10-16-96 NORKSHOP IN POLITICIAL THEORY AND POLICY ANALVEIS 513 NORTH PARK INDIANA UNIVERSITY BLOOMMOTON ADDISA ADDISA REPRINT FILES

Claiming the Alps : The Himalayan Commons in The Punjab and Himachal Pradesh

> Minoti Chakravarty-Kaul Reader in Economics Lady Shri Ram College University of Delhi New Delhi, India

Paper to be presented in the panel on "The Mountain Commons and Sustainability" in the Sixth Annual Conference of the International Association for the Study of Common Property : VOICES FROM THE COMMONS in Berkeley, California, U.S.A. June 5-8, 1996.

ABSTRACT

Claiming the Alps : The Himalayan Commons in The Punjab and Himachal Pradesh

Minoti Chakravarty-Kaul

Herding in the alpine pastures of the Himalayas has been proverbially, as "old as the hills". Customary grazing patterns of both herders and cultivators reflected both horizontal and vertical access to pastoral resources in the mountain commons. Such institutions of usage were designed over the years by constant and mutual adjustment during different seasons in the year and in pastures spread over varied elevations. Consequently the institutions of transhumance provided insurance against specific risks and preparation against general uncertainty prevailing in the Himalayas. The gains from such practices were shared by the commoners, both cultivators and herders.

These usages were relatively untouched by outside influences till the nineteenth century. External factors began to exert pressure when change in the political economy in the northern plains affected the character of risk and changed the nature of uncertainty. Further, growth in numbers of both humans and animals in the herd altered the ecological balance on the commons. Thus began the erosion of customary institutions which regulated herding and agricultural practices in the mountains.

This paper will attempt to map firstly the nature of customary usage on the pastoral commons both vertical and horizontal and examine the relation between these institutions and natural ecology; secondly, it will try to assess the disturbance to these institutions caused by firstly, forest reservation made by the Department of Forests; secondly, by statutory intervention like forest law; and thirdly by the capture of water-sheds of rivers on mountain systems like the Himalayas.

Thus the question of sustainability on the mountain commons rests on the resolution of the tension that exists between usages sanctified by customary law and rights instituted by means of statute.

Claiming the Alps : The Himalayan Commons in The Punjab and Himachal Pradesh

by

Minoti Chakravarty-Kaul

Mahatma Gandhi [when asked if, after independence, India would attain British standards of living] "....it took Britain half the resources of the planet to achieve its prosperity; how many planets will a country like India require?..."¹

Sustainability

In keeping with the main thrust of this panel we attempt to discuss the alpine pastures as communally accessed resource and its importance in sustaining the Himalayan country-side. We will therefore keep two aspects of the discourse on sustainability in focus.

The first:

- is to delink from a tradition which gives centrality to demographic pressure in the issue of sustainability in the Third world and the deny that there is an inexorable tendency of a Hardinian-type of tragedy looming on the edge of the commons. This step is necessary; first, because population growth has no immediate technical solution and therefore we run into a no-win situation; secondly, because analysis which relies on a statistically verifiable phenomenon is likely to reduce the importance of less visible but more critical factors which influence nature's capacity to sustain life; thirdly, because in the Himalayas the issue of sustainability is as much a question of safeguarding the animals and their shepherds as it is of sustaining the alpine commons.

This paper will try to explain why population pressure is not the major factor in explaining much of what has gone wrong in the mountain environment of the Punjab and Himachal Pradesh. It will instead illustrate the negative aspects of state intervention and the institutions of the market in enhancing uncertainty on the hill-sides in general and the alpine commons in particular. Such a diagnosis points to the necessity to *reduce uncertainty* in the customary claims of the 'shepherds of the snowy ranges' to gain access to their common inheritance - the ALPS. The second:

- is that 'sustainability' has been an open-access term. It has lent itself to 'value-free' and conflicting interpretations. Two examples here illustrate. In the first instance, the term has been used to mean sustaining nature as a goal in itself, no matter who is deprived consequently. On the other hand safeguarding nature has been discerned as a means for the greater good of greater numbers. This more or less describes the tension that exists in India between the so-called 'environmentalists' and what I call the 'realists'. In the second example is the difference in the stand generally taken up by 'globalists' i.e who are located at a distance from local settings and are looking at issues from a global perspective rather than from the ground-level point of view - the 'localists'. For example, in the wake of the Brundtland Report, Robert Goodland supported an opinion that ' "the limits of growth have already been reached, that further input growth will take the planet further away from sustainability, and that we are rapidly foreclosing options for the future, possibly overshooting limits (Catton 1982)." ' Therefore Goodland suggested that 'there was urgent need to convert to a sustainable economy, rather than the related and equally or more important need of poverty alleviation. Further that the political will to transit to sustainability will be mustered only when the need for the transition is perceived.' (Goodland et al, 1991 : 5) This makes sense not sensibility. Such a stand is singularly value-free and fails to distinguish between growth-led limits imposed on nature and those which are povertydriven.

This paper will take an *equity-driven* stand on sustainability. It will simultaneously underscore what Gandhiji stood for - the end never justifies the means. In this instance conserving the Himalayan alps entirely for itself, no matter how laudable, cannot be justified if it is achieved at the cost of denying survival to some while allowing others to live in profligacy.

A Case for Claiming the Alps

The first problem that we encounter is that of an adequate definition of a community. The alpine pastures of the Himalayas are seasonal commons as they are held together by a transhumant people who themselves form involuntary and transient communities mostly for a brief period in the summer. Their claim to these pastures hangs on slender customary usage which are recorded no doubt for the nineteenth century but today is backed with only permits for grazing given by the Forest Department to individuals. Thus the perspective of a collective image for the Gaddis stands on very uncertain ground.

The second problem is that of distinguishing rights which are clearly communal from those which are individual. This paper argues that it will be an act of prudence to re-assure the shepherds not only in their communal claims to the grazing alps but also to the individual rights of way and to pasture in the lower valleys and forests. Such an assurance will reduce the atmosphere of uncertainty which is inimical to the sustainability of the pastoral economy and to the Himalayan resources.

The third problem is that of defining and measuring uncertainty. This is crucial since transhumance is an investment in time which the shepherds pay to counter uncertainties. This can therefore be estimated in the form of additional effort required to insure and hedge against insecure conditions of livelihood. Noticeably pastoralists devise ways of adjusting with local conditions and their herds can survive only if the level of risk and uncertainty is within their customary calculation of costs.

Uncharted terrain :

All that we know is that the Gaddis' claim to these high altitude resources is based on customary rights either protected from competition by the inhospitable terrain which makes the 'conditions of sheep-farming suit the Gaddi only' ² or/and by the shepherdic perseverance in transhumancing over long ranges from the Punjab Siwaliks through the Kangra Dhars and to the alpine meadows of the Inner Himalayas. Here again there is much speculation and little certainty about the precise nature of this pastoral activity and its impact on the environment.³ We have attempted to draw a coherent picture from documentary evidence of the British Civil and Forestry Departments and from the indigenous knowledge and experience of the shepherds gathered in the course of my field work during 1993-5.

The exercise shows the need for hard science research in these tracts on the lines of those made in the Nanga Parbat areas of Pakistan to assess pastoral practices in fragile alpine areas.⁴ While some scientific taxonomy of the vegetation exists (Champion and Seth, 1965 and Raina, 1959) there is however little known, beyond assertions like that one made by Y.S. Parmar in 1959, 'In some of the alpine pastures, rich in herbaceous growth, deterioration has set in because of excessive grazing and land slips have started in places in them.'⁵ Nearly four decades later, N.K. Joshi, the director general of The Forest Research Institute in Dehra Dun, fears that many hitherto virgin meadows have been grazed lately.⁶ There is thus valuable first hand experience which needs scientific and social science enquiry into the phenomenon of transhumance beyond generalised speculation.

