

**COALITION FOR ENVIRONMENT AND DEVELOPMENT**  
**Sustainable Cultures – Cultures of Sustainability**

**BACKGROUND PAPER 19**

by

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**Sustainable Livelihoods and Lifestyles in Uttarakhand  
& Associated Movements**

Mountain regions are marked by their diversity, remoteness and fragility. It is this diverse, awesome yet fragile ecology that might have something to share with us about sustainability.

The greatest mountain range in the world, Himalayas, is home to diverse traditional communities, many perhaps all, socio-culturally unique. But what is common is their relationship with nature, determined by dependence, reverence and fragility. Of this, have evolved systems of knowledge and practice which ensure sustainability and a culture of conserving nature and all its resources.

This paper is borne out of an attempt to learn about and from one such culture – that of the Garhwal region of the Hill State of Uttarakhand.

While as this paper looks broadly on the Garhwal region of Uttarakhand, especially the districts of Dehradun, Tehri, Uttarkashi and Chamoli, its focus and many of its deeper and detailed illustrations and examples are primarily from the outer Himalayan ranges of the Dehradun valley, (most so, the cluster of villages around Nahikalan<sup>1</sup>, and Sinsayukhala) and Hemwalghati, the valley of river hemwal and most notably Jardhar gaon<sup>2</sup> and surrounding

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<sup>1</sup> Nahin kalan and its neighbouring villages and hamlets are situated at an altitudinal range between 3000- 5500 feet with a population of less than 1000. The neighbouring forests are spread across an area more than 10km long 3km wide and have thick and diverse forest cover. It is a water rich area with numerous perennial springs and streams. Also, a site of successful anti-limestone mining struggle in 1980s.

<sup>2</sup> Hemwalghati was the home of several Chipko movement actions and struggles, . Jardhar Gaon in Hemwal Ghati, is situated in the middle Himalayas near the river Hemwal and ranges between 4000-7000 feet with a population of over 3500 people and has a long stretch of lush, community revived forest spread above it all the way to the hill top and beyond. It is also the main home of the Beej Bachao Andolan.

villages ) in Tehri Garhwal. At the same time\_\_ the systems, approaches and situations drawn out and discussed in this paper would hold broadly true (or have till some time back) for most hilly parts of Garhwal Himalayas and broadly for all of hill Uttarakhand.

As with most traditional communities, there are no water tight compartments into which economic, social or cultural aspects of life are fitted. Central to all these is the relationship of the human community with nature. This relationship determines the contours of livelihoods. Livelihoods in this area are directly connected to nature and natural resources. While agriculture and pastoralism/animal husbandry are the mainstay livelihoods, other crafts and vocations such as architecture, weaving, healing, music and carpentry are secondary. Almost all families do grow at least part of their food and often have cattle heads.

This paper elaborately explores the mainstay livelihoods & associated lifestyles, the interconnections between the main livelihoods, their relationship with forests and ecosystems.

This interconnected wholeness has allowed for centuries of active engagement and experimentation, while sustaining and preserving natural resources and at the same time obtaining all that's required for the community's survival and enrichment. The survival of forests, ecosystems and rivers small and big to this day is testimony to the inherent sustainability of these livelihoods. The result is a fascinating body of knowledge and practice which is extensive, intricate, scientific, creative, non-violent and sustainable.

Sustainability or otherwise of livelihoods, lifestyles and practices is regularly examined\_\_ so the bright, nurturing winter daylight of sustainability is the light that constantly shines and probes through this paper

These are areas that have also seen threats, challenges of different sorts and have responded to them managing to save and sustain their communities, cultures and the environment around to a considerable to great extent.

We will certainly look at some of these inspiring movements and initiatives to protect livelihoods and the ecosystems and mountains they are interlinked with.

## **Mainstay Livelihoods and Associated Lifestyles**

**Agriculture and animal husbandry or pastoralism** have long been and still are the primary and mainstay livelihoods and occupations of the areas human communities. Closely and symbiotically interlinked, both of them are deeply dependent on the neighbouring **forests** and ecosystem for sustenance and viability.

As a village elder once told me, "it is impossible to even imagine agriculture in the hills without forests"

This deep dependence on forests implies deep interlinkages and relationships with forests and the entire ecosystem and watersheds. As communities are dependant on forests for diverse needs, forest health and diversity thus becomes critical to the existence of local livelihoods

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and well being of local communities. There is no way agriculture and pastoralism can thrive with degraded forests.

And so evolved relationships, processes and systems that enabled forests to survive and thrive with remarkable biodiversity and ecosystem services.

And thus forms a wonderful sustaining Triad of Forests, Pastoralism and Agriculture...

The following sections look deeply into both these primary livelihoods, their interconnections and the workings of this sustaining and sustainable triad, and associated lifestyles.

## Agriculture

Agriculture is presently the primary livelihood in this area and its distinguishing features are *organic cultivation methods and very high levels of biodiversity*. These and farming as a whole are based on a deep over time evolved and tested *traditional agricultural knowledge and practices*. Alongside, there is an exciting *traditional agroforestry system*. Together, these are like the foundations, the pillars, the roof and the walls of a house.

## Biodiversity

At the foundation of Garhwali agriculture are a vast array of native, traditional Himalayan crops and varieties. These seeds and crops have grown here for centuries, and one way the local people look at them is, as part of the ecosystem and landscape just as the mountains, rivers, streams and people are. An irreplaceable part! Having evolved in these conditions over centuries they are extremely well adjusted and adapted to the local climatic, soil and other conditions and their variations. This gives them hardiness, resistance and resilience that cannot be matched or replaced by external or hybridised seeds. The farmers of Nahikalan, a village I've been associated with for more than 20 years and worked in, grow up to 40 different crops in a year.

Agriculture in most of this paper's focus area, as in 87-90% of hilly Uttarakhand is rainfed in nature.

To illustrate the biodiversity, agricultural knowledge in practice, ecological sense and a wholesome way to meet the food and nutritional security needs of humans and cattle \_\_ let me describe a unique, profoundly sustainable farming system, concept and practice of Garhwal \_\_

## Baranaja ~ A Community of Crops

In essence, **baranaja is a mixed farming, companion planting system, a veritable community/society of crops**. All crops are planted together on the same terraced fields in the *kharif/chau masa* or monsoon season.

Amongst the grains (cereals and millets) there will be mandua(finger millet), ramdana(amaranthus), kuttu/ogal(buckwheat), jwar(sorghum) and makki (corn)

Pulses and beans like rajma, lobia, bhatt, gehat, naurangi, urad and mung

Oilseeds like til, bhangjeer, sann, bhang

Vegetables like ogal, chollai, kheera, lobia

Spices like jakhiya and til (sesame).

