely, the twice yearly supply of *piral* which is essential for livestock and fertilisers. The attitude of the villagers towards this forest has been one of ambivalence, and they seek assurance in the fact that the younger pine trees are more numerous and that pine is a fast growing species.

The villagers also realise that a neighbouring village is encroaching upon another forest area from where the people of Diyargaon also collect firewood and *piral*. But given the fact that exclusive ownership rights of the communities over specific forests have not been a part of the local tradition, no restrictive action is contemplated by the villagers. This indifference is probably encouraged also by the fact that there is still another large area of forest from which they could collect a seemingly interminable supply of timber, firewood, and *piral*. It is presently inaccessible, but the construction of a bridge over the Hima River will provide access.

### **A Typology for User Group Forestry**

A few conclusions can be arrived at based on the understanding of the socioeconomic forces that shaped the forest management in Diyargaon. Firstly, it has been seen that where the forest in question directly affects the existence of the local people, as in the case of the Thapala forest to the north of the village, the villagers take no chance on its protection. The entire community power structure and resources are adequately mobilised not only to establish an indigenous system of forest protection and conservation but also to ward off the possible claimants from both within the village and outside. Similar has been their interest in the conservation of the forest area in the north-east,

which they have long ago ceased to burn. From there, they can gather not only good grass for their livestock at present but also a more abundant supply of timber, firewood, and pine needles in the future.

Regarding the gradual depletion in the lower fringes of the forest across the river, instigated apparently by one elite household interested in clearing the area for cultivation, people are already beginning to voice their concern, although in a subdued manner as yet. The forest is far too useful for the entire village as an important source of firewood, timber, and *piral*. It is, therefore, unlikely that the forest will be allowed to be totally cleared for cultivation by them.

Secondly, the case of the forest farther away from the village tells a different story altogether. It has been the area that bore the brunt of the population increase in the village by being subjected to sustained clearing to make room for more cultivable land. That the limits have been reached for such expansion is very much in evidence by the extent of cultivated land in most of the high altitude mountain ranges in the region. The accelerated growth in population has already wrought havoc on the forests in such an ecologically sensitive area. But this has not been a matter of concern for most local people. Survival of human beings has obvious priority over the survival of the trees in this region.

Thirdly, although informal institutional arrangements can be quite effective, as in the case of the *piral* harvest, the participation of the economic and political elites is essential to lend them the necessary legitimacy. Given the highly traditional, economically stratified social structure, the successful introduction of egalitarian democratic norms in the management of local institutions will take some time. If sustained and more encompassing interventions, designed to bring about transformation in the social structure, are not contemplated, then the two elements necessary for the formation of effective user groups in Diyargaon's traditional context are (i) informality in composition and (ii) elite participation.

Fourthly, even though such an arrangement exposes the institutions to the risk of exploitation by village elites, this is still preferable to relying on the government bureaucracy. As is evident in Diyargaon's experience, the government forest office has played a part only in the formation of two forest committees, one male and one female (and this was probably to fulfill its annual target), and no subsequent support

has ever come from it. The contact with the villagers seems to be more "sustained", where the forest officials stand a good chance of extorting some precious rupees from the villagers.

Lastly, people acknowledge that the existence of the government officials in the vicinity has proven to be a fairly effective deterrent against indiscriminate felling of trees in the upper reaches of the region where people have not been interested in conserving the forest. This situation, in turn, suggests a principle of mutual complementarity based on which the jurisdiction of the participatory local bodies vis-à-vis that of the government offices can be demarcated: in the immediate environs of the villages the local communities are unparalleled in their effectiveness in the conservation and management of local forests; in the outer reaches the Government should continue to retain its authority and responsibility.

Given these realities, the traditional forest management systems of Diyargaon are more functional when they share a symbiotic relationship with the forests around. In such cases, the villagers as a community know exactly what they need to achieve in terms of protecting the forest on the ridge or collecting fodder grass (goal setting). They also mobilise resources and implement their goals by either making grants to poor *Kami* or by paying the *ban naralo* in bundles of fodder grass. In addition, the *ban naralo* can be replaced, as are other *naralo* or *kumthel*, on the basis of his work performance (evaluation). Thus, these traditional mechanisms, however informal they may be, possess the basic attributes of effective institutions in that they set goals, mobilise resources in a sustainable manner, implement plans, and evaluate the results on a regular basis.

In order to strengthen local user groups and make the leaders more accountable to their members, sustained external support in terms of training the members in more scientific and transparent methods of management and in facilitating intra-group and inter-group communication (including exchange of experiences) would be needed. However, the normal government bureaucracy is ill-equipped to render these services effectively, and more so in a remote location like Diyargaon. Therefore, this is a function that the private sector may be able to discharge more effectively.

Furthermore, where such a symbiotic relationship is wanting between a given community and the forests in the area, as in the case of the

highland forests in the region of Diyargaon, reliance on community user groups would be ineffective. The symbiotic relationship of the forests in the upper mountain reaches of Karnali exists not with the villages in the immediate area but with the regions much further downstream in the plains which can be devastated, not by the depletion of timber and firewood supplies there but by the massive unleashing of landslides that such deforestation would inevitably precipitate. Therefore, despite its immense limitations the government forest bureaucracy will have to continue to protect them.