The danger of un-informed opinion results in uncritical and undifferentiated judgments. For example, one does not hear of erosion caused by the grazing of large and increasing numbers of pack animals used,⁷ for trade, Forest Department transport of wood and collection of medicinal plants in the alpine pasture and mountain-sides while blame is apportioned to the flocks of the shepherds whose 'numbers may be falling'(Lyon, 1993 : 7). Also goes unnoticed institutions of shepherdic prudence. Gaddis are careful not to take horses with them up to the alpine pastures and there are fines for infringement.⁸ Ives and Messerli in Nepal (1989) have also pointed out how a 'perceived crisis' can confuse between natural causes of erosion like heavy rains or unstable mountain soil and those induced by human use. Again, Lyon agrees that 'Overgrazing may have occurred in the years 1984-91 as shortage of rain and snow caused fodder shortages in Himachal Pradesh' but whether this caused landslips was open to enquiry while deterioration of vegetation needed quantitative evidence.(Lyon, 1993 : 7)

The utter disutility of such observations is noticeable when they impact on policy decisions. Illustratively, in 1908 the Forest Department of Punjab wanted to be stricter with the Gaddis in Kulu because their number was increasing. This was countered by the Assistant Commissioner of Kulu who pointed out in 1908 that 'The Gaddis are no doubt a nuisance to the Forest Department and other people. But they are a nuisance which has to be endured. And there are no facts to justify the inference that they are damaging the forests in Kulu'.' He also remarked that 'the numbers of Gaddi sheep are not increasing.' From the *tirni* records he was able to show that the number of sheep going to Lahul actually fell.

1902	112,570
1903	113,424
	117,637
	106,310
1906	104,854
1907	101,734

Similarly environmentalists blame over-grazing to be the cause of soilexposure in the catchment areas of rivers and yet how many of these critics would know, even leaving aside the calculations of carrying capacity of the mountain-side, that the vegetation in the alpine areas need the manure deposited by the herds to re-generate and that harmful weeds are sometimes trampled and eradicated by the herds? To illustrate: recently a Government official holding a slide show (India International Centre, New Delhi) of the Valley of Flowers near the important pilgrimages of Kedarnath and Badrinath commented on how weeds have over-taken the region and flowers have wilted and in the same breath the administrator announced proudly that customary traditions of pasturing in this area had been forbidden! He just did not connect.

The Himalayan 'Alps'

The system of pasturing in the Himalayan alps - the dhar - is a complex phenomenon and cannot be discussed in a truncated manner. Each dhar has its local name ¹⁰ and more or less a recognised boundary.¹¹ They can also be classified as summer, autumn and spring *dhars*. Each one is in some way complementary to other dhars within a mountain range and these collectively complement pastures in another location higher or lower. There is then a sequence according to the season in which it is used.¹² Through this complexity there is one commonality - the grazing - which draws them in together into a system of grazing where all segments are inter-related in a complicated time and spatial pattern. This is what Gaddis do when they connect the dhar laterally across a mountain range with others in the range and vertically down a river system, through transhumancing. In the process the shepherds link the pastures to two ecological patterns - the Natural and the Anthropological. Transhumancing is thus the interface between nature and human use. Hence anything that de-stabilises the institutions of transhumance affects the Gaddi pastoralist's relation to the Himalayan eco-system negatively.

Transhumance and natural ecology:

In the nineteenth century, Lyall described the region, we now call Himachal Pradesh and explains why transhumance was such a special feature of the tract. 'Snow and frost, in the high ranges, and heavy rain and heat in the low, make it impossible to carry sheep-farming on a tolerably large scale with success in any part of the country. The only way is to change ground with the seasons, spending the winter in the forests in the low hills, retreating in the spring before the heat up the sides of the snowy range, and crossing and going behind it to avoid the heavy rains in the summer.¹³

The transhumancing herder harvests 'the fine natural resources of the alpine pastures' (Gorrie, 1937 : 213) in a unique way. His relationship to natural ecology is determined through this exercise and that too without depending on any infra-structure of roads, transport, communications or storage. They do not even set up camps in these high altitude areas nor watering holes for the sheep and goats. Thus they may not pollute by any other subsidiary activities. However since these pastures are shared there is a likelihood of diseases spreading as it did happen in 1907 when a mysterious disease killed goats in Kulu during the winter and their infecting the Lahul pastures was feared.¹⁴

The opportunity cost of these pastoral resources is near zero, not counting the harvesting of medicinal herbs. On the other hand if they were to over-use these resources a chain of externalities is likely to be triggered off through damage to the water-retention capacity of the alpine areas as sources of springs, rivers and irrigation systems. Sustainability of the entire vegetational pattern of not only the Himalayan ranges but also of the plains below depends to a large extent on this ecological balance between 'herders of the snowy range' and their pastures.

The alpine tract is not simply derived from the word which is used for a grazing run, but connotes a narrow geographical belt running unevenly across the North West Himalayas and is approximately 19,000 square kilometres in Himachal Pradesh.¹⁵ The meadows are located here typically between 11,000 -13,000 feet (Gorrie, 1937 : 211) and approximate 9,500 square kilometres, where forests cannot develop because snow avalanches and avalanche winds are very destructive to tree growth. The mean annual temperature below 7 degrees C and under -1 degree C in winter sustains only (Champion & Seth, 1965) an alpine scrub of tree trunks bent and branches moving up from horizontal stems due to snow pressure. Moss or ferns cover the ground with varying amounts of alpine shrubs, flowering herbs like Primula; Anemone: Gentiana: Fritillaria: Iris: with many Rananculaceae: Cruciferae: Caryphyllacease and Compositae; perennial mesophytic herbs, with very little grass (Champion & Seth, 1965).

The pastures here are ¹⁶ minimally supported with short fallow cultivation which do not provide any substantial amount of grazing resources like cultivated fodder. Nor is storage a viable option. Hence intensive grazing for at least four months take place in the year. The grazing provides respite to the food and fodder growing regions at different levels just in the appropriate growing season. Thus crops can be grown during the summer in the valleys and in upper ranges and in the plains after the monsoons. Therefore the region complements those below them.