Fibre plants like sann and bhang

Vines leap onto sturdier crops like corn and millets, with no negative effects on either. In fact they help each other by providing preferable conditions and improving each others productivity. As the pulses fix nitrogen for themselves and companions, they get to hold and climb far on the corn and millets. Also, plants grow at different levels or storeys much like a natural forest with different storeys, with different plants flourishing in different storeys. Thus utilising multiple levels of space on the same terrace. This implies more overall productivity, more something monocultures don't seem to know about.

On rockier lands pulses, lentils and beans are planted. On more fertile lands mandua, lobia and ramdana. With ogal, bhangjeer and bhang on the borders.

Different versions and combinations of this essential concept are planted across large parts of Garhwal, according to local conditions and community and farmer preferences. It could be mandua, ramdana, urad and cucumbers. Or corn and rajma. At any rate, mixed farming with these primary crops is the widespread and prevalent kharif-monsoon cultivation system across wide ranging regions of rainfed Garhwali agriculture.

This system provides wide ranging food options (cereals, pulses, oils, spices), that too all in one season, significantly meeting **food and nutritional security needs of farming families and their cattle**. Also providing some other needs like fibre. For domesticated animals there are diverse types of fodder and straw providing well rounded nutrition for them too.

Significantly, such a farming concept and approach ensures **maintenance of soil fertility**. The nutrition needs of different plants are balanced out. If some cereal and millet plants are heavy feeders like corn and mandua, others (notably the long list of pulses, beans and oilseeds) are big nitrogen fixers for themselves and others around. The soil is well covered through the monsoon, there's big leaf fall and later the crop stubble and roots are left in the fields.

Even a **simple comparison of biodiverse agriculture with chemical mechanical monocultural agriculture** reveals \_\_a diverse multi storeyed system as this implies more overall grain productivity, way more crop fodder for cattle (stalks and straw), incomparably more nutrients for the soil and organisms therein. What was that about greater crop productivity in chemical monoculture agriculture with hybrid seeds? They never consider the overall productivity of a field planted with diverse crops. Secondly, they never consider or count crop stalk fodder when they look at productivity of crops. Thirdly, there are many native varieties, like of paddy, that are as high or more grain yielding grown organically than newer hybrid crops grown chemically. So what are they talking about? And this is not even yet speaking of what these different approaches do to the soil. One nurtures it, the other mines it. And about sustainability, dear reader, you decide.

Getting back to our description \_\_ to ensure and further soil health and care the field is left fallow and undisturbed over the entire winter and spring seasons (rabi), **for rest and further rejuvenation**. The crop roots, stubble and fallen leaves will add organic matter to the soil.

Now, some families are reluctant to leave the fields fallow, and plant jau and masoor over the winter-spring

A further interesting practice in this system used to be to cut only the grain and leave the rest of the mandua (a major crop) stalks uncut in the field and allow cattle to roam and feed freely, dropping dung in the process. With winter snow, rain and frost falling heavily on them the stalks and cattle dungs would fertilise the fields wonderfully. Like Fukuoka's Natural Farming.... I keep finding akin examples of it all over India.

What happens in the same field in the following seasons illustrates the wonderful practice of **crop rotations and cropping cycles**, and reveals sustainability further.

Come March-April and the field is ploughed, levelled and left for a while. Soil becomes *bhurbhuri* (loose, ideal for seeds to sprout and plant roots to spread).

In May-June Jhangora is planted, in areas it is jhangora on the borders (for protection) with dryland paddy inside.

In the rabi season it will be wheat, madder, masoor and sarson(mustard).

And following summer, after a years break it will be back to *baranaja*.

### **Organic fertilisation**

All fertilisation is absolutely organic, from locally available, recycled and value added gobar (cattle dung) and biomass sources. The primary source of fertiliser is farm yard manure comprising of lots of cattle dung, diverse green leaves, twigs and grasses (mostly wild plants) that the cows mix with their feet to the dung, wood ash from kitchens and home sweepings etc.

For specific crops as ginger, turmeric, chillies, tubers (arbi) after sowing/transplanting \_\_green leaves of specific trees are added to the soil as a cover called *pattan* (a heavy mulch), for moisture retention, soil protection and disease repelling). Thick layers of farmyard manure are then spread on top of this. The fertilising effects of this very heavy manuring and mulching lasts for three years and is critically linked to the crop rotation cycle. Meaning much less fertiliser is needed for next two years.

Additionally, crop stubble and numerous weeds growing on terraces are ploughed back into the soil at the field/soil preparation stage. Leaves from the numerous trees and plants between and around the terraces ( details in section on agroforestry system) keep falling onto the fields. Most rainfed agriculture villages have a forest above the village and agri terraces, often in good shape, this has a profound influence on soil, water and fertility conservation and enhancement. One needs only to look at all the agri terraces below oak forests to understand this. And its no accident that main villages are very often located under forests in

the middle and outer Himalayan ranges. (this is discussed elsewhere in this paper). Altogether there is high organic matter and nutrient content in the soils.

The high organic matter content means lots of food for soil organisms like earthworms and micro-organisms. Which in turn process this into nutrients which the plants can readily take up. Also significantly enhanced is the soils ability to absorb and store carbon and to fix atmospheric nitrogen. Opposite processes work in chemical farming. As we'll elaborate later.

**Maintenance of soil fertility, its essential nature and ability to rejuvenate itself, is a critical factor in evaluating an agricultural systems sustainability, and this one fares rather well!**

### **Local Agricultural Knowledge and Practice**

*An illustration of much of local people's agricultural knowledge in practice was shared in the sub-section on Baranaja, a community of crops earlier, and informs various other sub-sections as illustrations, so we'll skip details here and largely list the kinds of knowledge. In fact, this whole paper is based foremost on local community knowledge, learnt over the last two decades.*

There is wide-ranging and highly nuanced knowledge of all important agricultural functions and tasks. From seed selection, drying, safe storage(different methods for each crop), what, where, when and how to plant, types of soil, fertilisation requirements of different crops and different types of fertilisation, weeding and hoeing requirements for different crops, companion planting, how to maintain an equilibrium of mixed crops, crop rotations and combinations, are given particular importance and are closely linked to organic fertiliser application cycles. There is a tradition of exchanging and rotating crop variety seeds amongst farmers.

There is tremendous knowledge of the rainfall and climatic patterns, in their valleys. And this is crucially important in rain fed agriculture and is intricately linked to sowing times for different crops and choices of what to grow.

**In essence, they have a good sense of how nature expresses herself, in their part of the world. And that is a lot of what farming and sustainability are about....**

### **Traditional Agro-Forestry Systems**

The rainfed agri-terraces are lined with numerous trees, often of an astounding diversity. In between terraces (on slopes called kalna) and on all non-terrace land in the agricultural zone. Their numbers could run into many thousands of trees for a single village. Further there are numerous types of wild bushes, grasses and herbs in the same areas. Its very easy to mistake some of these agricultural fields for a forest full of trees, especially in the monsoons.

