

# DownToEarth

## Community-based natural resource management in Himachal still weak

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Himachal Pradesh is categorised under one of the most fragile ecosystems among India's hill states. Hill communities face dual challenges of food and energy shortages and have become more vulnerable to weather variabilities and susceptible to natural disasters, attributed to climate change.

Fuel wood and fodder, which are two most important requirements of rural hill communities for their own sustenance and that of their livestock and small ruminants are becoming increasingly scarce. Presently, there is an enormous pressure on the forests for fuel wood and fodder with the woodlots in the commons diminishing over the past two decades due to rapid deforestation and absence of plantation activities.

Most forest stands in the hills have matured/aged and there is limited scope for their natural regeneration, due to non-formation of cones, attributed to climate change and increased human and cattle interference. The small ruminants like sheep and goats are now being grazed in the upper reaches of the forests, extending the zone of deforestation.

Engagement in subsistence agriculture, orchards and livestock rearing in the inaccessible hill terrains are the most important sources of livelihoods in the fragile Himalayan communities, with a heavy reliance on the local forest ecosystems.

Wood, LPG and electricity remain the three important sources of fuel for domestic purposes, with fuel wood being the vital source of heating and energy for a majority of the rural households, especially during the winter months (about 80 per cent), though the dependency on forests for firewood continues throughout the year.

Gainful employment opportunities are virtually non-existent for such communities. Majority of the households have at least one family member employed outside the village. Remittances, working as labour under the Mahatma Gandhi National Rural Employment Guarantee Scheme and in apple orchards areas are the main sources of income for these labourers.

Hill communities are directly dependent on forests for their provisioning needs, such as food, fuel wood, fodder, timber, water and medicines. Wood of *Cedrus deodara* (Deodar) and *Pinus wallichiana* (Kail/Blue Pine) trees are used for timber purposes.

Timber Distribution (TD) rights have not been issued in the last few years in the villages. Due to a ban on green felling in Himachal Pradesh, hill communities are facing difficulty in getting TD rights. The forest department allows communities to extract Non-Timber Forest Produce (NTFPs) once every three/five years, when the forest range is opened.

There have been efforts by the forest department, power plant companies and local communities for forest conservation and sustainable management under the Catchment Treatment Plan. However, there have been no significant changes observed in the villages on local soil and water conservation and forest improvements from the Catchment Treatment Plan.

The most important species collected from the forest are *Jurinea macrocephala* (Dhoop), *Aconitum spp.* (Patish), *Rheum emodi* (Rewand Chini), *Potentilla nepalensis* (Dori grass), *Orchis latifolia* (Salampanja), *Polygenatum vertuilliem* (Salam Mishri), *Ainaliaea apra* (Sathjalori), *Picorhiza kuroo* (Karoo), *Podophyllum emodi* (Bankakri), *Rhododendron compannlatum* (Kashmiri patta), *Saussurea lappa* (Kuth), *Artemesia sp.* (Seski) and *Polygenatum vertuilliem* (Thuth).

Procuring fuel wood round the year has become a challenge for most hill communities due to the rapid destruction of forests, degraded common property resources and increased restrictions from the forest department to collect fuel wood from the forests. Women from the local communities have to travel to faraway places (up to 10-15 kilometres) to collect fuel wood on a weekly basis due to non-availability of fuel wood in their own villages.

This is a painstaking work, which involves carrying head loads of up to 70-80 kilograms of firewood. Most often, they confront the forest officials, who reprimand, fine and

seize their small cutting equipment like axes, as a punishment for collection of such basic fuel wood material.

Hill communities do have individual and community rights for the collection of dry wood for fuel, grass and green foliage for fodder, timber extraction (for community functions like marriages/feasts) and collection of food products and non-timber forest produce. But there are no rights on grazing of cattle and livestock.

A majority of the households have customary grass cutting rights in the forest area and common lands. As a common practice, the grasslands are kept closed during the monsoon months from June to mid-September to prevent open grazing by animals and to allow the grass to grow.

The grass is cut during October for fodder requirements of their livestock during winter. The hill communities do have designated grass cutting patches for every family. Women are mostly engaged in the grass cutting during the whole month of October. Mechanised grass cutting machines are owned by a few community members and men are mostly engaged in mechanised grass cutting. Communities do practice traditional systems of rotational grazing on agricultural lands and forests.

Most rural hill families rear cattle and small ruminants (sheep and goats). All locals rear cows — local and Jersey, ox, goats, sheep, mules and small poultry. Animal rearing is essential to generate manure for farming, meat and milk. Small ruminants are raised for meat (consumption and sale), milk and manure. During summer and monsoon months cattle, sheep and goat are taken out for grazing in the grazing lands and forest.

Jersey cows are not left out to graze. Farmers who own 10-15 sheep or goats, keep them at home, but farmers with larger flocks of small ruminants, follow a common practice of taking the animals to higher areas where they have grazing rights, during April. The graziers reside in these areas with their livestock till the time of snowfall in October-November, when the livestock is brought back to the village.

Unfortunately there is little scope for vegetation to recover from the grazing during winter leading to cumulative loss of green cover over the years.

For the winter months, hill communities stock fuel wood and grass (Silage), especially when the temperature falls below freezing and the land is blanketed in snow, making it difficult to go out for collection of fodder to feed their livestock. Grass cut from designated areas and green leaves are procured from forests for fodder.

Eighty per cent of the fodder needs are met from the forest and the rest 20 per cent are from the private lands. Leaves of trees such as *Aesculus indica* (Khannaur- Horse

Chestnut), *Morus alba* (Kimu), *Robinia*, *Juglans regia* (Jungli Akrot), *Prunus spp.* (Wild Apricot - Chooli), *Prunus persica* (Wild Peach - Bemi), *Quercus semecarpifolia* (Kharshu Oak) and Ban Oak are used as fodder. Fodder needs are also met from crop residues.

Hill communities also collect medicinal herbs from the forests for domestic use and for sale. NTFPs such as *Jurinea macrocephala* (Dhoop), *Gentiana lutea* (Kadu) and *Trillium govonianum* (Nag Chatri) are harvested in the higher reaches and sold to traders who come to the village to buy the mushrooms and medicinal plants.

About 40 per cent of the households engage in collection and sale of NTFPs. Usually, those households engage in NTFP collection that have either have less land holdings, or have a large number of family members.

Dhoop is sold for Rs 120/kg and Kadu for Rs 240/kg. About 50 per cent of the households are engaged in collection of NTFP for sale and domestic use.

Fewer households are engaged in NTFP collection for sale. The availability of NTFPs has reduced over the last 10 years, and villagers have to now travel to higher reaches in the forests to procure the NTFPs. Food products such *Diplazium esculentum* (Lingad), Mushrooms (Chatri) and Cheejay are also collected during the season time from forests.

There are several formal and informal institutions existing in the form of committees such as Van Panchayats, Youth Clubs and Women's Groups/Collectives in the hill villages. These institutions undertake socio-cultural developmental and religious activities in the villages.

However, discussions on community-managed natural resource management is limited or non-existent. They currently discuss on sports events in the village/Gram Panchayat meetings. Effective coordination between and among the major stakeholders for community-based natural resource management remains a challenge for the hill communities.

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