The Gaddi skillfully cashes in on this variation and distributes his time and the composition of his herds between the different pastures such that he can support two vital functions of herding - lambing in the cool climate and shearing in the winter in the low country. He ensures his own food as well, with spring harvest in the lower hills on his route to sustain him in the alpine pastures and the autumn harvests in the middle hills for his winter grazing grounds. Hence his returns to scale is determined by the numbers in his flocks and according to the quality of grazing incidental to elevation, temperature and rainfall. Any miscalculation causes a chain reaction. There is reason to believe that decisions of the Gaddis in matters of numbers in their herds and flock composition depends on first, the natural distribution of grazing resources; second, not only on specific conditions of a *dhar* but also on what happens in the pastures elsewhere both along the mountain ranges and downwards to the valleys; and third, the degree of uncertainty in the access to different pastures. Hence herder decisions to keep particular numbers in their flocks and certain proportion of goats and sheep may be a response to hedging against risk rather than a driving force to raise his profits. For example : Coldstream, the Assistant Commissioner of Kulu in 1913 commented 'Thus the profit cannot be large,' and that if shepherds kept goats in Kulu it was because :

'(i) although subject to strange and devastating epidemics which do not destroy sheep (such as the one which destroyed whole flocks of Gaddis goats last year) they are easier to manage and ordinarily to rear;

(ii) the she-goats give milk both for household use and for the new born lambs of ewes at migrating time;

(iii) goat's hair is absolutely necessary for the coats worn by men, who have to live much at a high elevation; and

(iv) because the profit on the sale of goats is considerable.¹⁷

Thus keeping a proportion of goats to sheep ensured that the migration was facilitated and further en route farmers would make arrangements for food, stay and fodder in return for goat excrement and urine which are very valuable organic manure for farmland.¹⁸

Alpine pastures and Water-sheds :

Goats are very destructive to vegetation. This is usually the objection to the increasing numbers of goats included in Gaddi herds. And that too because the most important ecological factor associated with the alpine pastures is that the vegetation cover of water-sheds are important determinants of the even flow of water in important river-systems like the Ravi, Chandrabhaga (Chenab), Beas and Parvati particularly in the winter when the rains are less. Hence anything which preserves the vegetation here is vital to the run-off. Consequently transhumancing impacts on the re-charging of reservoirs in hydelprojects.

Illustration: Writing about the importance of plant cover as early as 1937, R. Maclagan Gorrie showed how - 'The catchment of the Uhl which supplies water-power for the 140,000 kilo-watt hydro-electric plant at Joginder Nagar' was affected by the decline in run-off at the Brot weir during winter because of erosion caused by loss of plant-cover in the hills, valleys and alpine pastures by faulty terracing, growing of potatoes and 'intense grazing (which) occurs (ed) along the main alpine routes, and heavy damage occurs(ed) where flocks are pushed too early up to the alpine belt when the turf is still dead and spongy with snow-melt'(Gorrie, 1937 : 213).

Further the passes through which these meadows are reached are situated at higher levels than the meadows themselves. Typically Rohtang at 3,978 m (13,046 feet); Hampta at 4,270 m (14,009 ft); Kugti at 5,040 m (16,535 ft); Chobia at 4,966 m (16,292 ft) and Kalicho at 4,803 m (15,758 ft) are very tricky entries with high wind velocity and sudden thunder storms. Most of these tracts are above the snow-level. These are the real vulnerable areas exposed to the Gaddi herders movements because anything which goes wrong in the calculations in their movements here are bound to be destructive to the cover of willows, birch and dwarf rhododendron. Here also packs of mules are used to convey wood and medicine and whose grazing and treading can cause damage to the vegetation and de-stabilise the soil. Their number has been growing in recent years.

Ultimately however the condition of the plant cover in the water-shed is determined by the amount of forage the flocks get in the terraces below along the valleys, pastures in the forests, fodder trees along the slopes down to the Lower Siwaliks. Each of these areas provide varied nourishment for the flocks. But in the Lower Siwaliks where the flocks spend the entire winter there is little grass in these places, and what there is, is very dry and coarse. Writing in 1860s Lyall listed the 'principal plants or trees on which these shepherds depend are - 1st,"garna" (carissa diffusa), a thorn bush, of which the leaves and twigs are eaten; and 2ndly, the "basuti" (adhatoda vasica), a small rank plant or shrub, which is avoided by cattle, but of which the sheep eat the leaves and the goats the stems. These two are the green meats most relied upon by the shepherds: where they abound the "ban" or sheep run is held to be a good one; but after them come the leaves of certain trees, viz, the "bil", the "kangu", the "kemble" or "kamil", the "dhon", the "kheir" and one or two kinds of "bel" or tree-creeper.' ¹⁹ Anything that reduces these sources of vegetation for grazing forces the shepherd to the upper levels and damages the plant cover and increases the run off and reduces the percolation. In recent years this is what has happened with extension of cultivation.

Transhumance and human ecological pattern:

Ironically enough, although the nomads have little time to 'socialise' yet a shepherd has to invest in social net-working both among themselves as Gaddis and with outsiders to provide insurance against both natural and economic risks. But fortunately for the shepherd, shifting pastoral grounds is not an isolated or direct one-way transaction. Gaddis have to negotiate at least three inter-linked transactions and the features of the 'market' are different in each. Fortunately for them, at each one of these transacting points the cultivators link up because they too need to access resources which are limited by sedentary occupation of terraces which is insufficient for supporting both cultivation and livestock for agricultural operations. Thus it is that, grazing and cultivation in the hills are interdependent in scale, time and space; and secondly knowledge of conditions can be perfect at one level and totally imperfect in the other. These transactions are important for the Gaddis for it is through them that they can obtain a measure of stability, and this is achieved when shepherd and cultivator provide appropriate service which the other needs in the necessary quantity, at the right time and at the right place. In other words these transactions are optimally organised when at least three conditions are fulfilled: when usages are flexible, allow reciprocity and are fair.

The first link in the ecological pattern is of graziers in the *dhar* with the cultivators of the lower hills. The *dhar* takes the flocks off from the cultivated terraces and fields in the valleys and lower hills during the summer, and the monsoons following it. This shifting of grazing pressure allows the cultivators to concentrate on agricultural activities and allows grass to re-generate in the forests of the valleys and lower hills. At the same time it enables the flocks to avoid diseases caused by heat and wetness in the lower regions. This would not be possible unless the shepherds could migrate and take with them the flocks of the cultivators as well and if the latter did not reciprocate in the autumn and winter with pasture on the stubble. Hence the summer pastures have to be aligned to the spring and autumn grazing made available in the migration routes.

The second link is the lango-karu or migration route which links the spring to

the summer pasture and then to the autumn pasture. The managers/warises provide the linkage to the *dhar* with the *lango-karu* on the one hand and then are tied up with the winter pastures on the other.

The third link and the final part of the cycle is the connection of the graziers with the *ban* or winter grazing which cut across the forests of the Lower Siwaliks and the cultivated tracts of *mauzas* or revenue paying villages.

The negotiation at each one of these links is both a tough and a delicate operation which depends on firstly, the *timing* of transhumance in relation to other competitors for Himalayan resources both vertically and laterally and secondly, on the *usages* or rights of the Gaddis at the three levels of pastures.

NOMOS AND THE NOMAD OR Mapping Customary Usage

Customary usages of shepherds determine the relation between pastoral practice and land-use pattern and hence impact on the vegetation. An useful way to examine these is to map them along particular river valleys from watersheds down to the plains. Accordingly we can then discuss meaningfully the impact of statute, reservation of forests and the construction of dams on rivers on these customary usages in the alpine pastures and their relation to sustainability on the mountains.

In section I we will map the general features of the alpine pastures and the customary usages of the Gaddis; and in section II we can then take up a case study of a river system connecting alpine pastures in watersheds to the forests of the Lower Siwaliks.