This amazing traditional agro-forestry system is an important source of diverse fodders, foods, fuel wood, fibre, firelight, medicine, timber...

It enables a still further or profounder multi-storeyed farming, remember there is already multi-storeyed cropping in the diverse mixed cropping forms of the area, (example of Baranaja, at the beginning of this section), *(this makes it really much like a forest, where the*

*inspiration seems to come from*), consisting as it does of plants and trees of many sizes and heights. And it adds to overall productivity and integrity of agro-ecosystem, by being much like a natural forest.

Agro-forestry plays a major role in creating efficient nutrient cycling, direct fertilisation and indirect and value added fertilisation through the fodders it provides to cattle and resultant farmyard manure, acts as a wind break, creates a microclimate for special diverse hill crops, protects soil from erosion etc and maintains soil moisture.

### **Community or Cooperative Farming \_ *Samuhik Kheti***

An important and beautiful feature of the *baranaja* and such like esp. *kharif/chau masa* (monsoon season) cropping systems including paddy cultivation is the practice of community/cooperative farming. The important and arduous tasks of weeding and hoeing in mixed farming of *baranaja* or *mandua* based mixed cropping are undertaken by many members of the community working together on each others fields by turn, called *sail* in Malkot, *godvart* in Hemwalghati. In *godvart*, *mandua* weeding and hoeing was undertaken with playing of drums and trumpets, and practice of traditional ceremonies and playing of epics like *mahabharat*. This would be accompanied by Prasad, food and dancing. These elaborate cultural practices involving musical instruments and performance have largely ceased, but the cooperative farming, talking, joking and feasting elements remain to this day.

In paddy, sowing is still undertaken together with members drawn from various families. There are sowing songs, sung together, as people work together. There's food, laughter, joking and joy as people play with mud and water, like at Holi time.

Similarly, for harvesting of major crops, like paddy, ginger... families join hands and take turns harvesting each others fields.

If someone is unwell, the people will get together and do the work on the persons land. It won't remain undone and abandoned.

Where there are major inroads of modernisation, all this is reducing. It is also linked to social relations and a sense of community and connectedness. It's a form of labour exchange. If your fields are far from your home, then you can get cowdung manure from a nearby house in exchange for giving fodder from your crops.

In sharp contrast, if the farming is monocultural, you need to hire labour and pay money, as in tomato or other such new forms of cultivation. Some families now also think of getting there own work done first.

Overall, according to informed local estimates, there is still high prevalence of cooperative farming for these critical tasks of traditional farming \_\_ up to 70-80%

### **Traditional Agriculture and Global Warming**

Agroforestry systems fully integrated into agriculture, the enormous amounts of farmyard manures, direct applications of leaf and twig mulches, biodiverse mixed cropping systems and crop rotations, fallen leaves, lots of wild weeds, crop stubble turned into the soil and

integrating with it along with plant roots\_\_ all these add huge amounts of organic matter to soils. Tremendously enhancing the soils carbon absorption and holding capacities. The wild trees, shrubs, grasses and herbs in the agricultural zone along with the diverse crops sequester and hold huge amounts of carbon themselves. So, these organic biodiverse and agroforestry systems are huge carbon sinks and sequestering systems. The organic agriculture of which they are all an important part uses no external inputs whatsoever, in the form of seeds, fertilisers, or tractors ... no oil or fossil fuels whatsoever are used to run or fuel or fertilise. Making organic, biodiverse, agricultural and forestry systems a wonderful mitigation and adaptation strategy to climate change.

In contrast chemical mechanical industrial agriculture needs enormous inputs of fossil fuel energy to power it\_\_ through oil based chemical fertilisers, pesticides, farm equipment like tractors, harvesters... not to count the transport needed to bring all these external inputs to the farm. Chemical agriculture releases carbon into the atmosphere, where as organic biodiverse agriculture sequesters and traps carbon\_ in soil, plants and trees.

Ironically, in spite of having played no role in it, these entirely rain fed farming systems are today having to bear the vagaries of climate change. With increasingly changing swinging climate the skies are becoming ever more difficult to predict.

*The local people feel that the only predictable thing about rainfall today is that it is unpredictable.*

## **Pastoralism-Animal Husbandry**

Vijay Jardhari, Chipko movement veteran and co-founder of the Beej Bachao Andolan, echoes the feeling of hill people when he categorically says “***without cattle hill agriculture is not possible***”.

It's the cattle that power the regions agriculture. The main fertilisation for crops comes from cattle manures, used to make farmyard manure and for direct applications in some crops. The ploughing is entirely driven by oxen. So its not tractors or petroleum that powers ploughing, nor do fossil fuel based chemical fertilisers give a fix to productivity here.

There is vast knowledge of the areas extremely diverse range of wild plants especially fodder plants \_ fodder qualities and properties, ideal times and methods of harvesting that would ensure regeneration and sustainability.

***The local expression goes that cattle are the hands and feet of the farmers. In the fields and in everyday life too. They feed the farmers and the agriculture too. And they don't let the farmers grow lazy.***

Till some 40-50 years back, animal husbandry and pastoralism were the primary livelihoods/ occupation of the hill people and farming was secondary.

Agriculture, if and where its flourishing, at best provides up to half of the fodder needs of cattle. For the rest, and hence primarily, cattle are dependent on the natural forests,



grasslands and hill top meadows, on the numerous wild trees and plants between terraces, elsewhere in the agricultural zone and on surrounding village common lands.

In the Nahinkalan area, different seasons bring different fodders from different directions and altitudes all around the village. The range of fodder plants is astounding and the local traditional knowledge about them is indeed impressive. Which fodder is appropriate in which season (the *taseer* etc.), has what properties, which all enhance milk, such properties of numerous fodders are known. Also what proportions, ratio's, mixes and rotations of fodder including green fodders and stray/hay. Its believed to be important and good for cattle to substantially or primarily eat diverse green fodders and these are form the primary food for them \_ green leaves and grasses, soft twigs, flowers and pods too. Considerable to great effort is made to get fodders which cattle prefer and indeed relish. Many of the common fodders are important medicinal plants. Little wonder that the cattle are healthy and largely free of disease. Their expressions of approval when being served their favourite fodders is a sight to behold. Overall you get the feeling they are content. And I've seen some remarkable expressions of happiness.

This also reminds me of the enormous, though quiet, joy and celebration at the birth of calves. That a cow or buffalo with a young calf and when she has milk, is called '*biyae*' (married).

Cattle provide milk, or more specifically and importantly\_\_ buttermilk, butter and ghee. And as importantly, *gobar* (cattle manure) to fertilize the agriculture terraces and of course bullocks for ploughing the fields.

*I do not think there is any other single activity around which so much effort is made and care taken\_\_ and all around year, numerous hours, each single day. Agriculture, in comparison, is a relatively seasonal activity, with busy and lean spells.*

This likely indicates the livelihood significance of cattle for the local communities.