Section I:

NOMOS is Greek for 'pasture', and the 'NOMAD' is the clan chief or elder who presides over the allocation of pasture. Nomos therefore came to mean 'law' 'fair distribution' 'that which is allocated by custom' -- and so that became the basis of Western law. The verb NEMEIN, is 'to graze/pasture' 'to spread' which has a second meaning as early as Homer, viz 'to deal' 'to apportion' 'to dispense'. NEMESIS is the 'the distribution of justice' and so of Divine justice.²⁰

Customary allocation of pastures and the rights of way by the Gaddis on the Himalayan country-side are indeed governed by usages which are not recorded in the revenue records but are certainly inscribed on the minds of the people. Early in the nineteenth century it was recognised by the British that indeed the North West Himalayas were not 'howling wildernesses' but were acknowledged to have been the 'customary' grazing grounds of 'the shepherds of the snowy ranges' as the Gaddis were called. Such allocation has been selforganised by the shepherds presumably as members of an acephalous society, even though Bharmour the capital of their homeland Gaddheran has been incorporated into the kingdom of Chamba and ruled by one single family since 700 AD. Recorded history can trace these usages to at least that period. After the Sikh Wars in 1849, the British took over a greater part of the Himalayan region leaving loose control to the 25 principalities which had existed earlier. One of these kingdoms was the State of Chamba. To this was attached Gadderan the ancient home of the Gaddis.²¹ The shepherds were thus not subjects of British India. (It is only after 1947 that the State became a district of Himachal Pradesh in India). It was this demarcation of the boundaries in the Himalayas in the 1850s that first distinguished 'foreign territory' where rights of access had to be established by written treaties and not custom. Residents of Chamba, the Gaddis, had to seek rights of access from the British. These records show such rights of way were given to Lahaula traders much earlier in Kulu than those given to the Gaddis since the former were important links to Western Tibet.²² Inside Chamba the King negotiated with them but did not seem to be acting on their behalf with either other hill principalities or with the British Government in Punjab. What is ironical is that even though the Forest Department managed the forests of Chamba on behalf of the king, the Gaddis however, continued to be regarded as 'foreign' herders in forests outside of Chamba.

There is recorded evidence that customary usages of reciprocity governed resource use in North West Himalayas. But none of these were subsequently recorded at the time of settlement or when the British Government passed the Punjab Customary Law in 1872. The exercise would have been useful considering how intricately the rules had been organised in keeping with the diverse region which could not sustain intensive use of land at some points of time. Optimal use of mountain resources can be unsustainable unless adjustment is made both in scale and time. Herding had to be on large scale to be optimal but had to be nomadic in order to be sustainable over time. Sedentary cultivation could be optimal only if intensive use of the land was made and that could be sustained only if inputs of manure could be made to substitute land at the intensive margin. In turn this was viable if supported by extended pastures made possible by nomadic herding. Pastoralism is thus surrogate swiddening of the Himalayan country-side, without shifting

cultivation.

Accordingly customary right of access to the alps has three components which are operationally important for sustainability in the Himalayas. One is the 'rights of pasture' in the *dhars*, second is the 'rights of way' and the third is the 'common of shack' and pasture in the *ban*. These are rules of pastoral use to fit into the pattern of both intensive and extensive land-use.

Rights of Pasture:

Most of the Gaddi shepherds had held their summer pastures in a way which gave them a connected right from the upper to the lower ranges. For this purpose generally they held lands and houses in Chamba but had their winter, spring and autumn pastures in Kangra. The summer dhars in Chamba were always of a higher class, that is above the limits of the forest, on the bare heights which at other times were coverd with snow. Initially when Chamba was a kingdom, the Raja had given pattahs and obtained cash rent directly. But sometimes the 'shepherd was bound by custom, to pen his sheep several nights on village lands or to present a sheep for sacrifice at the village shrine, to be there consumed by the villagers.²³ In most of the *dhars* some shepherd family claims a warisi, but the flock in a dhar commonly belongs to several families and not to the waris alone. In Chinota and most of the Cis-Ravi country, when the shepherds make up their accounts of the comon expenses in the *dhar*, the waris paid five percent less than his proper share; but across the Ravi, in Bharmour, no such deduction is made and all pay alike. In Kugti at the head of the Bharmour valley, the Kugti men held all the dhars in some claim of corporate property, and although these were obtained from the Raja, they could lease to whosoever they pleased. The families in the lower valleys sometimes held the alpine pastures and leased them out to the shepherds who in return would take up the flocks of the cultivators and on their way back pen their flocks on the cultivators field.

Some of these customs have continued but others have been modified. In the first instance Gaddi pasturing in the summer has been conditioned by the way grazing leases have undergone change over time and each time this has happened, it means a new set of factors to be adjusted in the Gaddi scheduling of the alpine pasture. For example, with the organisation of the Forest Department in the last quarter of the nineteenth century some of the leases were given in the form of *warisi* rights to certain families of Gaddis in the *dhars* of Dhaula Dhar, Bara Bangahal and Lahul. The system varies. On the whole these were in the nature of managerial rights or *muqadami*. It has led to leasing of summer pasture by the casting of lots to be drawn in some village in the Siwaliks where an annual meeting or *muqadma* is held. I was present at one such meeting in a village called Kandi in Palampur district in early September 1993. There was a big social gathering of 150 *deras* with herds totalling 55,000 heads of sheep and goats; and they feasted while they entered their names for the casting of lots. The managers with *muqadami* rights were a Gaddi family who held the occupancy rights of certain *dhars* as shareholders; in this case they were : Suba, Lakha, Das & Sheru. They were leasing the *dhars* of Lahul in Chandra Tal, Darcha, Sarchu, Bara Lacha, Samundra Tapu, Mang Padra, Bakretar, Shigri and Sarnethar.

Rights of Way:

In the second instance the Gaddi had to negotiate his 'right of way' or *lango karu* which included spring grazing of two months and autumn grazing of three months along the migration route from the alpine pastures to the winter grazing in the Lower Siwaliks. Before 1850 the shepherds paid a due to the native government for the right to graze in spring and summer along the way and this was the '*lango-karu* or crossing tax.'²⁴ There was thus some rough management of the dhars : certain shepherds were told off to each dhar; regular comers claimed a right to occupy the same ground year by year. But the Settlement of 1850s removed this tax and so the *dhars* became free that is the first come occupying any ground he chose. The tax had been collected by a Gaddi who took certain perquisites for himself.

There are 15 *dhars* in the *kandi* villages (lower level) of the southern slopes of the Dhaula Dhar in Kangra; Within the *dhars* there are *goths* or level places where the sheep are penned. There are two classes of *dhar* - the one in the bare rocky ground above the line of forest called *kowin* or *nigahr* and the other lower down, in among the forests called *kundli* or a *gahr*. These *dhars* are not used at the same time nor are the flocks in either for the whole five months. For instance in autumn the flocks come down the Dhaual a Dhar from the Chamba side early in September and spend about ten days in the *kowin*; then they descend into the *kundli* and then stay there for five or six weeks. When the crops are cut and cleared off the fields below, they leave the wastes and descend into the upper hamlets and then to those in the valley. They stay a month or more in these parts finding pasturage among the stubble or in the hedge rows and penned every night on some field for the sake of manure.

Much the same process is found on the routes to the Lahul pastures and the Bara Bangahal ranges. There are 57 more *dhars* here in the latter range out of which all but 8 are behind the outer Himalaya in Bara Bangahal. In the north side of the outer Himalaya the rainfall in the summer is not half as heavy as the south side. Hence they have an added advantage for sheep who cannot thrive wet pastures. Most of these *dhars* were held in *warisi* either by Gaddi families or by a family living in the Mandi territory or by Kanet families in the hamlets of Kodh and Sowar. These latter competed for the Mandi shepherds to go to their *dhars* and in return for which the shepherds agreed to manure the fields in the villages where the Kanets live. In fact the manure was so highly valued that the Kanets fed the shepherds gratis and supplied more when exhausted. The journey usually took three days.

Actual timing of these routes is sensitive to predictability or otherwise of climatic changes on the one hand and the Gaddis' capacity to negotiate migration routes on the other. These migration routes in the present times have to be negotiated by the Gaddis separately with pastures owned by communities along the routes and with the Government Forest Department wherever there are reserved forests, demarcated protected forests and undemarcated protected forests.

Climatic factors can be tricky but the Gaddis negotiation has become even more and more uncertain because there is increased competition from herders like the Gujars who compete for pastures in the lower valleys; then pastoral land-use has to compete for natural resources with medicinal harvesting, cultivation in the valleys, tea gardens and silvi-culture by the Forest Department on the slopes and the production of hydro-electric power in the Siwaliks. These relationships modify the returns to transhumance.

Winter Pastures:

In the third instance the pasturable country in the Lower Siwaliks is divided among the shepherds into divisions or circuits which can extend through several *mauzas* and so can waste unconnected and scattered over the whole or greater part of a region be called a *ban*. Even during the early nineteenth century Gaddi flocks came down to the low hills in Hoshiarpur, Gurdaspur, to the States of Mandi, Suket and Bilaspur.

These bans had been obtained as warisi by the Gaddis from pattahs granted by some Raja or the other. The holder of the pattah formed a company of shepherds and directed the course of the flock and acted as spokesman and negotiator. This was no mean job. As master of the flock he was known as "mahlundi" and the other shepherds as his "asamian" or clients. The work of distributing the tax was done by him in return for the trouble he appropriated the money paid for the manure "mailani". In return the landholders were ready to give the shepherds food and drink and money if they could pen the flock one night in their fields.

The system varied. The *warisi* was not ownership as much as it was management. He could lose his position if he did not fulfill his duties of filling the *ban* with shepherds. On the other hand there were shepherds who would go to a *ban* regularly but they had not a *warisi* as in the case of the Chamba *bans*, where the contractor of the Raja managed the *ban*.

Such customary usages reduced transaction costs since flexibility of rules made adjustment quick and there was less need for costly dispute administration.

Unfortunately the weakness of the system was that it depended on reciprocity of the cultivators. This category of land-user was systematically woed away from customary arrangements by the British revenue settlements. Hence once again the the herders' became 'outsiders' and their rights of common ironically enough, have only been 'tolerated'. This could be explained largely by the characteristic British repugnance of the 'footloose' life-styles of nomads. But there is more to it than just that. Thus it is no wonder that institutions of the nomadic graziers were largely ignored even though the British Government gave recognition to Customary Law as early as 1872 by the passage of the Punjab Laws Act whereby customs of communal control over resources were recorded for only sedentary cultivators in both the hills and in the plains. The Gaddis were literally left out in the cold.

Section II

A Case-Study From the Dhars to The Shahpur Kandi Tract

Uncertainty, transhumance and vegetation:

One of the migration routes which we will examine here will illustrate what uncertainty does to sustainability in the Himalayas. Presently the fate of the Gaddis and other alpine shepherding people is inextricably tied up with a growing conflict between increasing need to exploit natural resources *and* to conserve them at the same time as well. The Thein Dam illuminates. It is being constructed at a point on the Ravi where it pierces through the Siwaliks on its way to the plains. Just at this point on the left bank of the river lies the Shahpur Kandi Forest. The reservoir - Ranjit Sagar - will consequently submerge parts of it and serve as a catchment for all the small hill rivulets like the Karnal which runs through the forest tract. In the process it will drown not only valuable croplands of sedentary cultivators in large sections of some thirty odd villages (see Appendix for further details) in the tract, but will also put an end to the grazing resources of a transhumancing people - the Gaddis. At the same time the Punjab will lose a part of its most important forest which comprises 52% of its total forest resources.

This forested tract, along with similar forests in the Siwaliks complements resources of two pastoral regions at two different times of the year. This is because the tract gets sufficient rainfall to support agriculture and yet is comparatively frost free and dry in winter. Therefore the tract can give refuge to herds of sheep and goats in winter which cannot survive the frozen alpine regions in the Upper Himalayas; while it can take on the heavier cattle of other nomadic groups like the Gujars after the rains. Both these features contribute towards relieving pressure on the more fragile eco-systems of the Upper Himalayas. The access to these are guarded by snow cover on the passes and the treacherous storms.

Such conditions of risk are daunting and if Gaddis can tackle them it is only because of the assurance that they have the possibilities of alternating their use of <u>dhars</u> or alpine pastures in the upper regions with those in the long fallows of the sedentary farmers in the forests below. This indicates the importance of communally controlled access to the Siwaliks in general and Shahpur Kandi tract in particular. Fragile eco-systems need care in use rather than being preserved as esoteric wildernesses within the ecology of the Himalayas.

In recent years pressures on the pastoral resources have increased, yet in my field trips to the Siwalik forests I seldom heard farmers complaining against the large number of nomadic herds in forests like Shahpur Kandi.²⁵ In fact if the farmers had done so, the Forest Department would have gained support in their move to keep the nomads out from protected forests. This spoke of continued dependence on the services of herders. Anything which destroys the basis of this trust and co-operation will be an irreversible damage.

However a strong modern State has weakened institutions of ground level governance. Administrative institutions like the revenue and forest department set up in 1868, legislation like the Indian Forest Acts of 1878 & 1988 and the Land Reforms Act of 1947 were demonstration of State power over rights in natural resources. Irrigation canals in the plains of the Punjab and dams like the Bhakra Nangal, Pong and now the Thein constructed in the last one hundred years in the Himalayas have resulted in intensifying land use. These have affected the circumstances of the different tracts unevenly; consequently altering the relative position of communities who had organised and governed natural resources. Thus the announcement of the Joint Forest Management Policy in 1992, has created an air of uncertainty and even suspicion. It failed to enthuse either the communities of the 30 villages in the Shahpur Kandi forest or the Gaddis. Communities, once vigorous performers, feel powerless and incapable of reversing the breakdown of their institutions of mutual aid and self-governance.

The State in the last two centuries has played a key role in securing both private and communal property rights of farmers; but such rights have been decided on notions of "prescriptive" and "sedentary" use by those who paid taxes or revenue. Gaddis cannot claim such recognition. Therefore it has increasingly added to the degree of uncertainty to the lives of the shepherds of Chamba. For example, a cultivator in Punjab had a share in the right to land in a village which had appended rights to the pasture in the common fallows of the village and also recorded rights in the forests as it is in Shahpur Kandi. Nomadic herders may have used and shared the pasture both in the long fallows and in the forests, (may be long before there were any settled agriculture in the forest) and the fact may have been recorded in the Village Administration Paper; BUT now when the Thein Dam needs to submerge the surrounding catchment area only the farming community can seek compensation for the loss of land and pasture. Not so the Gaddi shepherd. This effectively put in a wedge between the two communities. I have evidence to show that once upon a time the farming community would have protested such injustice, not now!

Take another instance. When the Pong Dam was built near the Brindaban and Karanpur forests in the Hoshiarpur district, compensation was not provided to all nomadic herders who transhumanced in the tract for grazing. As if this was not enough, the herders were hemmed in by restrictive policies of the forest department, which protective as they may have been of the reserved forests of bamboo, nevertheless pushed the alpine herders further into the upper regions of the Himalayas against norms of innate sense of conservation. Injustice of this kind can push even hesitant free-riders to become one.

Likewise, when for reasons of administrative expediency the rights of one group have been recognised, it gives rise to exploitation of others not in the same position. This has happened in the case of tenancy rights in the alpine pastures given to particular families who had helped in collection of <u>tirni</u> or grazing tax in the nineteenth century in Lahul. There are signs of resentment which have the potential of dividing the ranks of the Gaddis. Once again, tenancy rights have been secured by sedentary farmers in the plains this is not the case of the alpine pastures.