Does all this indicate supreme importance or primacy of cattle in people's livelihood? It would appear so. Alongside, there could be the dimension of deeply and properly caring for someone dependant on you. And there is the long history of pastoralism being the primary livelihood. Alive in the collective unconscious!?

Along with its symbiotic link with agriculture, cattle are an important part of food and nutritional security and risk reduction, providing a climatically and ecologically surer livelihood than rainfed agriculture in these times of changing climate.

I go into these details for when we think of communities that are settled agriculturalists; we simplistically refer to and think of them as farming/farmers. Inadequately or not at all seeing (leave alone understanding) linked occupations and livelihoods that could be as or even more important.█

### **Multiple villages/hamlets or *chhaaniyan***

For centuries, there has been an interesting tradition of a family having three different habitations, where they moved with cattle for different seasons in the year. One in the

valley(ghati), another on the middle of a hill(rainfed agriculture) and one atop the hill (danda) where they made *chhaan or chaaniyan* (mud huts with and thatch roofs) on the *danda*. The movement depended primarily on the seasons and abundance and availability of natural resources like fodder, water and possibility of agriculture in different ecological niches. Versions and variations of this cyclical movement of habitation and ecosystem dependence existed all over Garhwal. And do to this day! This would spread out the biotic pressures, enable regeneration breaks and not too much pressure on any one area. Houses in two different locations with pastoralism/animal husbandry and farming continue to this day.

When the hill top meadows sprouted new verdant grasses and the forest were thriving, in the three-four monsoon months, parts of the family travelled up to the danda (hill top) with their cattle, to live in the *chhaan*'s. There could be some agriculture here too, or it could be only for pastoral cattle grazing. And here they made '*chaals*' (or *chali, khaal, chotte joharh*), water pools or ponds, big ones for their cattle and another for themselves. Meadows in the higher altitude areas are called *bughiyal*, from the soft *buggi* (cushion like) grass.

The bigger *chaals* were forever, that is they lasted till the next monsoon. To have water available round the year on the hill tops is a wonderful achievement. This also provided water to wild animals. Smaller *chaals* were made on hill slopes, where there were small water springs.

As this catches rain water on the hill tops and slopes; providing water to cattle, humans, wild animals, birds and others; charges natural springs below, provides moisture to forests and hills enhancing plant growth and preventing fires and providing means to control them.... it was the over time preferred and honoured water harvesting and watershed treatment and development method. What a wonderful example of human, community initiative towards sustainability.

The writing is all over the forests and hills, *chaals* need to be re-cognised and readopted as the primary and supreme watershed method and approach. By communities and all government plans and agencies.

Knowledgeable elders say 99% of danda's (hill tops) have these *chaals*. But today *chaals* are in a bad way, thoroughly neglected and filled with silt. Essentially such *chaals* need simple though regular maintenance. And this situation can and needs to be turned around.

*Chhaaniyan* are still there too. People still go up with the cattle and may or may not do agriculture there. Elsewhere you can go up and down from the mid-hill village in the same day, so there may not be active habitation here.

Meanwhile, the tradition of grazing cattle is reducing as there is a movement towards buffaloes from cows. Although, in higher hills the buffaloes too travel up to the *bughiyals* on hill tops.

## Forests

*“Without forests, it is impossible to even contemplate agriculture in the hills”*. I remember an elder and former pradhan of Nahinkalan village, Diwakar Dutt, telling me many years ago.

Traditional livelihoods in these hills are entirely nature and natural resource dependent and that foremost means forests and associated ecosystems. This of course is truest for our foremost mainstay livelihoods of pastoralism and agriculture. .

The most significant and defining natural feature after mountains themselves are the forests. It is around them that everything revolves. This starts from the very location of habitations. Most primary/main, old and present villages are very strategically located just under forests, in the middle of the hill, where lots of reliable and perennial water springs sprout (thanks entirely to the forest cover above). Providing year round water for drinking and all other needs of humans and cattle. This location is also where the majority of agricultural terraces will be, receiving sustained moisture and fertility of soils from the forests above.

Forests provide other critical livelihood needs, like year round fodder for cattle, and resultant cowdung the primary fertiliser for agriculture, special trees for mulching special crops, regular high quality fuel woods, numerous wild foods, medicines for humans and cattle, wood for house building, repair, furniture and agricultural and other implements. Forests also create a congenial micro-climate for the cultivation of several special crops of the hills.

The world of water and forests are in the following section.

#### **An example of diversity in a community conserved forest area:**

A tucked away valley on the first ranges of the Himalayas overlooking the Doon valley, the Sinsyarukhala-Nahikalan area stretches across 3000ft and is more than 14 kilometres long and some 4 km wide. It has diverse types of richly endowed natural forests, with an astounding range of trees, shrubs, vines, grasses, herbs, ferns, orchids, mosses and lichens. Then there are grasslands and hill top meadows. As for tree diversity, we could easily identify more than 100 types of trees. Some major trees are Himalayan ban oak, baubhinia semla, wild amla, amarha, baherha, paiyan, gald, tun, madara, chhirna, ainyar etc. Vines like malu(baubhinia vahlii), maalkangni, gilloe and surmarhi. More than 50 important medicinal plants and numerous wild relatives of important cultivated crops.

There's fauna to match the flora: four types of deer\_ goral, sambar, kakarh and seerau, leopard, tiger, black bear, wild boars, monkeys, langur, totriyala, leopard cat, wild hens, porcupines and wild rabbits etc. A wide diversity of birds, butterflies, bees other insects and micro-fauna.

The area is home to numerous perennial natural springs that provide drinking water to more than 12 villages. And irrigation water to villages in the Doon valley.

Agriculture is organic and biodiverse, with more than 40 different crops grown organically annually (counting the vegetables) and there is an agroforestry system that makes agri-terraces look like the forest itself.

Communities typically access wide altitudinal ranges and aspects, enabling them to access different ecosystems in different seasons depending on abundance of resources. Remember the tradition of rotational habitation or 3 houses... moving with the seasons...

My Garhwali friend and colleague, Bhupal Singh said, ***“Even as our ancestors lived (even farmed) in the forests they nurtured the forests.”*** **And that is how there are still forests even today, I added.** Evolved relationships, processes and systems that enabled forests to survive and thrive with remarkable biodiversity and ecosystem services.

This is most remarkably true of areas where communities have protected and conserved, even regenerated, nearby forests.... Community Conserved Areas. There is an enormous tradition in Uttarakhand of communities conserving, even very large tracts of forests.

An informed estimate reckons about 80% villages still have community decision making and management of common resources and systems like forests, water sources and *guls*. Payments for protection and management are through cash or in grains.

We see Community Conserved Forest Areas as a quiet, at times turbulent, long happening movement, so they are covered more elaborately in the Movements section of this paper.