Timing and duration of Gaddi routes are intimately tied with vegetation and expectations of sudden change in weather conditions. Such flexibility is the hallmark of their accumulated knowledge of the country-side. State appropriation of forests and pasture lands have altered these trails of the Gaddis. The original purpose was to keep them away from forest plantations. But not all grazing is destructive. Sheep grazing helped in the re-generation of certain tree species like the deodar and the oak at certain heights.²⁶ Also herds went through a forest when it was scarcely the time for scantlings to come up. Expert forest officials themselves admitted this and even today forest scientists in the Forestry School at Dehra Dun will admit such wisdom.

In the last part of the nineteenth century, the forest department imposed restrictions on Gaddi routes, the number of miles they could march a day and the number of days they could halt etc was also laid down. Such prescription could not take into account either the manuring service which the Gaddis performed enroute to the upper regions nor the uncertain change of climate like rain, storms and snow-bound passes. Archival files of the forest department indicate that these rules created a considerable degree of hardship for the both the nomads and the communities which depended on them. Besides it led to departmental acrimony over nomadic affairs.

Today matters should have been different. Even with in the forestry department there are tensions over positions taken up. One would expect an environmental-sensitive Government at the centre to appreciate this and seek to resuscitate local self-governance. But recent Government proposals to set up natural sanctuaries like the Rajaji National Park, in the tract adjoining Himachal Pradesh will only help destroy resources at an enormous policing cost. And what is more the prospects will be bleaker still, if one has to go by the Narmada dam experience. Even if some compensation is provided, rootlessness can scarcely help revive conditions in which people learnt to live by the rules of the game which they themselves had devised to manage natural resources. Policing costs for such ventures will be high and provide a basis for corruption. In the process too an important human skill i.e to live with nature will be lost.

The Forest Department on the Gaddi's trail:

The Forest Department was set up only in 1868 because it was too costly

to do so earlier. This co-incided with the demand for wood from the railways. Reservation of forests became a means to procure the supply. At the same time communal organisation had been recognised in the forests of the Siwaliks, Shahpur Kandi in Gurdaspur in particular, where the Forest Department kept only a light control. In the decades of the 1860's and 70's began the erosion of the Hoshiarpur Siwaliks which destroyed thousands of acres of cultivated land in the foothills of the Siwaliks and at the same time the number of sheep and goats declined in the Kangra. The Secretary of State made an enquiry and was told that erosion had been caused by the rights of cultivation given to the hill people in the forests which denuded the water-sheds. There was no mention of nomadic grazing being the cause. At the same time the report showed that shrinkage in areas of pasture had been due to closure of forest which had contributed to the decline in cattle numbers!

It was only in the late nineteenth century that the Forest Department started to complain about the increasing numbers of cattle and then too as an article written in the Indian Forester identified the concern in the district of Kangra was for "half-starved herds of a quarter of a million animals devastating some 600,000 acres of land while a potential but usually wasted hay crop of over perhaps 150,000 acres in the same district is waiting for a little organisation!"²⁷

Creation of state ownership drove a wedge in the arrangements between the herders and farmers. The Government took over the management of the grazing of the sheep and goats of Gaddi shepherd and the right to realize dues from them were entirely in the hands of the government. "These shepherds are the (assamis) of Govt. & not of the village proprietors. The shepherds and the zamindars must make their own arrangements in regard to manuring field; but the zamindars may not interfere with the Gaddis, even though they refuse to manure fields."²⁸ Disputes over grazing arose as a consequence. Significantly grazing disputes fell whenever more grazing areas were available. As in 1919 the court cases of grazing disputes fell from 9% to 6% of total as largely due to the opening of old trihais in Kangra, in 1919.²⁹ The Forest department ³⁰ demarcated the Shahpur Kandi tract in 1904, creating a protected forest which was 1/8 th of the forests in the hands of the villagers, (about 27,850 acres) and not demarcated. The rules for the protected part separated the forests. Two things happened : first, the undemarcated part became overwhelmed with both nomadic herds and those of the forest villages; and second, the Gaddis found themselves faced with two masters, where they had been co-organisers. The colonial government always gave preference to tax-payers³¹ so the farming communities in the Shahpur Kandi tract were given the right to collect grazing dues from the Gaddis, in their common forests. Another come down for the

nomad from being a co-sharer of the forest commons to a subordinate position. Gaddi sensitivity to this treatment led them to seek the protection from the district administrators instead!³² Even here they sense the difference between one department of the government and the other, which helps to exacerbate uncertainty.

The situation has not improved by post-independence trends in shifting boundaries of neighbouring countries which froze transnational movements of these people; forest enclosures further shifted the grazing tracks and then came the dams across the Himalayan rivers which deluged their grazing grounds. Anywhere in the world such a situation would have drawn sharp attention; not in India.

A beleaguered peopled:

The nomads seem to be nobody's business. They have now begun to recognise this. They are convinced that their ancient practice of transhumance cannot continue on the basis of trust nor on the principle of reciprocity. As a consequence they have begun to take uni-lateral steps to get a foot hold on the Himalayan range. The Gaddis have just also started organising. As a first step they registered themselves as a trade union in Himachal Pradesh on the 15th of August 1993. Increasingly, both individually and collectively they have taken to "hedging" against insecurity of another kind. Their action is reminiscent of - "When you can't beat them join them". Some of them the method individually had tried buying up land in the villages which had grazing resources. A step which they had imagined would give them a legal access to the common lands of those villages. Such is a story illustrative of the trauma about to begin. The details of this come out of a field trip to the Shahpur Kandi. Mohan Lal, the shepherd with whom I trekked last summer has bought agricultural land and built up a house in Shahpur Kandi forest and expects the Government will compensate him when the waters of the Ranjit Sagar laps at his door-step! Or perhaps Mohan Lal should take tips from camel graziers who had been forbidden to graze in the forests of Hoshiarpur in 1917.³³ In November 1917 Rs 5,000 compensation had been paid to 126 villages to which section 4 & 5 of the Chos Act had been applied. In his report Dy. Commissioner of Hoshiarpur says that the number of camels actually increased since the closure since the camel men argue that they were kept to get more compensation.³⁴

On the other end of the spectrum, the Sarpanch of Kilar in Pangi valley, which hosts herds from Lahul, Kangra and Chamba made sure when I was there, that I knew the distinction between the Pangiwalas and the Gaddis. In their attempt for distinct identity they seek "freedom" from the nomadic shepherds services by devices like cross-breeding animals such that they can remain in their houses through the winter without transhumancing. On similar lines, the Lahulis who were once dependent on the Gaddis are now taking to the new crops of hops and potatoes.

The Dam has thus succeeded in creating an "institutional" diaspora. The Gaddis can no longer depend on the residents of the Shahpur Kandi villages to support their transhumancing life-style. The cultivators have succumbed to "money illusion" and fear their own chances to secure jobs on the dam(n) project will be jeopardised in case they honoured their reciprocal commitments to the Gaddis. Nor can they hope for support from the Forest Department.

At stake here is a whole system of property rights. In question here is not just the material loss to people but the ruination of a form of joint governance - a political system. As the dam engulfs the pastoral resources it will also terminate a long-standing relationship between those who can best be described by a term - which Gandhiji used - "trusteeship" of the Himalayan environment. How else can one define a group of people who have jointly battled with natural disasters like flood, famine, earthquakes and plague?

In the last resort they can go to court. However, while the cultivator's rights are prescriptive and therefore "legal" in a court of law; such is not the case of the user rights to communal resources which is all that the nomadic graziers can possibly claim. Their use of the Himalayan pastures has been treated as "tolerated" customary usage with no existing "legal" record.³⁵ Hence no court need take cognisance of these customs, leave alone compel a Government to compensate the Gaddis for their loss of grazing resources in the forest. Their political consciousness does not match with their ability to organise on any scale which could effectively put their case in full view. Besides, the Gaddis near the Thein Dam have been more involved with the cultivators of the Shahpur Kandi tract than with their own people who have formed the Trade Union. With the situation as it is today, the shepherds realise that they are but naive pawns in power struggles inherent in a democracy; and that majority votes can "drown" minorities. Presently, a hydro-electric project which on the face of it is intended to empower people will actually strip the nomads of even their basic right to choose a way of life.

Appendix : The Shahpur Kandi Forest

The disbursement of the Shahpur Kandi Forest fund was done accordingly in the following years from 1975-76 onwards - taken from the DFO's office Gurdaspur, 15/10/1992.

Village	Area (acres)	Forestation (%)
Nagrota	252	0.99
Bungal	24	0.09
Hara	4,550	16.34
Narainpur	1,273	4.57
Trehti	14	0.05
Kot	1,051	3.77
Thara &	6,359	22.83
Thara Upperla:		
Jalar	201	0.72
Phagli	651	2.33
Dhara Khard	525	1.89
Hardosarn	103	0.36
Dhar Kalan	1,371	4.92
Langera	892	3.20
Bakhatpur	54	0.19
Dunera	1,144	4.11
Ghar	897	3.22
Bar Sudal	305	1.10
Naloh	1,248	4.48
Lahrun	1,823	5.11
Bhamlada	368	1.38
Phangota	645	2.32
Chamror	220	0.79
Banglah	369	1.32
Sarti	856	3.18
Bhangori	42	0.15
Kough	51	0.18
Dukhniali	366	1.31
Darban	585	2.46
Tirhari	1,892	6.79
Total	27,850	100.00

From: DFO Gurdaspur in reply to: C.F. Bist Jalandhar, No 1278 23/5/85, Subject : Kandi Watershed and area Development Project Punjab Phase II - Extension to Shahpur Kandi tract in Gurdaspur District (Forestry Component). There are about 30 village in the Dhar Block and number of cattle population is as under :-

Village	Popul- ation	Cows	Buff.	Sheep	Goat	Others	Total
Nagrota	98	260	50	 50	250	20	630
Bungal	750	400	200	150	1,200	50	2,000
Hara	3,598	2,500	600	7,000	10,000	60	20,160
Narainpur	546	2,260	200	5	1,300	10	3,775
Treheti	1,034	90	30	800	700		1,620
Kot	2,948	1,500	250	1,000	900	60	3,710
Thara	2,907	1,500	700	2,000	3,200	30	7,430
Thara Upperla	200	100	600	1,500	1,800	15	4,015
Jalar	421	143	81	6	130	4	364
Phagli	289	135	65	75	91	2	368
Dhar Khurd	229	250	90	135	334	5	814
Hardosarn	144	150	75	600	700	20	1,545
Langera	1,174	292	125	35	65	10	527
Bakatpur	47	60	11	17	56	2	146
Dunera	1,213	446	173	96	380	5	1,100
Ghar	401	231	47	25	303	9	615
Bar Sodal	621	474	126	80	25	11	716
Naloh	1,145	610	280	901	1,205	40	3,036
Lahrun	922	705	302	805	313	20	2,145
Bhamlada	1,133	750	250	701	1,100	5	2,806
Phangota	2,000	700	250	50	150	10	1,160
Chamror	41	100	30	10	100	4	244
Banglah	595	350	121	333	33	6	843
Sarti	1,773	1,100	200	400	500	20	2,220
Bhangori	300	740	232	480	18	18	1,488
Kough	592	306	81	25	70	5	487
Dukhniali	396	190	77	120	406	5	798
Tirhari	5,148	3,100	800	3,100	6,500	150	13,650

Bibliography

Board of Economic Inquiry, The Punjab. 1933. <u>An Economic Survey of the Haripur and Mangarh Taluqas of Kangra</u>.

Board of Economic Inquiry, The Punjab. 1940. An Economic Survey of Launa.

_____, ____. 1926. H.R. Stewart. <u>The Economic</u> <u>Value of Goats in the Punjab</u>.

- Champion, Sir Harry G. and S.K. Seth, 1965. <u>A Revised Survey of The Forest</u> <u>Types of India</u>. (Government of India Press : Delhi).
- Ives, Jack D. and Bruno Messerli. 1989. <u>The Himalayan Dilemma</u> (Routledge : London).
- Kipling, Rudyard. 1891, 1987. Namgay Doola in Life's Handicap. ed. A.O.J. Cockshut (OUP : Oxford)
- Lyon, Fergus. 1993. "Nomadic Pastoralists and Enviornmental Degradation in H.P. India". Conservation and Development Research Initiative CADARI, Report No.1.
- Phillimore, Peter. "The Gaddis of Kangra : A Question of Identity or A Pastoral Tribe? Gaddi Identity in Chamba and Kangra" Department of Social Policy, University of Newcastle Upon Tyne.
- Raina, V. 1959. "Preliminary Survey of Grasses in Himachal Pradesh. Indian Forester. 85 (2).
- Register of Permits for Gaddi Grazing in the Shahpur Kandi Tract, Dunera, Pathankot, 1987-1992-93.

Reports:

- 1. Final Report of the Regular Settlement of Kangra, by J.B. Lyall, Settlement Officer, 1868-72.
- 2. Final Report of the Third Revised Land Revenue Settlement of the Palampur, Kangra and Nurpur Tahsils of the Kangra District, 1913-1919,

by L. Middleton. (Govt. Printing : Lahore, 1919).

- 3. Preliminary Assessment Report of the Palampur Tahsil of the Kangra District, By G.M. Boughey, Settlement Officer, Kangra (Lahore Govt. Priting Punjab, 1914)
- 4. Final Report of the Revised Settlement of Kangra Proper, By A. Anderson, Deputy Commissioner and Settlement Officer, 1897 (Lahore : The Civila and Military Gazette Press, 1897).
- R. Maclagan Gorrie. 1937. "The Economic Importance of Changes in Plant Cover." Paper presented to the Botanical Section of the Indian Science Congress, 1937. <u>The Indian Forester</u>
- Seeland, Klaus. 1996. "Sociological Remarks on 'Community Forestry' in Nepal". Paper to be published in : Stellrecht, I. (ed) (1996) : Contributions to Comparative High Mountain Research : Pakistan- India-Nepal. Cultural Area Karakoram Scientific Studies No 3.
- ¹.Robert Goodland. 1991. "The case that the World has reached limits -- More precisely that current throughput growth in the global economy cannot be sustained--" in Robert Goodland, Herman Daly and Salah El Serafy Compiled and Edited : "Environmentally Sustainable Economic Development Building on Brundtland". Environment Working Paper No.46 in the Environment Department of The World Bank Sector Policy and Research Staff.