At the same time the effects of unsustainable pressures and utilisations, external or internal are manifold disasters:

On the outer Himalayan ranges a dense enough vegetational cover is invaluable and uncompromisable. As fragile, steep hills shorn of their floral mantle cannot bear the heavy monsoon nor at times their own gradient. Whenever and wherever there has been deforestation, mining or severe degradation, not just soil but stones and rocks begin to roll. There are numerous small slips and not few big slides that start to tear and more these magnificent hills. As was most notably evidently post limestone mining, by the 1980's and indeed after any such pressures.

These hills appear designed to reveal clear and sure indicators of sustainability or otherwise of any activity, including local livelihoods and ways of life. Indicators that can be ignored only at enormous, grave peril.

These graphic visual screams of Himalayan ranges overlooking the Doons, likely played no small role in the anti-limestone mining movement of the 1980's.

Further up, on sturdier hills, it's basic needs that then take up all the time: sourcing water, fodder and fuel wood then become arduous taking most of the day and make life difficult, drudgerous and even painful. Where is then the time and opportunity for other livelihoods and gone is all quality of life. Leading to severe livelihood stresses, migration and more.

So renewable and regenerative utilisation of natural resources is the key to sustainability of forests, livelihoods and the mightiest mountains in the world.

*The deep link of hill folk culture and forests is reflected in songs and music. The following statements by knowledgeable hill people give an idea of importance of forests to folk music and culture...*

*“The best training for folk songs and music happens in the forest”.*

*‘Bajuband’, is a folk singing form that is a conversation between two people who may not be able to even see each other...where one person sings a line and the other responds with the next line.... “It is best sung in dense forests...it is not written... so no written records...*

*“Jab tak jangal hain, tab tak lok sangeet hai!” (Till there are forests, there will be folk songs)!*

*Although, there is a big boom in the relatively new Garhwali music industry, village folk lament that the advent of commercialisation of local music is signalling the end of many authentic forms of folk music.*

### **Wild foods**

***For centuries, many kinds of fruits, flowers, leaves, and tubers from the forests and other non cultivated areas like grasslands, gulleys, danda... comprised a very crucial part of the food and particularly nutritional security of the local communities. Additionally this also provided another beautiful dimension to the communities relationship with forests and wild plants. These wild food plants run into dozens of plants...and comprised flowers and buds, fruits and berries, leaves, wild tubers etc.***

***Flowers such as burans (rhododendron), guriyal (kachnar/bauhinia family), sakina/saikna, semal, pilkha...***

***Fruits, berries and nuts like kaphal, kingora, hinsar/hisalu, kali hinsar, timla, amla, chhanchri, mol, jangli akhrot, malu seeds***

***Leaves like lengda/lungdu (a variety of wild fern), fresh karheek leaves, kalda and kaldi***

***Wild tubers like turarh/tald (dioscorea), gainthi, bevar,***

***This tradition continues, though in a significantly reduced form and no other adequate nutrition sources have taken its place. This could imply nutritional imbalances and deficiencies. Its high time we gave wild foods (and the connection they give to nature!) the attention they deserve.***

### **~Water ~**

Access and adequacy of water, for all its numerous uses, is always a bigger defining factor in mountain areas compared to the plains. And so it plays a huge role in mountain livelihoods and cultures.

Most regions receive good to heavy rainfall and snow too in all the higher hills. The degree of direct dependence on rain and snow can be seen from the fact that 87% of Uttarakhand hill agriculture is entirely rain fed.

Forests are the single most defining factor in sustained water availability. Springs, streams, rivers...soil moisture...productivity. Water has long been seen as a common property resource, a gift of nature.

Natural springs will typically have trees around them. Protection of forests around water sources is an old tradition, with clear rules and customs. Cutting of green trees is prohibited, as is cattle grazing, especially on slopes above sources. Here we find trees that hold water in their root zones and help give birth to natural springs. There is lots of knowledge about trees that hold water and keep soil moisture. Also, the area is not to be dirtied, polluted.

*Barish(rain), barf(snow), nadi(river), naulla/dhara (streams) are big inspirations and themes in folk poetry and songs across the region from Kumaon, through Garhwal to Jaunsar. In tribal Jaunsar they believe water is the incarnation of Vishnu, and must not be polluted at any rate.*

### **Schemes without Springs**

*Over time, natural springs have always provided the primary sources of drinking water to humans and cattle along with chaals.*

*Enter the Government, with its water departments and drinking water schemes.... "They only make schemes" say locals... they tap far away sources, make big pipelines... and do not even look at the immediate catchment of springs and the forests are invisible to them...so they forget or don't know about catchment conservation. Numerous such water schemes thus come to naught, as sources*

And then there are guls/kuls to bring water from the snowmelt, streams or small rivers to the villages, primarily for agriculture. These are wonderful social, ecological and local engineering marvels. Often the excess water is then returned to the river. There are wonderfully intricate social systems of maintenance and management of guls and the water from them.

People have deep relationships with the numerous small beautiful rivers that are and are viewed as especially beneficent. It is of course these small rivers that flow on to make the mighty rivers of the Himalayas. But the conservation and protection needs of these and

their catchments are today sadly neglected, especially by government policy and programs.

And yes, there are *devi-devtas* (goddesses and gods) who help out. There are *devta's* from whom one can ask for rain. And if it rains excessively there is a *devta* to help stop the deluge.

Surkanda Devi is the supreme goddess of this area. When it doesn't rain, entire villages go to ask for her help to bring rain. And their experience is they are not disappointed. I recently heard a story from a Chipko veteran, about a wonderful miracle like experience of troubled villagers asking for rain. And then he went on to add, "***when we go with a true mind, will power takes the form of god***".

But climate is changing swinging and rainfed agriculture especially is in serious difficulty.

### **Other Livelihoods and Lifestyles**

As with the mainstay livelihoods others like architecture/construction of houses, spinning, weaving, medicine and healing etc. are directly dependent on nature and her resources.

There is in depth knowledge about these resources and their qualities and the practices have been sustainable.

Thankfully, most houses at least in rural areas (above 95%) are still made of local materials like stone and soil and designed locally by the rajgirs, traditional architects who doubled up as masons and carpenters. Different timbers were used for different parts of the house like beams, door frames, doors and windows, beds etc. There was a well worked out system of availing slate stones and timber for construction. And these were and are still not allowed to flow out of the area or be commercially traded.

What is new is the arrival of cement and concrete and some iron for roofs and pillars and cement for plastering of walls. The walls are still almost entirely of local stone, gravel and soil. And the use of wood has reduced substantially. Cement and concrete are climate unfriendly and are likely to be less durable.

A very important part of the community has been the bajgi community. They played the distinctive musical instruments of the hills\_ the *dhol*, *nagada* and *baja*. They are believed to have knowledge of the *dhol sagar*, *tals*, *mantra*, *jagar*, *yagya* (holy fire worship), mahabharat, The bajgi and his instruments are so critical that important hill functions and rituals like worshipping goddesses and gods, weddings, *mundan*, *mandaan* for ancestors etc. cannot happen without them. They are also, atleast in some areas believed to be the original inhabitants of Garhwal\_ *Garh hoi* (*Garh ke Nivasi*)...

And yet they are the poorest, most socially and economically vulnerable community, at the bottom of the social ladder and discriminated against, the dalits, scheduled castes \_\_ they have some land but not much and are the least educated. There were traditional systems for their economic sustenance like *dadvar* (a share of agricultural crops) but they don't get this regularly anymore and as far as money goes they are paid way less than the new market music bands for weddings etc.

The lohar (ironsmith) made all agricultural implements, like some parts of the plough, *daranti*, *kudal*, *gainti*, copper and bronze utensils and the hookah.

Clothes came from traditionally handspun and locally woven woollen and some cotton clothes. These have seen enormous change, as most cloth now comes from outside.

Then there are the nomadic shepherding communities of Bhotiyas, Marcha and Tulchha; the Gujars and the Gaddi's. They traversed with the seasons, following the bounties of natural fodder, from the high hill meadows in the summer/monsoon, to the *terai* or duns in the winter months. An interesting and close relationship with the ecosystems they inhabit and traverse. Parts of the families of course stayed in one habitation.

Their intricate and complex tale is beyond the space and scope in this paper. Suffice it to say, that their livelihoods have traditionally been sustainable but are today coming under various pressures from governmental forest policies etc. and have seen changes and all this needs understanding and engagement.

*There is an interesting tradition of houses not having doors in hill top chhaani's (hut habitations). Elsewhere, doors won't have latches. Popularly, there will be latches but no locks even when the whole family is away in the fields or forest.*

As mentioned earlier mostly these are not full time occupations and the family would more often than not, be growing at least a part of their food and would rear some cattle.

### **Threats and Challenges to Sustainability**

As one would clearly see it's no Shangri-la, where the enlightened face no challenges from within or outside. The ecology, cultures, community, families are regularly challenged, pressurised and threatened.

**The biggest locally generated threat is forest fires.** There was a strong tradition of going collectively as a community to control and put out forest fires. This tradition has weakened. And no other effective system has come in to replace it, nor can it, without local communities playing their critical role. There are various factors behind forest fires, most so climate change induced frequenter long dry spells or severe heat spells has made forest fires a distinctly more frequent, wider ranging and severer occurrence. Causing enormous avoidable harm to forests, ecosystems and communities, and releasing enormous amounts of pollutants and stored carbon, even as it burns the sinks to store carbon. Today it helps no one, and adds tremendously and avoidably to global warming and climate change.

Where there are community conserved forests this tradition of community fire control is still alive.

Forest fires prevention and control need to be a priority, with awareness and full participation of

It strongly appears that the major threats to sustainable lifestyles are to begin with external in origin. Whether these are the big patently destructive and unsustainable one's like large dams, mining projects, commercial felling of forests or the recently bigger threat of road building and highway widening being done indiscriminately with large machinery.

Most of these are linked to government policies, be they for energy, transportation or agriculture they are driven by an unenlightened, inappropriate and at times callous approach.

A big challenge in the last two decades has been the increasing vagaries of changing climate....

**Rain fed farming communities (87% of hill Uttarakhand) are today**

**struggling with the vagaries and unpredictabilities of changing swinging climate....To which they have made no contribution.**

**Add to it significant crop loss to the wild animals** due to a host of factors.

All the above lead to a reduced interest in agriculture, borne out by a decline in area under cultivation.

This threatens not only the forest and the fields but the sense of self esteem and confidence of communities and their delicate fabric of interrelationships.



This has resulted in unsustainable practices either disguised as a “modern” approach or the ‘I don’t care’ attitude. Forest fires, unsustainable extractions and a general apathy towards one’s surroundings are some of them and the more insidious ones are changing social and cultural mores, devaluation of all that is traditional, in a blind aping influence by the city, the celluloid and the tube. Also there is the considerable migration from the hills.

And yet, organic biodiverse agriculture and dependence on forests have changed so much less in the hills of Uttarakhand especially Garhwal, compared to other western Himalayan states.

*What implications do the above and other changes have for sustainability of livelihoods, ways of life, cultures and societies... forests and other ecosystems and critical ecosystem services like rivers, springs and streams...?*

A very important thing to remember and understand at this juncture with all these challenges before us, is that its the sustainability of these primary livelihoods and indeed their core defining characteristics that have enabled the sustainability, integrity and perhaps survival of these mountain ecosystems over centuries.

And all is not lost, not just yet, as the following section shows....

## **Movements**

Significantly over the last four decades there have been several remarkable efforts by local communities to protect their forests, mountains and water sources and the livelihoods dependant on them. In more recent times there are initiatives to protect and celebrate the regions sustainable agriculture and a sustained struggle to save the community conserved areas.

In the process communities have fought apathetic Governments, money and muscle power, the timber mafia and politicians of all hues, the arrogance of modern science and economics - for decades in a number of struggles. What provided the fuel, creativity and direction for these movements?

### **The Chipko Movement**

*“Kya hai jungal ke upkaar : Mitti pani aur bayaan  
Mitti pani aur bayaan: Zinda rehne ke aadhaar”*

*(what does the forest give us- soil, water and fresh air  
soil, water and air are the basis of staying life)*

In the mid-1970s, from these very hills, started the pioneering (mother of all) modern environmental movements, the Chipko movement.

By the mid-1970s fairly large scale commercial felling of forests was taking place in the Garhwal hills. Forests or trees were being auctioned to outside commercial interests and were even sought to be clear felled. Village communities from nearby areas were disturbed with these happenings and protest and resistance built up. With women, youth and even children at the forefront, the villagers refused to let trees be cut. They announced their

decision to do a Chipko (hug the trees), if they were sought to be cut. In one of the first actions, in Reni village in Chamoli district, the villagers determination and enthusiasm served to turn away the loggers. Over the next years, in Hemwal ghati, there were a string of local movements to save forests from felling, and in some of these Chipko, or hugging of trees, was resorted to. Notable amongst these were Adhvani, Badiyargarh, Salet. There were also movements in Kangad (in Bal ganga ghati) and Khuret/Laasi in Bhilangana ghati.

Fodder, water, fuel wood were the main concerns of villagers. The major landslide in Tawaghat on the route to Mansarovar, the devastating 1978 flood in the Bhagirathi (again due to a landslide), deep gashes left by resin tapping of pine trees that caused them to fall in storms....all these propelled the further evolution of an environmental consciousness and need for action.

Ban on felling of green trees emerged as a demand. And the government later agreed to a ban on all felling of green trees 1000m a.s.l.

These initiatives fired the imagination of not just of hill people, but started to inspire people and communities far away. And played a critical role in the evolution of modern environmental movement and awareness, an inspiration that continues to this day.

That village women, youth and children...some of them even unlettered...took the initiative in valiantly resisting and stopping felling of forests and trees, shows the deep interconnections and relationship between peoples livelihoods, lifestyles, consciousness and the neighbouring forests. And it was an onslaught on these sustaining and sustainable livelihoods that were being resisted so bravely.

Some notable poets and folk songs and music along with slogans played an especially crucial role in the expression of this awareness and struggle. In fact Ghanshyam Sailani Raturi is credited with first using the word chipko in a song.

This movement can be seen as a society and cultures response to threats to its livelihoods and relationships (its very integrity)... and this can be considered as a further indicator of a sustainable culture.

Here are some more Chipko slogans:“gifts of the forests are not resin, wood and commerce; gifts of forests are soil, water and fresh air”

“fodder, fuel wood, soil and water, without these all plans are blind”

## **Community Forests or Community Conserved Areas**

*Jakh bhi dekha khali jagah, vakh lagava daali* (wherever you see any empty space, plant a tree there).... *Banjh ki, burans ki ho, chorhi patti walee*...(an oak, a rhododendron, let it be a broad leaved tree).... *bheemal ki, guriyal ki ho, chara patti wali*... (a bheemal (grewia optiva) tree or a bauhinia tree, let it be a fodder bearing tree)...*Jakh bhi dekha khali jagah, vakh lagava dali*... A popular Ghanshyam ‘Sailani’ Raturi song...

In this wonderful old tradition of communities protecting, conserving and sustainably utilising forest resources, even today, Uttarakhand is dotted with hundreds of such community conserved forests. Many are very large areas, several kilometres long and they often have far more diversity and density of trees and other plants and far better ecological

health and ecosystem services than government protected forests, including reserve forests. In fact, many are the best forests you will see in numerous valleys.

**This has long been often quiet, at times strident, sustained movement to protect and conserve forests and ecosystems to ensure survival and dignity of lives, livelihoods and cultures. It is the relationshipal bedrock of most environment and livelihood movements in the Garhwal Himalayas. This needs to be recognised, celebrated and furthered as a movement**

There are various community forest management systems to protect these forests, Kumaon of course has the celebrated van panchayats, in Garhwal, forms and systems of community conserved forests are much more diverse and less formal and often not officially recognised by governments. Ownership seems to matter less here, as at least some or many community conserved areas are technically reserve forests. The degree of protection and sustainable use, management systems and their efficacy, as well as diversity will of course vary.

In *van band* (forest closure), forests are closed to all interference (usually for monsoon months, or more). At times they are closed for years. Many villages have community appointed and paid van sewaks (forest carers or guards), Lassiyal village in Balganga valley gives a high salary to forest carers as it believes this is an important task. These funds are entirely (or almost so) generated within the villages through contributions by each family. In some forests, grazing of cattle, lopping of trees is completely banned (for over two decades in Lassiyal). Allowed are only collection of fallen leaves and cutting of limited fodder in a specified season. Significantly, if a forest fire starts, the entire community has to go to control it.

Some forests have been protected and regenerated by communities after the decades before the 1980s saw them being degraded. They are today wonderfully regenerated community forests over the last more than 25 years.

At times, various communities have had to face and counter significant threats to their forests especially from mining interests. And villagers like Jardhar, Kataldi and earlier Nahikalan have countered these successfully as we shall share in the next movement.

## **Anti-Mining Movements**

*Aaj Himalay Jagega :Pathar wala Bhagega  
(This morn, Himalaya will wake up: and the stone miner will flee)*

*Dongiya bagh: hat! hat! hat! O' stone eating leopard: move away, move away, move out!*

*Paharh ki haddi tootegee; desh ki dharti doobegee!  
If the bones of the hills break (due to mining); the land of the plains will be submerged!*

*Upar dekho jahan khadaan; neeche kheti registan!*  
Look up to where the mine is, and look down to see agriculture below is becoming a desert wasteland.

On the first Himalayan ranges, overlooking the Duns, nestling in and atop a water rich valley called Sinsyarukhala lies the Nahikalan area. For 25 years, till 1986, this rich, fragile valley saw reckless, wanton limestone mining. Boulders rained on homes and agri-terraces of the nearest Barkot village, perennial springs and streams choked under mining landslide rubble and parallel ran timber smuggling. The bhidalna turned into an angry torrent of

boulder and stone. Regularly sweeping off its forested, agricultural banks and threatening drinking and irrigation water supplies till far downstream.

Their reasonable requests met with violence and arrogance, Nahikalan youth wrote to the Chipko movement for help. Kalpavriksh (then a youth environment action group) also joined in.

Meetings, folk songs, slide shows, slogans and innovative direct actions soon invigorated and mobilized the valley. Chipko activists dug pits to bury themselves and planted trees on the mining road, a forest memorial was made for hundreds of langurs who died due to indiscriminate blasting. Local women and youth were the mainstay and villages far downstream joined in. Evocative slogans echoed across the valley

Face to face with armed and automative power stood planned and impulsive non- violent direct action. Money, iron rods, revolvers, trucks ... the mine owner tried all these. Villagers responded with Gandhi inspired Chipko movement methods and greater knowledge of the mountains to evolve ingenious 'non-violent' guerrilla tactics. The creative space enabled by the non-violent nature of the movement.

In hill valley and apex court, the wanton mining was fought and in the first environmental PIL (Public Interest Litigation) before it, the Supreme Court ordered the mine closed. This became part of the famous Doon Valley Limestone Mining Case, and all mines in the Doon valley were declared closed. I was there then, in the valley and sometimes in the apex court.

Some years later, the Union Environment Ministry declared the entire Doon Valley an Eco-sensitive Zone, under the Environment Protection Act, mining being one of the prohibited activities.

Today, new forests have sprung and are growing on the banks of the Bhidalna... the river is once again discovering its essential nature...

There have been other brave, inspiring and successful movements to stop mining, most notably in the Hemwal ghati. First in the 1960s, then in 1984-5 in Nagni and from 2002 onwards (still ongoing) in Kataldi. All these have been attempts to mine limestone and in Nagni and kataldi they have been resisted and stopped at the outset. Mining here would have directly affected water springs, village habitations, the local food bowl valley of Nagni and the river Hemwal herself.

Hemwal ghati is one of the homes of Chipko and also of the Beej Bachao Andolan.

I've long been feeling its important to understand and identify key factors behind the success of these anti-mining movements, which may also be valuable for other movements, so, as a participant, here are my considered perceptions\_\_ In a nutshell, **it's the depth and diversity in the team of participants, players and supporters, along with non-violence, all enabling participation and creativity, amongst and beyond the directly affected, that I feel have been critical factors in the success of these movements.**

**Listing all key factors:** Awareness and mobilization of local communities, clarity, courage, commitment and creativity from key members of the local community(women, youth and children have been inevitably in the forefront here) and Chipko movement activists (and importantly their multi-faceted experience of similar struggles and their creativity and sharing of understanding), the significant non-violent nature of movements (including non-violent direct actions) enabling full and leading participation by women, children and wider

support by and amongst others, support and participation of other groups, especially environment groups and individuals (like from Kalpavriksh and Dehradun groups in the Doon valley mining movement and Minerals, Mines and People and others in Kataldi), the songs and slogans (notice how the slogans are always full of meaning and never hollow or just angry) fair media coverage both in local and national press, including support from some journalists and writers.

## **Beej Bachao Andolan**

Apni miiti apni khad; Apne beej apna swad  
(Our earth our own manure; Our seeds and own own taste)

khet hamare beej tumhare; nahin chalenge! nahin chalenge!  
Our are the fields, and the seeds are yours; no, this won't work, this won't do...

Beginning in the early 1990s, farmers in the Tehri Garhwal district of Uttarakhand started the Beej Bachao Andolan (Save the Seeds Movement) an initiative to create awareness about and conserve indigenous agricultural crop biodiversity.

Chemical inputs like fertilizers and hybrid seeds had made some inroads into the hill farmlands and some farmers from experience of using these new methods were not satisfied. They also found that indigenous varieties of crops were increasingly getting difficult to source as farmers started to grow the new hybrid seeds. So started a movement that has grown and spread and motivated farming families to conserve tens of Himalayan crops and in the case of rice/paddy and beans hundreds of their varieties. Collected from across Uttarakhand and grown every year are more than 230 varieties of rajma (kidney beans) alone, many hundred varieties of paddy, numerous varieties of millets like mandua, jhingora, junyali, cheena. Amaranthus varieties, corn, wheat, barley and numerous vegetable varieties. Also found was that many of these seeds were very high yielding and ofcourse have much more fodder than hybrid seeds. BBA undertook yatra's to share awareness of biodiversity etc. the most notable being the Arakot-Askot yatra right across Uttarakhand.

BBA is seen as the pioneering and most significant initiative to conserve Himalayan agricultural diversity and has inspired several such initiatives in other regions of India. As indigenous crops go hand in hand with organic cultivation this also promotes organic farming and eliminates the need for chemical inputs. Members share and promote a holistic view of agriculture in the hills, with cattle rearing and community forests as important related areas.

Another initiative along with Vividhara (a kindred group from the Nahikalan area, where limestone mining was successfully resisted) has been annual exhibitions of Himalayan agricultural and some wild diversity along with sales of organic foods and natural products at Delhi. Together the groups have shared awareness with lakhs of Delhi's citizens of various backgrounds and ages with the ideas of biodiversity conservation, organic cultivation and sustainable livelihoods, over the last 15 years. BBA regularly participates in farmers and ecological agriculture and related meetings, networks and initiatives.



The last four or five years have also seen an Uttarakhand state government initiative to promote organic agriculture through the setting up of an Uttarakhand Organic Commodity Board. This is better designed and run than most government programs and is a step in the right direction. While as, other departments of the state govt. continue to promote chemical agriculture. Now, that's perhaps how governments work...

### **Folk songs and music**

Integral to the movement as well as vehicle for it were the songs, poetry, slogans. Folk songs and poetry have been at the forefront and base of the notable and remarkable movements linked to environment and livelihoods that have originated from these hills... whether it is Chipko, anti-mining, anti-large dam, save the seeds, community conserved forests etc. The culture of resistance indeed informs the cultural response making it difficult to separate the two.

The decades since the 1970s have seen new folk songs in Garhwali with a passionate and deep environmental understanding and inspiration, notably on forests, agricultural diversity, rivers and large dams, wanton mining... **thanks to exceptional folk poets and singers like Ghanshyam Raturi 'Sailani' and Narendra Singh Negi.** They have given a cultural, folk, rooted-ness and an inspirational resonance and spread to environmental conservation, sustainable livelihoods and movements to protect them, across this region. Garhwal has indeed been blessed with them and these movements are to me imaginable without them. Naman!

They have also chosen to write on all the social evils thus creating a space for reflection and introspection. Addressing issues facing their societies, not hesitating to sing of the threats howsoever big and Sailaniji particularly also sung extensively of sustainable alternatives, thus daring to dream. Narendra Singh Negi writes and sings as the breath of mountain air, with the lyrical rhythms of the nadi and the naulla and with diversity like in the forests of Garhwal\_ such a singer comes once in a few generations...

### **Sustainable Cultures & Cultures Of Sustainability:**

#### **Cultures of Sustained Struggles**

All the movements discussed above: chipko, anti-mining, anti large dams, beej bachao andolan and community conserved areas... and the environmental, nature inspired Garhwali folk songs of Sailaniji and Narendra Singh Negi \_\_ can be viewed as a culture's response to external commercial environmental threats. All of which were highly threatening to local sustainable livelihoods, lifestyles and the forests. In most of these instances they have been fairly to very effective and even successful responses. Especially when compared to many other efforts at resisting threats to environmental and livelihood sustainability, in recent times.

Such cultural and societal responses and abilities of effective resistance to unsustainable threats may be seen as a further level or type of sustainable culture.

Or rooted cultures of sustainability....

*A fragile ecology, remote communities, extremely hard living conditions, yet these areas have fought powerful opponents. How come they simply didn't give up, succumb to the pressures like various other communities?*

*May be because the struggle - was not to save the 'environment out there' or 'for our lives out here'. It was emanating for the interconnected wholeness, where the trees, forest, seeds, springs, our lives, soil and the mountains were all one, apart from which there is no existence what so ever. If we don't respond, if we don't resist we wont survive.*

*The mountains are fragile, so tread gently, live lightly on this land, take care of everything around – for all of us to live.*

*That the planetary ecology is fragile and we need - to tread gently and live lightly on this land and take care of everything around, is something that the modern science is recently and reluctantly waking up to.*

*In order to respond to the present global crises we might actually have to learn not only about the cultures and the struggles but also from the culture of these struggles. Where the gentle and strong go together, and as one – the mountain and the tender gentle flower – as in the following song...*

Swarg Uttara khand bhumi  
Himalay phool jaiso phool, brahm kamal  
badalon ki ot bani chae  
himalay barfili hawan brahm kamal  
yu himali dhandi khati  
himalay ghana devdara brahm kamal  
bhola bhala log rainda  
himalay tapasya ki bhoomi brahm kamala

heaven, it is, this land of Uttarakhand  
himalay blossoms as a brahm kamal (a delicate  
high hill flower)  
veiled in the clouds  
where icy winds blow, the brahm kamal  
himalay with lush deodar forests,  
simple honest folks live here,  
it is a land of devotion and practice,  
is a the brahm kamal

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[http://www.ymparistojakehitys.fi/sustainable\\_societies.html](http://www.ymparistojakehitys.fi/sustainable_societies.html)