- ³.Fergus Lyon. 1993. "Semi-nomadic Pastoralists and Environmental Degradation in Himachal Pradesh, India." Conservation and Development Research Initiative (CADARI) Report 1 : chapter 3.
- ⁴. At the initiative of the GTZ and project Cultural Area Karakoram of the University of Tubingen research on pastoral use of high altitude pastures have been made by young geographers like Marcus Nisser from the University of Berlin. They support the usage patterns of the transhumancing people on grounds of sustainable resource-use.
- ⁵.Fergus Lyon, 1993. 'Semi-Nomadic Pastoralists and Environmental Degradation in HP, India', Conservation and Development Research Initiative CADARI, Report No, 1 : 10.
- ⁶.Personal communication, Dehra Dun, April 23, 1996.

7. The number of other animals have increased from:

- **1966....32,390; 1972....36,518; 1977....38,658; 1982....48,278;**
- 1987....75,957 ; Director of Land Records (H.P.).
 ⁸.Personal communication from Mohan Lal, the Gaddi shepherd with whose family I was trekking. He told me how he may not take a mare with him to the alpine pastures and may have to pay a fine for the one he was taking with us to carry my baggage.

².<u>Kangra SR 1868-72</u> : 46.

- ⁹.From A.P. Howell, The Assistant Commissioner, Kulu; To the Deputy Commissioner Kangra, No. 526, 8/9/1908, Department of Forests, Government of Punjab, Proceedings 10 A, Nov 1908.
- ⁰0.Kangra SR 1868-72 : Mohan Lal called out the names of the *dhars* in the Kugti area. There were 22 Dhars :and they can take on 22,000 heads of sheep. Halli, Deosar, Ogi Gun, Tapni Gunn, Mundi, Hiya, Bankhar, Duggi, Dhamyil, Baharli Dhamayil and Andauli Dhamayil, Karog, Kannaur, Baharli Kannaur, Andauli Kannaur, Sappor, Gheora, Dug, Harni, Geyi, Behaad, Nainun, Guduyui
- ¹1.<u>Kangra SR 1868-72</u> : 52.
- ²2.Ibid.
- ³3.<u>Kangra SR 1868-72</u> : 46.
- ⁴4.From A. P. Howell, Assistant Commissioner, Kulu, To Deputy Commissioner, Kangra, No. 526, 8/9/1908, Forest Department, Punjab, Progs. 10 A, Nov. 1908.
- ⁵5.Area under perpetual snow is above 19,000 square kilometres above 4,000 metres and about half of this amount is available for grazing. G.C. Chaudhary and K.C. Sharma, "Grazing Regulations and Future Suggestions."
- ⁶6.Raina, (1959) has listed the grasses predominating in the subalpine and alpine pastures.
- ⁷7.Forest Department Progs. 23 A, Sept. 1913.

⁸8. 'Chemically the solid excrement of the goat is much richer in nitrogen and phosphoric acid than that of either the cow or the horse. the urine also is exceedingly rich in both nitrogen and potash and very much more valuable than that of any other animals.' H.R. Stewart. 1926. "The Economic Value of Goats in the Punjab" in The Board of Economic Inquiry, Punjab, Rural Section Publication-8.

⁹9.<u>Kangra SR, 1868-72</u>: 47.

⁰0.Bruce Chatwin, "DREAMIME", <u>Granta 21</u>, spring 1987.

¹1. Gaddis are alpine shepherds who belong to Gadderan with its ancient capital of Brahmour; it then became a part of the ancient kingdom of Chamba, with a history which shows royal governance by one single family since 700 AD, a distinction not shared by any European reigning house in the nineteenth century.

²2.Letter no. 526, 8/9/1908, From A.P. Howell, The Assistant Commissioner, Kulu, To Deputy Commissioner Kangra, Progs. 10 A, Nov. 1908, Department of Forests, Punjab Government.

³3.<u>Kangra SR, 1868-72</u> : 53.

⁴4.<u>Kangra SR, 1868-72</u>: 52.

⁵5. There were 30,000 heads of cattle of the nomadic herders in winter in addition to those owned by the 30 odd villages of the Shahpur Kandi forests, which made a total of 1 lac. From DFO Gurdaspur, reply to letter No. 1278, 23/5/85 of Conservator of Forests, Bist Jalandhar regarding Subject : Kandi Watershed and area Development Project Punjab Phase II-Extension to Shahpur Kandi tract in Gurdaspur District (Forestry Component).

- ⁶6. Para 6: Notes para 46 & 47 of Report in which it shows : "That light grazing is actually beneficial in connection with the reproduction of deodar in the hill forests." Review of Forest Report 1892-93, Progs 11 A, Jan 1894.
- J.W.A. Grieve, "Note on the Economics of Nomadic Grazing as ⁷7. practised in Kangra District," Indian Forester, 46 (July, 1920) : 332-340, 332.

⁸8.

Shahpur Kandi Forest Record of Rights prepared for the purpose of Section 28 of the India Forest Act of 1878, under Notification No 151 dated 25/3/1885, Progs 29 A, Jan 1904, (forests) Punjab Govt.: 41.

⁹9.Review of the Forest Administration for 1917-18, No 23621, 21/12/1918, Progs 33A, Department of Forests, April 1919 : para 4.

ō_{o.} Sir, In accordance with the provisions of Section 77 of the Indian Forests Act, 1878, I am directed by the Lt.governor to submit, for the sanction of the Governor-General in Council, a draft of the rules which it is proposed to issue under

section 31 of the Act for the protected forests of the tract known as Shahpur Kandi in the Gurdaspur District. Copies of the Notification Nos 3 and 4 of this date, declaring these forests to be protected, are also enclosed.From: J.A. McNolly,Esq. Offg. Revenue and Financial Secretary to Govt, Punjab and its Dependencies, To, The Secretary Govt. of India, Revenue and Agriculture Deptt. Lahore, 6th Jan, 1904

Forests.

Shahpur Kandi Forest Record of Rights prepared for the purpose of Section 28 of the India Forest Act of 1878, under Notification No 151 dated 25/3/1885, Progs 29 A, Jan 1904, (forests) Punjab govt.

¹1. Section B:

Para 10: All the rights of bartandars are appendant to cultivated land assessed to revenue & to land liable to assessment which has since last settlement been brought under cultivation with the permission of the competent authority... This is also for bona fide agricultural and domestic purposes ... and not for ... purely pastoral as distinguished from agricultural purposes.

Shahpur Kandi Forest Record of Rights prepared for the purpose of Section 28 of the India Forest Act of 1878, under

Notification No 151 dated 25/3/1885, Progs 29 A, Jan 1904, (forests) Punjab Govt. 22. Para 16: the manage

Para 16: the management of the grazing of the sheep and goats of Gaddi shepherd and the right to realize dues from them are entirely in the hands of the government. these shepherds are the (assamis) of Govt. & not of the village proprietors. the shepherds and the zamindars must make their own arrangements in regard to manuring field; but the zamindars may not interfere with the Gaddis, even though they refuse to manure fields. (p 41)

- ³3. Letter no. 291-22-H-4, Lahore 26/3/1917, From V. Connolly, Senior Secretary to F.c. Punjab To the Revenue Secretary to Government Punjab, Prgs 29-30A, Deptt. Forests May 1917.
- ⁴4. No. 276. 8/9/1917, From A. Langley Dy. Comm. Hoshiarpur To the Comm. Jullundur, Deptt. of Forests Progs15-17 A, Nov 1917.
- ⁵5. Section C: Para 18: "Gaddi shepherds are not entitled to
- any forest rights unless they are knewatdars and bartandars". Shahpur Kandi Forest Record of Rights prepared for the purpose of Section 28 of the India Forest Act of 1878, under Notification No 151 dated 25/3/1885, Progs 29 A, Jan 1904, (forests) Punjab Govt: