

CRISIS OF COMMONS



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Preface

Pastoral system and pastoralism as a way of life and viable economic system find little space in development discourse. The issues relating to pastoral communities and their dependent resources get rare notice of policy makers and planners in national development agenda. The importance and interconnectedness of pastoral system and pasture commons, the resource base, has been missing from public consciousness and policy discourse as a result of which it has been an all time area of negligence from development planning and policy making. Such critical interconnectedness between dependent communities with their resources is largely misplaced while framing the policies of governance.

The survival of the pasture commons would survive the community as well as pastoral economy. The state controlled globalisation agenda of so called development is a threat to the communities dependent on commons. A large scale shrinking in and depletion of resource base has taken place due to massive diversion of common land and lack of effective regulatory mechanism for conservation, protection and management with absence of community partaking. This has led to serious implications over those traditionally dependent communities deriving their livelihoods and their resources. Thus, insufficient knowledge discourse and state constructed development prototype under the shadow of eminent domain caused dispossession of rights of the communities, decline of resources and spawn vulnerability among self sustained occupational communities.

The FRA 2006 has provided a limited space to recognise the rights of nomadic pastoralists over forestlands. Till date no progress has been made in recognition of such rights due to unattended procedural complexities and vastness of the routes of seasonal resource access areas. However, FRA has not addressed the major issues of village commons and the rights of larger communities including non-nomadic over vast areas of non-forest pastures, which the present research has highlighted.

In this critical juncture, the study “Crisis of Commons” taken by Natural Resources Knowledge Activist Hub (NRKA Hub) bears significance and need of the time. One of the ultimate objectives of this study is to facilitate an environment engaging the key stakeholders in alliance building and policy advocacy of pastoralists and their community leaders, civil societies, policy makers and state level actors for a legal and policy space for recognition of rights of dependent communities and better use of pasture commons. I wish the information generated would support to emanate a conscious campaign, from state to national level, for ensuring the commoners’ rights over commons and help towards a “national policy on commons”.

I congratulate the study team for their effort to bring this study report, especially the Head and colleagues of NRKA Hub.

Sandeep Chachra
Executive Director, ActionAid India

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Dr. Bratindi Jena
Head, Natural Resources Knowledge Activist Hub
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Abbreviations

BPL	Below Poverty Line
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CFR	Community Forest Resource
CPR	Common Property Resource
DFO	Divisional Forest Officer
DLC	District Level Committee
DPF	Demarcated Protected Forests
ELDF	Environment Law & Development Foundation
FCA	Forest Conservation Act
FES	Foundation of Ecological Security
FD	Forest Department
FGD	Focus Group Discussion
FPC	Forest Protection Committee
FRA	Forest Rights Act
FRC	Forest Rights Committee
FSI	Forest Survey of India
GDP	Gross Domestic Product
Gol	Government of India
Govt.	Government
GP	Gram Panchayat
GPS	Global Positioning System
GS	Gram Sabha
HH	Household
HP	Himachal Pradesh
IFA	Indian Forest Act
IFR	Individual Forest Rights
JFMC	Joint Forest Management Committee

MFP	Minor Forest Produce
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MOEF	Ministry of Environment and Forests
MOTA	Ministry of Tribal Affairs
MoU	Memorandum of Understanding
NGO	Non Government Organisation
NT	Nomadic Tribe
NTFP	Non-Timber Forest Produce
OBC	Other Backward Castes
PESA	The Provision of the Panchayat (Extension to Scheduled Areas) Act 1996
PLA	Punjab Land Administration
PRI	Panchayati Raj Institution
PS	Palli Sabha
PTG	Primitive Tribal Group
PVTG	Particularly Vulnerable Tribal Group
RF	Reserved Forest
RI	Revenue Inspector
RoR	Record of Rights
RTI	Right to Information
SC	Scheduled Caste
SDLC	Sub-Divisional Level Committee
SLMC	State Level Monitoring Committee
ST	Scheduled Tribe
TSP	Tribal Sub-Plan
U/s	Under Sectionof the given Act and Rules
VSS	Vana Samrakshana Samiti
WLPA	Wildlife Protection Act



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Executive Summary

Common Property Resources (CPR) constitute all such resources meant for the common use of villagers, collectives or a community without any exclusive individual ownership or access rights. In India pasture commons, as a part of larger CPRs, contribute significantly to the rural economy in multiple ways. For the last several decades, such resource base has been eroded mainly due to diversification of land use, inadequate legal and policy support, non-eliciting the community institutions for their protection and management, non-regulation of encroachments, non-recognition of rights of pastoral communities, state development interventions and its dominant control regime, among others. Such factors have restricted the community's right to access, use and conserve the commons. Chapter One deals with understanding the concept of commons and pasture commons, as part of larger commons, analyses its importance and examines the existing legal and policy space for governance of village common land including the process of dispossession from pasture lands.

Chapter Two deals with the methodology adopted for the study with short and long term objectives. The former has generated knowledge and information, as pre-requisites, in understanding the issues to complement the later in building alliance and striving for policy advocacy. The study covered five states including Gujarat, Himachal Pradesh, Maharashtra, Punjab and Rajasthan with 500 sample HHs. The primary information was collected through HH surveys, Focus Group Discussions (FGDs) and case studies, covering ten sample villages of each State. The selection of districts was made on the basis of major grazing animals present such as sheep and goats. It has also experimented on a pilot basis using GPS/GIS mapping of the routes of migratory graziers in Himachal Pradesh identifying different indicators.

Chapter Three focusses on the status of pasture commons and profiles of sample states by

analysing the information on land use data status, status of pasture and other land categories. It also uses primary baseline information like the demography and gender based educational and occupational status of sample HHs in the analysis. The study found highest area of pasture land in Himachal Pradesh (33%) and the lowest in Punjab (only 0.08%) of their respective geographical areas. Such situation in Punjab is created due to massive focus on agriculture (82.6% of the geographical area) coupled with faulty land use laws of the state. In other states like Gujarat, Maharashtra and Rajasthan the pasture land is not exceeding 5 percent of their geographical areas despite significant partaking in pastoral system. The literacy rate of the pastoral HHs in all five states is very low. Further illiteracy among women in this community is much higher. The contribution of women to pastoral occupation is also found very significant across the states.

Chapter Four focusses on the analysis of village level information on pasture land, pastoral communities, nomadic and local pastoralists, the status and trends of livestock, income generated by HHs from livestock, their access to grazing, nomadic or migratory pastoralists and their issues related to grazing permits. The analysis and interpretation relates to factors such as changing livestock, reduced areas of pasture land, status of grasslands, impact on pastoral communities, contribution of women in pastoral occupation, problems and plight of pastoralists related to healthcare, insurance, theft, harassment, conflicts including their problems during mobility in the routes. Chapter Five deals with conclusion and recommendations emerged from the study.

Major findings

Pastoralism is a healthy and viable economic system that has a lot of potential to reduce poverty and promote prosperity of the rural poor. It is a

significant source of revenue for rural HHs and can ensure a better livelihood for them. The declining pasture commons has led to decline in the number of sheep and goats, affected income level of the pastoral HHs. The reservation of *gochar* lands only takes into account, cattle and not the sheep and goat population.

The shrinking of pasture lands and depletion of vegetation due to encroachment on pasture lands by vested interests, cultivation by landless, diversion for development projects, agriculture expansion and land grabbing – are some of the major factors. This has affected the livelihood and economy of pastoral communities.

An effective institutional arrangement for protection and management of commons is required. Though the *Gram Panchayat* is endowed with the formal responsibility of management and protection of pasture land, it is largely non-functional or non-effective, and not consulted for any initiative on pasture land.

The lack of a comprehensive land use policy and regulation, creates serious challenges in the governance of common land, a crisis in vital land use for commoners.

The plantation undertaken by the Forest Department over traditional pasture land, minimises the community's access to grazing commons.

The restriction by local villagers caused due to the reduced area of pasture lands and scarcity of quality grasslands, has brought down the number of nomadic graziers and led to conflict between local and nomadic or migratory graziers.

The lack of grazing permits has led to the harassment and exploitation by forest officials and the police, which impacts the morale of the pastoralists, alienating them from their traditional occupation.

The rush for individual accumulation of property, the impact of the current development agenda, coupled with the increasing value of land has

led to “individualisation” and “corporatisation” of common land and resources. Thus these are factors promoting encroachment and grabbing of pasture land.

The non-recognition of CFR of the nomadic pastoral communities under FRA 2006, has been due to vast and complex process and overlapping use of areas across districts without any proper strategy by the government.

Water bodies close to the pasture lands have dried up as a result of which quality grasses and fodder are not being grown.

Despite the significant contribution of women to pastoral economy, they are not recognised as pastoralists.

The lack of proper market arrangements at local levels has created problems for sale of livestock products. Facilities are required at the district and state level.

Major recommendations

- A National Policy on Commons to be in place on priority, to safeguard the rights of pastoral communities and livestock.
- A comprehensive National Land Use Policy with proper safeguards to common land should be urgent priority. This should be followed by a National Grazing Policy to ensure sustainable use of grasslands.
- Amendment of state laws with strict provisions to ban diversion of grazing land for any other purpose.
- Reservation of more grazing land based on the number of sheep, goats and other animal population rather than only cows and bullocks.
- Immediate recognition of community forest rights of the nomadic pastoral communities on grazing and seasonal resources access under FRA 2006.
- The State and the Central Government to bring pro-pastoralist policies based on the view of pastoralism as an economy, eco-system and a way of life.

- Mapping of all critical grasslands and desert habitats as a comprehensive land/water use plan. Encourage and provide appropriate legal backing to community conserved areas containing grasslands and deserts.
- Mainstreaming of the potentials of pastoral economy, which contributes significantly to the national economy through national and state level campaigns.
- Building alliances at state and national levels for policy advocacy and struggle for the rights of communities over pasture commons.
- Establishment of a separate department/ ministry both at the central and state level to look after the grassland issue and coordinate inter departmental/ministerial communication.
- Complete ban on plantation of exotic species in all grassland habitats.
- Women as pastoralists to get adequate space in institutional and policy matters. Equal recognition for women as pastoralists.

Recommendations for practical actions to safeguard common lands

- Complete ban on diversion of common land for development projects and ensure eviction of encroachments with strict and heavy punishment for land grabbing by land mafia.
- Allotment of alternative land to the landless poor families and prohibition of any plantation and construction over *gochar* land without informed consent of the *Gram Sabha*.
- Issue of grazing permits to all pastoralists irrespective of areas and exclude all pasture lands from protected areas category and creation of a separate protection and management mechanism.
- Empowerment of the *Gram Panchayat/Gram Sabha* to protect and manage the village commons land and constitution of a pasture management committee in each village with adequate financial and technical support.
- Construction of rain water harvesting structures in dry areas, development of grassland and ban on insecticides spray for weed/grasses control, plantation of good quality grass, ensuring drinking water facility for livestock and regeneration of grassland, revival of traditional water bodies as urgent priorities.
- Proper market arrangements for collection of skins, bones and wool and ensure collection of wool from the shearing points in time on remunerative prices from the migratory graziers. Organisation of fairs for livestock as incentives to pastoral communities at local level.
- Provision of mobile health care facilities and special protection through local police, to check theft and harassment, for nomadic and migratory graziers. Provision of shelter for nomadic pastoralists, their livestock along their routes of mobility, education for children, open ration card for the nomadic HHs, loan subsidy, etc as minimum service delivery system.

Introduction



Understanding commons

Common property resources (CPRs) are those resources that are used by a community without any exclusive individual ownership or access rights.¹ It constitutes all such resources including village pastures and grazing grounds, village forests and woodlots, protected and unclassified government forests, waste land, common threshing grounds, watershed drainage, ponds and tanks, rivers, rivulets, water reservoirs, canals and irrigation channels which are meant for the common use of villagers. In pre-British India, a very large part of the country's natural resources was freely available to the rural population. These resources were largely under the control of the local communities. The CPRs available to the communities declined substantially while the

extension of state control over these resources gradually abated the traditional institutions of community management systems. Over the last several decades, these commons have been disappearing mainly due to diversification of land use, lack of adequate legal framework and institutions for control and management and rampant encroachments, among others.² The inadequacy in the existing legal framework, which governs the commons and state control CPR regime, the right to access, use and conservation of commons have been severely restricted by the state governments, which restrain in eliciting effective community partaking in management and conservation initiatives.³ The accessibility of a resource determined either by legal status or by convention - the customarily accepted user rights, and collectively owned or formally held (by legal

¹ N. S. Jodha (1986) The Decline of Common Property Resources in Rajasthan, India, Pastoral Development Network, Overseas Development Institute ODI)

² ELDF (2011) Protecting and Conserving Commons for common good.....Rajasthan

³ NSSO (1999) Common Property Resources in India, NSS 54th Round January 1998 – June 1998 (Report No. 452(54/31/4)), National Sample Survey Organisation, Department of Statistics and Programme Implementation, Government of India, Dec. 1999, p 1

sanction or official assignment) by well defined co-users of a village (community) or identifiable community is considered to be a CPR.

The village 'common land' or 'commons', as part of the larger CPRs, refer to common property land resources within the boundary of the village and were formally (i.e., by legal sanction or official assignment) held by the village *panchayat* or the community of the village.⁴ The village common land includes the village *panchayat* grazing land/pasture land, a well defined classification used in official land-use records, which has traditionally been the most important constituent of CPR land. These lands are earmarked and variously known as *gauchar*, *gochar*, *gairan*, *gomol*, etc. Villagers have users' rights on permanent pastures by legal sanction.⁵ The village sites, threshing floor and all areas earmarked for the common use of villagers for economic activities like processing of agricultural produce, storing of grains, other agricultural produce, firewood, etc., uses for other household enterprises belong to the village common land. However, the village woodlots, which may have come up on the grazing/pasture land, belong to the forest revenue or any other department, although formally, they come under the management of the village *panchayat* or a community of the village.

Villagers have legal rights of only access to some specific categories of land, like 'pasture and grazing lands' and 'village forests', which are under the jurisdiction of the village or the village *panchayat*. All other categories of land, other than privately owned land like barren and uncultivable land, cultivable waste land put to non-agricultural uses and forests belong to the State Revenue or Forest department, upon which the villager's rights of common access is prohibited. Nevertheless, the rural population, particularly the poor, depend greatly on the *de facto* use of the goods and services available from these categories of land.

In many parts of India, traditionally, village communities were managing their community resources very efficiently in a sustainable manner. Some of these institutions still exist in parts of India. However, the process of extending state control over common resources began with the declaration of "reserved" and "protected" lands and forests and this has essentially excluded the villagers' access to common resources. As a result, the systems of community management have gradually disintegrated and are now virtually extinct.⁶ Thus, the history of enactment of the legislations and policies has been the history of deprivation of the rights of the community over commons and the process of dismantling the viable and vibrant community based traditional institutions through impositions and dominations through the "top-down" institutions designed by the state legalisation.

In pre-independence India, pastoralists were granted grazing rights, for which they paid fees per livestock. Earlier, though the princely states taxed the pastoralists heavily, they provided corresponding access to resources. Various taxes taken from the pastoralists were wool tax, ghee tax, grazing tax, professional tax, hearth tax etc. To protect the rights of the local pastoralists, prevent degradation of local grazing resources and discourage outside migrations, higher taxes were levied on the outside pastoralists. After independence, all taxes were abolished and free mobility was allowed to resource-rich areas; this also excluded them from their traditional resources rights.

In India, lack of any pasture management and grazing policy at the national/state level has rendered the pasture lands, including village commons and uncultivable wastes open to developmental, societal and grazing pressures. Large chunks of such land have experienced change in land-use due to transfer for developmental projects, land grants to landless,

⁴ NSSO (1999) Common Property Resources in India, p. 5

⁵ NSS (1999)

⁶ Report No. 452: Common Property Resources in India, Jan - June 1998, NSS 54th Round

plantations on degraded pastures and bringing of such lands under irrigated cultivation at the expense of traditional agro-forestry practices. Thus, reducing the areas of pasture commons resulted in deprivation of the right of access to grazing by the pastoral communities.

Pastoralism and pastoral communities

Pastoralism is the branch of agriculture concerned with the raising of livestock. It is animal husbandry: the care, tending and use of animals such as camels, goats, cattle, yaks, llamas, and sheep. Pastoralism generally has a mobile aspect, i.e., the moving of herds in search of fresh pasture and water. In the Indian context, pastoralism is defined as “members of caste or ethnic groups with a strong traditional association with livestock keeping, where a substantial proportion of the group derives over 50 percent of the household’s consumption from livestock products or their sale and where 90 percent of the animal consumption is from natural pasture or browse and where households are responsible for the full cycle of livestock breeding”.⁷

There are numerous practicing pastoral communities, traditional and non-traditional, found in India. Based on the geo-climatic environment and economic consideration, the pastoralists and their occupation can be seen in three categories (i) as a significant source of economy for prosperity, (ii) as a traditional way of life and economy, (iii) as a critical source of survival to overcome economic vulnerability (mainly landless poor). However, these are not exclusive but overlapping social categories. Although a vast number of the population in India is engaged in pastoral activities, no census is available about their numbers. Only the names of a very few pastoralists’ communities, mainly nomadic or semi-nomadic, are mentioned in research reports or anthropological documents. More than 28 such communities residing in India largely belong to scheduled tribes and backward



communities. Such communities are Gaddi, Ahir, Bakarwal, Bharwad, Bhotia, Bhutia, Dhangar, Gaddi Muslim, Gaderia, Gavli, Ghosi, Gujjar, Jath, Kinnaura, Mer, Rath, Rebari/Raika, Toda, Van Gujjar and many such communities.

The contribution of women in pastoralism has not received the attention it deserves. Their knowledge of livestock production has been ignored. They not only remain the ‘hidden hands’ of production but also a neglected source of indigenous knowledge. The majority of pastoralist women are illiterate, but have considerable experience and knowledge about livestock, their management, production characteristics and feeding behaviour and accordingly, they make feed mixtures, choose fodder, gather or store bush and tree products for feeding livestock. The women of nomadic pastoralists are exposed to more serious hardships and vulnerability than men.⁸

Why are commons so important for rural communities?

Commons are an important livelihood-based resource in India. Those have multiple users and usages and make significant contributions to the rural economy in many ways. A CPR typically consists of a core resource, which defines the stock variable, while providing a limited quantity

⁷ Pastoralism in India: A scoping study, Indian Institute of Management (1994) V. P. Sharma, I. K. Rollefson, and John Morton Ahmedabad, p 8.

⁸ Rangnekar Women Pastoralists, Indigenous Knowledge & Livestock Production in Northern Gujarat.

of extractable fringe units, which defines the flow variable. In India it is neither properly understood nor are the rules of governance properly framed. As a result, commons are viewed as space that can be legitimately colonised. According to Garret Hardin (1968), *The Tragedy of the Commons*, "in the absence of government regulation and private ownership, each individual user of commons tries to maximise his or her self interest and ends up over exploiting the commons". For centuries, traditional users have developed a stable and sustainable relation with their commons. Thus, the use of CPR has two dimensions – stock variable and flow variable. The former consists of a core resources area that needs to be protected and supported for sustainable use, while the later is harvested and consumed by the people for their daily needs, with limited supported to allow for continuous exploitation.⁹

Livestock rearing is one of the major occupations in India and is making a significant contribution of about 8.5 - 9 percent to the country's GDP.¹⁰ The sector assumes a higher significance as it forms the most critical means of supporting the earning capacity of landless pastoralists and those of marginal and small farmers, especially those living in drought-prone, hilly, tribal and such other areas where crop production which is mainly dependent upon the vagaries of nature, is not certain.

The sheep and goats, which mainly depend upon open grazing, can survive on the fast degrading pasture land. For millions of resource-starved HHs - landless pastoralists and marginal farmers - free grazing based livestock often forms the only one and most critical source of food and cash income.¹¹ The open grazing and fodder availability from CPR like forests, pastures, village commons, etc., fulfills 50 percent of the annual fodder requirements while the balance is from cultivated fodder and crop residues.

A study (Jodha-1999) in 82 villages across 21 districts in the arid and semi-arid zones of India highlights the relevance of the Commons to the rural economy at large and their importance as a 'safety net' for the poor in particular. He estimated that around 84-100 percent dependence of the rural poor on the Commons for fuel, fodder and food items, in comparison to 10-19 percent dependence of better-off HHs (even for the better-off the figure increases in dry land regions like Rajasthan). The study estimated that 14-23 percent of HH incomes are derived from the Commons, which plays an important role in reducing income inequalities that would otherwise have been starker. He also indicated that rearing livestock without the support from the Commons would mean a diversion of almost 48-55 percent of cropland from food and cash crops to fodder crops. The alternative, on the other hand, of reducing the number of animals in proportion to the availability of one's own fodder resources, would entail a 68-76 percent loss of draught power and up to 43 percent loss of farmyard manure.

Economic and livelihood benefits apart, CPR have been endowed with ecological benefits in terms of resource conservation, recharge of ground water and sustainability of agro-ecological systems. These contributions and potentials emerging from CPRs are not consciously measured and monitored. Considered to be one of the most productive ecosystems in the Indian subcontinent, the grazing lands have been massively degraded. The ecologically sensitive pasture lands viz., Shola grasslands of Nilgiris; Sewan grasslands of Bikaner, Jodhpur and Jaisalmer; semi-arid grasslands of Deccan; Rollapadu grasslands in the semi-arid tracts of Andhra Pradesh; Banni grasslands of Gujarat and Alpine grasslands of Sikkim and Western Himalayas are already on the point of no return. The strong village level traditional institutions ensuring sustainable management

⁹ Common Land & Poor Livestock Keepers, FES, BAIFDev. Research Foundation & GIDR, March 2009, p.3.

¹⁰ Anon (2006) Report of the Task Force on Grasslands and Deserts, Planning Commission, Gol.

¹¹ Report of the Sub Group III on Fodder and Pasture Management Constituted under the Working Group on Forestry and Sustainable Natural Resource Management, Planning Commission, Gol, Version:1.5 (21 September, 2011).

have broken down and there is no alternative available to sustain.

Though the grasslands and pastures form a major source of forage for the livestock, they also have a wider social and ecological significance. Since it is the habitat of many species any further degradation of these habitats is likely to put many more species under a threat. In addition, the fodder and pasture development programme has a great significance towards reducing 'poverty and hunger'.¹²

The shrinking commons has intensified the conflict over resource use indicated in a number of studies. The poor families especially are usually at the losing end, either by being denied access to these resources (mainly because of privatisation of the commons by a few) or by diversion of the Commons to alternative uses. Privatisation of CPR and their use for alternative purposes under the pretext of their being degraded have been major contributing factors for depletion of the commons (Iyengar 1989, 1997; Beck 1998; Beck & Ghosh 2000; Cavendish 2000). The massive plantation over the village common lands with the mono-culture of exotic species for commercial use through afforestation and bio-fuel plantation programme has been a serious threat to the resource base and deprivation of the existing rights of the village community.

Legal & policy framework: locating deprivation of rights over pasture commons

In India, land & land reforms are under the exclusive legislative and administrative jurisdiction of the States as provided in Entry No. 18 of the List II (State List) of the Seventh Schedule to the Indian Constitution that defines this as "**Land, that is to say, rights in or over land, land tenures including the relation of landlord and tenant, and the collection of rents; transfer and alienation of agricultural land; land improvement and agricultural loans; colonisation**". The central government

only played an advisory and coordinating role in the field of land reforms since the First Five Year Plan. The focus of land reforms has been on giving importance to agriculture productivity, abolition of intermediary tenure and on ensuring the security of individual land tenure of the landless tiller. The aspects of securing CPRs and village common lands has not been given attention. The implications of the protection and security of the customary user-rights of pastoralists and village communities over common lands has led to marginalisation and exclusion. The recording of their rights, except to some extent in Himachal Pradesh, has not been done leading to the denial of rights of access to the customarily used area of commons. In this process, the village common lands were occupied by individual and captured by vested interests, that reduced the size of village commons. This has led to a change in the concept and character of the 'common land use' system.

The pastoral communities are not only limited in their access to and use of village permanent pastures and other grazing lands for their livestock but they also get limited seasonal and conditional access to 'reserved' and 'protected' forest areas. Different forest legislations enacted before and after Independence have granted *nistar* rights, seasonal grazing permits and have conferred the rights to the extent admitted (in a very limited manner) as mentioned in the Forest Working plans. However, historically, the Forest Department has been preventing the dependent communities from exercising their rights and criminalising them as unauthorised encroachers.

The Forest Settlement Officer, during the process of reservation of forests, admits the rights of claimants on pastures u/s 14 and exercise of the admitted rights u/s 15 of The Indian Forest Act 1927. The National Forest Policy (1988) has argued for a participatory mode of resource conservation and management which based on the involvement of the local community to regulate grazing in forest areas. However, in reality, the forest department holds the control.

¹² Report of the Sub Group III on Fodder and Pasture Management Constituted under the Working Group on Forestry and Sustainable Natural Resource Management Planning Commission of India, Version:1.5 (21 September, 2011), p.8

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, a progressive and historic legislation, is a product of the long struggle against '*historical injustice made to the forest dwellers*' to recognise the long pending customary rights over forestlands and forest resources. The Act has provided a framework for recording the rights of the "community forest resources" of the forest dwellers, including pastoralists and nomadic communities over their customarily seasonal resource access areas, which they have been using for generations for their livelihood. Under Section 2 (a) of the Act, "**community forest resource**" means customary common forest land within the traditional or customary boundaries of the village, or *seasonal use of landscape in the case of pastoral communities, including reserved forests, protected forests and protected areas such as sanctuaries and national parks to which the community had traditional access*".¹³

The provision u/s 3(1)(d) provides "other community rights of uses or entitlements such as fish and other products of *water bodies, grazing (both settled or trans human) and traditional seasonal resource access of nomadic or pastoralist communities*. The rights also include under section 3(1)(i) "to protect, regenerate, or conserve or manage any community forest resource, which they have been traditionally protecting and conserving for sustainable use". This law (FRA) is only applicable to forestlands of any description but not the legally non-forest areas of "village commons" largely under the ownership of state revenue departments. Besides, the act also provides rights over grazing land by both settled and transhumance nomadic and pastoralists. Section 12 of the Rules provides the process of verification of claims by Forest Rights Committee after due intimation to the concerned *gram sabha* (GS) and the Forest Department to *ensure that the claim from pastoralists and nomadic tribes for determination of their rights, which may either be through individual members, the community or traditional community institution, are verified*

at a time when such individuals, communities or their representatives are present. It also said the District Level Committee should examine whether all claims, especially those of primitive tribal groups, pastoralists and nomadic tribes, have been addressed, keeping in mind the objectives of the Act.

Seasonal use of forest resources, migration and small dispersed populations are features of such populations which create further challenges, as migratory routes may vary from year to year, thus, making mapping complicated. Fixing of boundaries or months is difficult and can subvert the intentions of the Act of protecting customary practices, as access of pastoralists to grazing grounds needs to provide flexibility to them. For instance, the home villages of Dhangars of Maharashtra are usually in the dry Deccan plateau in areas called *maal raans* which are open stretches unsuitable for agriculture but excellent for grazing. Dhangars inhabit these villages until the end of the monsoons and then they set off in different directions, i.e., migrate in search of fodder depending on its availability and return to their home villages only when the monsoons return.

Thus, the process and procedures of recognising the rights of the seasonal resource access area and landscape used by nomadic tribes or pastoralists are very complicated and difficult. There is lack of clarity on the mechanism for claiming rights involving multiple GS, especially in the case of nomadic tribes and seasonal pastoralists. The submission claims with the huge and floating numbers of GS across the routes without any awareness of the nomadic and pastoralists and the nature of mobility for grazing are practically difficult. It is more difficult and complicated if one looks at the seasonal routes and the mobility of the nomadic and pastoralists, along with the floating nature of GS. Therefore, even though the law may sound progressive, because of its complex procedures and ambiguities, access to justice is denied to those who are not accustomed to mainstream

¹³ The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, Ministry of Tribal Affairs, Government of India.

legal coding and technicalities. The process of recognition of community rights of nomadic and pastoralists are not progressing much all over the country due to the above mentioned issues. Recognition of rights is extremely important in the states where pastoralism and the nomadic and pastoralist communities solely depend upon those pasture resources for their survival.

State specific laws and policies on commons

This study has made an attempt to review a few state specific policy provisions to locate the description of rights recognition and deprivation points for understanding the governance framework for governing the commons by the state. Commons in India are regulated by state specific land revenue legislations. Only Punjab and Himachal Pradesh have specific legislations dealing with commons namely, The Punjab Village Common Lands Regulation Act 1961 and the Himachal Pradesh Village Common Lands Vesting and Utilisation Act, 1974.¹⁴ However, Gujarat, Maharashtra & Rajasthan have such provisions as part of other laws.

Gujarat

The land reforms initiative, as part of agriculture development, has brought a systematic categorisation of land use pattern in India, soon after Independence. Development of infrastructure facilities, such as roads and transport network, has opened up the markets, and resulted in massive exploitation of natural resources for a rapid growth rate. Besides, increased population in rural areas has naturally increased the pressure on available land. The village commons land has decreased and continues to do so due to the policy of privatisation and over-use and over exploitation that has led to deterioration in its quality, which considerably altering the status and areas.

The land reforms initiative has broken down the social customs and conventions related to the regulation of CPR land. Mechanisation of agriculture, increased commercialisation of land based natural resources has led to rapid depletion of forests and other land-based resources. This has disturbed balanced land use patterns in the community. Although the revenue department and the village *panchayats* are vested with powers and duties for protection, management and development of the waste land and village common land, they hardly play any effective role to regulate them. In most of the villages where there is land encroachment, *gauchar* land is the first target. Under the current land revenue code, sheep and goat populations are not taken into consideration while determining the area needed under *gauchar*. The control and management of the forest land by the Forest Department is at the other extreme. Generally, they are very strict with the poor and the resident population. With forest contractors they either become powerless or allegedly connive with them for private benefits.

A resolution on May 17, 2005 was adopted by the Gujarat Government for leasing waste land up to 2,000 acres for a period of 20 years to big corporate houses and rich farmers for corporate farming¹⁵ on a mass scale in which the wastelands, as one of the most important and critical source of pastures, had been given on lease to corporate houses. This had led to massive depletion of pasture lands while seriously depriving several pastoral and nomadic communities¹⁶ in the state of their traditional resource rights.

Himachal Pradesh

The Himachal Pradesh Village Common Land Utilisation Act, 1974 vested in a *panchayat* for streamlining the utilisation of village common lands popularly known as 'Shamlat Land'. The idea was, no doubt, laudable but in practice, the utilisation of such lands by *panchayats* was open to criticism, as certain unscrupulous elements occasionally

¹⁴ Co-management: An Alternative Model for Governance of Gairan (grazing land) in Maharashtra: A Case Study, Prabhjyot Chhabra and others

¹⁵ Bharwada, Charul & Mahajan, V (2006) GUJARAT: Quiet Transfer of Commons, Economic and Political Weekly January 28, 2006, p. 313

¹⁶ *ibid*



circumvented the provisions of the Act for their personal benefit. In old areas, however, such lands were either with village communities or with co-sharers, with no control of the *panchayats* or the government. Under the Act, 'the ownership of the soil which was earlier with the village proprietors has been vested in the Government'. As a result of this, the *Ban-Maufi* forest which was the property of the villagers became government property. Similarly, the soil of the unclassified and protected forests which belonged to the people (the government having proprietary rights only on the trees of spontaneous growth or planted by it) was also vested in the government, and these forests also became the absolute property of the government, though burdened with rights.¹⁷

Similarly, section 8 of the Himachal Pradesh Lease Rules, 2011 made under The Himachal Pradesh Village Common Land Utilisation Act, 1974 says that (a) an area not less than 50 percent of the total area vested in the state government under section 3 of this Act for grazing and other common purposes of the inhabitants of an estate and the remaining land for allotment to a landless person or a person whose holding is less than one acre, despite having other categories of waste land,

reduced the area of commons.¹⁸ The vested land can also be transferred to some other departments of the state government or can be given on lease to an individual in connection with development activities of the state. However, this provision was subject to the condition that this will not reduce the land to less than 50 percent reserved for common purposes for the inhabitants of an estate.

Maharashtra

Under the Maharashtra Land Revenue Code 1966, "the right of grazing on free pasturage shall extend only to the cattle of the village or the village to which such lands belong or have been assigned, and shall be regulated according to the rules made in this behalf by the State Government. Any case of dispute as to the right of grazing decided by the Collector shall be final, subject to only one appeal" - Maharashtra Land Revenue Code 1966 on Right in Waste land of another Village.¹⁹ Also, the villagers may be granted the right of *nistar* in the neighbouring village and such villagers shall be given a right to passage. However, provisions in the Act talk about making arrangements for free grazing of cattle. It should be noted that no such rule has been made in reality. The process of auctioning was done under a lot of political pressure and there was no fairness and transparency in the same.²⁰ Some people cannot even afford to pay the grazing fee and hence, are denied the right to graze their cattle on community land. These decisions are made by the Collector without the involvement of villagers in the decision making process. The money collected from the auction is given to the Collector and there are no funds with the *panchayat* to maintain *gairan*. There is no provision made under the Act or the rules for the maintenance of *gairan* land. The *panchayat sarpanch* is sidelined with the Collector to resolve the disputes. Various anomalies exist when revenue land is regulated by the Revenue Department and the *panchayat* and *gochar* (village grazing) land by the Forest Department.²¹

¹⁷ Forest Working Plan of Palam Forest Division, Himachal Pradesh

¹⁸ Himachal Pradesh Lease Rules, 2011

¹⁹ The Maharashtra Land Revenue Code, 1966

²⁰ Co-management: An Alternative Model for Governance of Gairan (grazing land) In Maharashtra, p 9

²¹ *ibid*

One of the major flaws in the present system is that *gairan* is under the control of the Forest and Revenue Department and thus, villagers have no rights or powers to make rules to govern the community land.

The right to graze on *gairan* land is allocated to people on the basis of auction in Maharashtra. The money collected from the auction is given to the Collector. People, who do not get a share of *gairan* land, go to the nearby forest area to collect fodder. The *gairan* is not contiguous and is scattered all over the village. The pasture land is often used by travelling nomads to reside on for their period of stay. Considering the *gairan* is government owned land, the government often converts its usage to an activity other than *grazing*.

In Maharashtra, there has been a serious impact on pasture dependent communities and villagers due to diversion of pasture land to industries. The village common lands, which actually belong to the village, are now being easily handed over to private corporates by the government since these lands are legally recorded and owned by the government. The Land and Revenue Department officials are clearly flouting the rules. For instance, the Maharashtra *Panchayat* Act, 1958 requires the consent of the *panchayat* before changing the use of the land. However, the procedure is hardly adhered to. The villagers are unaware of their rights and have no say in any matter. Many such instances of encroachment on CPR due to industrialisation and urbanisation have been reported.²²

Management of the commons ignores participation of people of the community with governmental agencies based on *shared authority* over resource management and governance. There is an urgent need to empower the villagers and include them in the decision making process.



Punjab

Section 439 of the Punjab Land Administration Manual, 1931²³ mentions that as an essential feature of the village community, the proprietary body should possess part of their lands in common, as common land of village communities. The village sites and grazing lands over which the cattle wandered and the wells from which the people drew their drinking water were held under common ownership. Often, each sub-division (*taraf*, *patti*, or *paa*) of the estate had also its own common land, in addition to its share in the common land or *shamilat* of the whole community. This feature of communal village property was reproduced by revenue officers in those areas where the village system was forcibly grafted on the lines of a tenure of a very different character.

Under section 4 of the Punjab Village Common Land (Regulation) Act, 1961,²⁴ the rights, title and interests in whatsoever is vested in *panchayats* and non-proprietors in *shamilat deh* of any village under the *shamilat* law, which is situated within or outside the *abadi deh* of a village. The *panchayat* is competent enough to manage and lease the lands vested with it.

²² Iyengar, S. and Shah, A. 2001 "CPR in a Rapidly Developing Economy: Perspectives from Gujarat" Paper for workshop on "Policy Implications of Knowledge with respect to Common Pool Resources in India", September 14th. Institute of Economic Growth, Delhi

²³ <http://punjabrevenue.nic.in/landadmnmanu1.htm>

²⁴ Punjab Village Common Land (Regulation) Act, 1961



Under section 703 of the PLA Manual, the waste lands in Punjab over which the government has asserted rights varying from null ownership to a power of control exercised in the interests of the surrounding communities may be roughly classified into state lands: (a) mountain forests, (b) hill forests, (c) plain forests and (d) grazing lands. In the fourth class, forests are referred to as pastures and grazing grounds proper even if they are forests only in namesake. These can be declared as forests under the Act in order to obtain a statutory settlement on the rights which private individuals or communities on the other hand possess over them. Also, claims to the rights of pastures or forest produce are the most difficult part of the forest settlement officer's duty. The state law has also allowed taking a limited extent of plantations in *shamilat* land. As a whole, the common pasture land is a practically non-existent form.

Rajasthan

Rajasthan is the only state which defines "Public Land" or "Common Land" as meaning land which is not in exclusive possession or use of any individual, but is used by the inhabitants of a local

area, commonly under its *panchayat* law.²⁵ The use of common purpose means "any purpose in relation to any common need, convenience or benefit of the village or other area".²⁶ Comparatively, Rajasthan has a better legal safeguard for the village pasture common land vested with the *panchayat* than other states of India.

Under the Rajasthan Land Revenue Act, 1956, the state government may set apart land for special purposes such as for free pasturage of cattle, for forest reserve, among others or for any other public or municipal purpose and allocate it to the *panchayat*.²⁷

The legislative enactments of the state dichotomised land are as *khatedari*—cultivable land in the private possession of villagers—and non-*khatedari* on the basis of a settlement record. Village pastures fall under the non-*khatedari* land that is deemed to be the property of the state government. During the settlement, the authorities are required to bring a statement of 'unoccupied' government lands to the notice of the villagers, which could be converted into pasture (*charagah*) on an

²⁵ Section 2(1) (xx) of the Rajasthan Panchayati Raj Act, 1994

²⁶ u/s 2(aa) the Rajasthan Holdings (Consolidation and Prevention of Fragmentation) Act, 1954

²⁷ See section 92, 102, 102A, of Rajasthan Land Revenue Act, 1956.

application from the *gram panchayat* within two months of the Settlement.²⁸ However, the pasture-land in the record that was wrongly classified as 'unoccupied' land often went unchallenged because ordinary users were unaware of legal provisions although the law sought to protect their customary grazing rights.

Successive rules framed by the states to bypass the *panchayat* resulted in reduced area of village common lands used for other purposes by the state. The common lands vested in *panchayat* have been allotted for various purposes like setting up of brick kilns²⁹, construction of seed godowns³⁰, construction of cinemas, medical facility among others with framing of several Rules enacted under section 90-A and 102 of the Rajasthan Land Revenue Act, 1956. Landless agriculturists, dependents of deceased defense personnel and ex-service men are also entitled to government waste land for cultivation. A process has also been laid out for the grant of such unoccupied government land.³¹ However, the allotment of village common pastures led to the reduction of commons, which can be avoided by allotment of the lands other than grazing lands. Hence, it is clear that such changes in the legislation are reducing the area of commons.

The Collector, at his discretion, may in consultation with the *panchayat*, change the classification of any pasture land vested in it, as unoccupied cultivable government land (*sewai chak*) for allotment for any agricultural or non agricultural purposes, maximum up to the area of not exceeding four hectares.³² Thus, before diverting a pasture land for agricultural or non agricultural use, he only needs to consult the *panchayat*, which does not imply approval. It is not legally binding to consider the opinion of the *panchayat* in case the *panchayat* does not want to change of the land use. Hence, the right of the *panchayat* remains an empty safeguard of common land.



Under section 103 of the 'The Rajasthan *Panchayati Raj* Act, 1994', power is vested with the *zila parishad* to frame bye-laws and rules for promoting and maintaining the health, safety and convenience of persons residing within the jurisdiction of such *panchayat* and for the administration of the *panchayat* under this Act. Further, under section 104 (1), power is vested with the *panchayats* to frame bye-laws inconsistent with any bye-laws made under section 103 by the *zila parishad* which inter alia include (f) to regulate the manner in which tanks, ponds, cesspools, pasture lands, play grounds, manure pits, land for disposal of dead bodies and bathing places shall be maintained and used.

With the abolition of intermediaries, the rights, title or interests of surplus land was vested with the state government. Consequently, the control and management of all common lands so vested in the state government were transferred to the *panchayats*.³³ The common lands in rural

²⁸ Section 116, Rajasthan Land Revenue Act, 1956.

²⁹ The Rajasthan Land Revenue (allotment & conversion of land for establishment of brick kilns) Rules, 1987

³⁰ The Rajasthan Land Revenue (allotment & conversion of land for establishment of seed godowns) Rules, 1965

³¹ Rule 11, The Rajasthan Land Revenue (Allotment of Land for Agricultural Purposes) Rules 1970

³² Rule 7, Rajasthan Tenancy (Government Rules) under the Rajasthan Tenancy Act

³³ Ajmer, Abolition of Intermediaries and Land Reforms Act, 1955.



Rajasthan, thus, are made accessible to the community through the institution of panchayats. Village level *panchayats* hold all common lands and government lands lying within the *abadi* or territorial area of the *panchayats*³⁴ as a trustee and is entrusted with the responsibility of controlling and managing them.³⁵ The *panchayat* is required to maintain a register to record the particulars of all immovable properties, including common lands placed at its disposal.³⁶

The state government may set apart land for special purposes which, among others, may be for free pasturage of cattle, for forest reserve or for any other public or municipal purpose and allocate it to the *panchayat*.³⁷ This land cannot be used for any other purpose than for which it is set apart, without the sanction of the state government. However, in the structure of authority, the District Collector plays a decisive role, as the ultimate decision making power is centred with the Collector.

The enactment of subsequent legislations or diluting the authority of the *panchayat* causes reduced areas of commons through allotment of common lands for various purposes such as setting up of brick kilns,³⁸ construction of seed godowns,³⁹ construction of cinemas and medical facilities, among others, by making several rules have been enacted under section 90-A and 102 of the Land Revenue Act of Rajasthan for allotment of land for various purposes.

It is understood that the trail of enactment of legislation, has been a history of rights deprivation and exclusion for the most vulnerable, commons dependent communities. While designing institutional arrangements and vesting of power, the perception of 'eminent domain' continues to prevail.

The context of the study

The present study covers five states such as Himachal Pradesh, Punjab, Rajasthan, Gujarat and Maharashtra with the main focus on the community governance system and the extent of people's control, access and rights over pasture commons. Three aspects deserve special attention in this context:

1. Issues related to pasture commons is looked at more as waste land to be encroached but not a resource for the survival of vulnerable dependent communities and their livestock, as a source of economy.
2. A traditional governance system of pasture commons needs to be reinforced to ensure community participation to have access and control over it.
3. To bring together all communities dependent on pasture commons and organisations working on this issue for a national level policy advocacy.

³⁴ It is called "Panchayat Circle" defined u/s 2(xvi) of The Rajasthan Panchayati Raj Act, 1994.

³⁵ ELDF-Commons - Rajasthan-April 2011, p.7, Rule 136, The Rajasthan Panchayati Raj Rules, 1996.

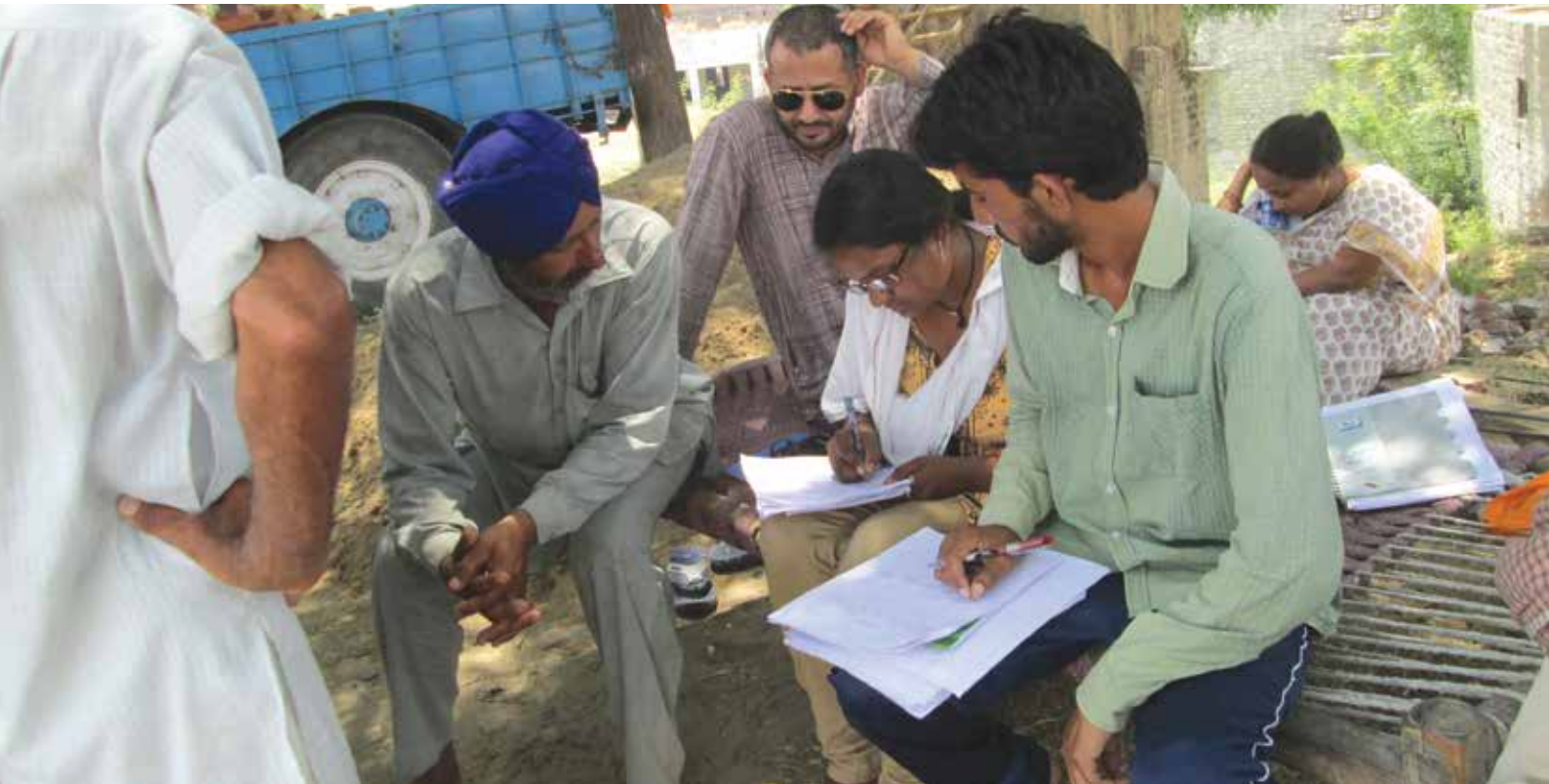
³⁶ Sec. 137 of the Rajasthan Panchayati Raj Rules, 1996.

³⁷ See section 92, 102, 102A, of The Rajasthan Land Revenue Act, 1956.

³⁸ The Rajasthan Land Revenue (Allotment & Conversion of Land for Establishment of Brick Kilns) Rules, 1987.

³⁹ The Rajasthan Land Revenue (Allotment & Conversion of Land for Establishment of Seed Godowns) Rules, 1965

Research Methodology



Objective of the study

The present research has short-term objectives based on which the long term objectives will be achieved. The short term objectives would provide knowledge and generate information on the issues, while the long term objectives will help build alliance and strive for policy advocacy. The first four can be considered as short-term but necessary pre-requisites for the fifth and sixth objectives.

- To understand the **status of pasture commons** and the extent of community rights over such commons
- To understand the **changing status and conditions of pasture commons** in selected states
- To analyse the **plight of pasture commons' dependent vulnerable communities**
- To document the **traditional community governance system** of protecting pasture commons
- To **build alliances** and share the study findings among a larger section of people for generating public opinion on the issue and take up advocacy for community access and control over it
- To take up **policy advocacy** for the protection of pasture commons in the larger interest of unity of vulnerable communities.

Table 1: Lists of sample states, districts and villages covered under the study

State	District	Tehsil	Village Name	Household composition of sample villages	
				Pastoral HHs	Non-pastoral HHs
Gujarat	Kachchh	Rapar	Varjvani	320	0
			Bhutakiya	100	500
		Bhuj	Sanosara	500	0
			Khawda	80	620
			Jatavada	500	100
	Banaskantha	Dhanera	Jadiya	820	620
			Raviya	500	480
			Vasan	430	870
		Disa	Khimana	400	750
			Baiwada	250	850
Himachal Pradesh	Chamba	Bharmour	Lahal	80	0
			Barahmni	24	10
		Holi	Garoh	35	15
			Nayagran	17	10
	Kangra	Bajjnath	Karnathu	100	0
			Sarajada	30	0
			Bahlnawal	30	0
			Gunehad	180	20
		Multan	Polling	150	0
			Barabhangal	122	0
Maharashtra	Ahmadnagar	Sanbhamner	Darewadi	60	40
			Pemgiri	100	125
			Digras	90	410
			Shirapur	80	190
			Pipalgawn matha	50	88
	Nashik	Nandgoan	Kasari	230	190
			Jamdari	163	265
			Kusumtel	240	144
			Talvade	65	283
			Rankheda	87	196

State	District	Tehsil	Village Name	Household composition of sample villages	
				Pastoral HHs	Non-pastoral HHs
Punjab	Firozpur	Talwandi	Bara bhai ka	250	50
			Khwaja khadak	180	70
			Mirje key	270	30
			Loham	400	60
			Shakur	370	80
			Kawarbachan	290	110
			Jawahar singh bala	150	50
	Firozpur	Bhangar	250	50	
	Bhatinda	Bhatinda	Kalajhrani	700	100
			Luhlbai	290	10
			Rai ke kalan	700	205
			Rai ke khurd	140	30
			Bahadur garh jandia	380	20
			Jangi rana	1,200	100
Chak attar singh bala			1,200	300	
Rajasthan	Jodhpur	Bap	Sekhaser	228	55
			Akhadana	156	247
			Mandli	50	19
			Rawara	135	146
			Sanguri	48	42
	Jaisalmer	Pokran	Nokh	138	562
			Bodana	122	228
			Talara	80	18
			Daleri	45	20
			Bithega Gaon	61	94

Sample design of the study

The study has used stratified purposive sampling for collection of information. The reason of using stratified purposive sampling was based on the situations and availability of the focused respondents as per requirements.

Our main focus was to cover 100 practicing pastoral households (HHs) from each state. Punjab is a variation in terms of village coverage, due to unavailability of the required number of practicing pastoral households. However, we have covered a total number of 100 HHs from the district of Punjab.

Table 2: Number of households and villages covered from each state and district

Sl no.	State	District	No. of villages	No. of households
1	Gujarat	Kachchh	05	50
		Banaskantha	05	50
2	Himachal Pradesh	Chamba	04	40
		Kangra	06	60
3	Maharashtra	Ahmadnagar	05	50
		Nashik	05	50
4	Punjab	Bhatinda	09	49
		Ferozepur	08	51
5	Rajasthan	Jaisalmer	05	50
		Jodhpur	05	50
Total	5	10	57	500

Criteria of sample selection

The study has covered the five states of Gujarat, Himachal Pradesh, Maharashtra, Punjab and Rajasthan based upon the consideration of the prevalence of pastoral occupation and pastoral communities and wider prevalence of the issues relating to pasture land and commons.

For the purpose of collection of information, two districts from each state were selected. From each state, 10 villages and 100 individual HHs were covered. However, Punjab has been an exception where 17 villages were covered to meet the sample size of 100 HHs.

The study has focused exclusively on the pastoral communities - both nomadic/migratory as well as local pastoralists.

The selection of the HHs was made on the basis of the numerically dominant livestock, social composition and gender priorities. For livestock, dependency and access to pasture lands and commons is very critical. Since the focus of the study is on pasture commons, the selection of individual HHs was based upon their sheep and goat population besides their involvement in pastoral activities. From each state, five districts were taken with numerically preponderant sheep and goat population and two districts were selected for the purpose of this study.



Table 3: State-wise five major districts with numerically dominant sheep and goat population

State	District	Main livestock population			Selected Study District
		Sheep	Goat	Total	
Gujarat	Kachchh	5,72,110	4,73,042	10,45,152	✓
	Banaskantha	1,58,947	2,99,409	4,58,356	✓
	Rajkot	2,06,243	1,77,884	3,84,127	
	Jamnagar	1,98,657	1,52,217	3,50,874	
	Bhavnagar	2,46,359	1,70,943	4,17,302	
Himachal Pradesh	Chamba	3,16,565	2,40,564	5,57,129	✓
	Kangra	67,757	1,97,151	2,64,908	✓
	Mandi	1,40,837	2,26,485	3,67,322	
	Shimla	94,609	91,840	1,86,449	
	Sirmaur	40,217	1,68,426	2,08,643	
Maharashtra	Nasik	3,51,750	6,17,521	9,69,271	✓
	Pune	3,77,261	5,18,855	8,96,116	
	Ahmadnagar	3,30,098	8,90,271	12,20,369	✓
	Solapur	2,11,522	8,12,286	10,23,808	
	Satara	3,06,170	3,77,623	6,83,793	
Punjab	Bhatinda	28,480	37,672	66,152	✓
	Ferozepur	53,152	30,898	84,050	✓
	Mansa	18,217	17,780	35,997	
	Muktasar	20,452	24,571	45,023	
	Sangrur	13,379	17,556	30,935	
Rajasthan	Nagaur	7,88,394	13,45,498	21,33,892	
	Jodhpur	9,75,422	13,77,282	23,52,704	✓
	Jaisalmer	13,03,357	11,20,945	24,24,302	✓
	Barmer	13,70,238	22,07,523	35,77,761	
	Nagaur	7,88,394	13,45,498	21,33,892	

Source: Livestock Census of 2007 from State's Animal Husbandry Department website.

Tools and techniques used for data collection

The draft questionnaires developed and piloted in two villages of Kangra District in Himachal Pradesh, along with a sharing workshop. The questionnaires were finalised based upon the feedback received through field testing and a sharing workshop.

The data was collected both in qualitative and

quantitative forms to gather information from both primary and secondary sources.

There were two different sets of questionnaires designed for the purpose of this study: (1) for the overall village profile collection through group discussions (village schedule) and (2) HH information through direct individual interview (HH schedule). The questionnaires were both closed and open ended.

The HH questionnaires covered questions related to pasture animals, seasonal grazing, trends in animal grazing, problems related to grazing land and livestock, plight of migratory as well as nomadic pastoralists, institutions of pasture management, seasonal routes of grazing, issue of permits and access to pasture resources, government support for health and insurance, their challenges and suggestions etc., have been also covered, along with other questions.

Besides, we have tried to collect additional information through individual case studies and focus group discussions (FGDs) to understand the overall situation relating to pasture commons in the village and related issues. The FGD was conducted in almost all sample villages, irrespective of their numbers, for establishing rapport, explaining the purpose of the visit and the research, identifying village issues and collecting village level information, etc. The participation of women in meetings was limited except for in Himachal Pradesh.

Apart from the above, the study has also taken a sample mapping of the seasonal routes of grazing by using GPS readings in Himachal Pradesh on an experimental basis to understand different issues

interlinking with a given case study and geophysical and social issues on migratory/nomadic grazers. We have taken GPS points, developed GIS maps of the routes with different indicators using GIS software and **google-earth**.

Interpretation and analysis of data

Data collected from secondary sources include census information, land use data, journal articles and papers of eminent scholars, reports and records of the central as well as state governments, government statistics, books, policy documents, state specific relevant acts and rules dealing with pasture commons. Both revenue, forest and *panchayat raj* departments were reviewed and analysed, based upon which the report compilation was made. The quantitative data and statistics were processed and analysed in MS Excel.

The primary sources of data collected from the HH level and village levels are both quantitative and qualitative in nature. The village level data was collected with FGDs which had both structured and semi-structured questionnaires. The data processing and their analysis was made using MS Excel.



Seasonal route mapping of Himachal Pradesh using global positioning systems

Out of a survey of 100 graziers, Mr. Inder Singh, resident of village Polling, Multan *tehsil* of Kangra district was identified as a representative case of mapping the route and to generate other thematic issues like theft, grass productivity, etc. Google image is used to identify places in point and routes in poly line and on the basis of primary markings with respondents, we processed it to develop a geo referenced point and poly line. After developing these points and lines, we used surveyed information to attach with points to generate different thematic maps in Arc GIS software. This is one case of an individual grazier, who is practising this as means of livelihood for more than three decades.

Sharing of Draft Study Findings

As part of this study, a two days “National Consultation on Pasture Commons” was organised on 15th & 16th December 2013 at Constitution Club, New Delhi, to make it inclusive (1) to share the findings of the study among larger sections of the society generating public opinion on the issue and building alliances, and (2) to take up policy advocacy for the protection of pasture commons in the larger interest of pastoral communities at national level. In the first day, the findings of the study was shared before the participants from five sample states along-with other guests including members of pastoral

communities of the study villages, community leaders, civil society members and more importantly the active participation of women pastoralists. The feedback on the study findings was received. In the second day, the state-wise discussion was held on alliance building and advocacy strategy from local levels to the national levels. To make proper representation of gender perspective, a separate working group of women pastoralists was formed and their suggestions were shared before the house, which are included in the final recommendations. The details of recommendation emerged from each State has been included in the final recommendation of the study.

Limitations of the study

1. The limitation of time for a long-term social rapport for understanding more deep into the local social dynamics and equity is inadequate. There is further need of exploration on gender perspective.
2. Time constraints to go for a deeper understanding and effective documentation of community management institutions and initiatives.
3. Access to local revenue records and identification of encroachments on pasture lands and the village level dynamics could be insufficient for understanding the village/ community level politics on commons, although documentation is made on the story of encroachment on village commons and problems associated with them.

Profiles of States and Status of Pasture Commons



This chapter attempts to provide the profile of the country and states covered under this study in terms of land use status, status of pasture land and other commons. Since the state of Himachal Pradesh, Punjab, Gujarat, Maharashtra and Rajasthan are largely inhabited by pastoral communities, this chapter gives both primary and secondary data on the status of communities, land and commons use in these specific states. Analysis of baseline information like the demography, educational and occupational status of men and women of sample households about the study states has also been explained in this chapter.

Land use status of the country

The official land utilisation data (2010 -11) reveals that out of the total geographical area of India, 21.3 percent is under covered under forests, 3.1 percent under permanent pasture and grazing land, 5.1 percent is barren and uncultivable land, one percent falls under miscellaneous trees, crops and groves, 3.9 percent is cultivable waste land,

and 8 percent area each are under fallow and non-agricultural use. As part of the larger CPR, the total area of permanent pastures and grazing lands is 10.2 million hectares, which is 3.1 percent of the country's total geographical area.⁴⁰

Nomadic pastoralist communities in five sample states

Pastoral economy is the key contributor to the larger economy of rural India, which is particularly critical and significant for pastoral communities. There are four recognised grazing systems found in India - nomadic, semi nomadic, transhumance and partial nomadic. There are more than 27 nomadic-pasture dependent communities in India and most of them are found in the western and the northern states. Among the states, the highest number of such communities are found in Rajasthan (eight in number) while in Gujarat,⁴¹ seven such communities are found. *The following table gives details of these different communities living in the states mentioned below.*

⁴⁰ Source: Dept of Economics & Statistics, Ministry of Agriculture, Government of India, New Delhi (2011).

⁴¹ http://en.wikipedia.org/wiki/Nomads_of_India

State	Sub region	Name of the communities	Ethnic/social identity	Types of livestock breeding
Rajasthan	Tonk, Jaipur, Boondi, Kota, Alwar	Ahir	Hindu/Yadav	Cattle
		Gaddi Muslim	Muslim	Cattle
	Southern Rajasthan	Gayari	Hindu	Sheep
	Churu, Jodhpur, Sikar, Jhunjhunu, Jaipur	Ghosi	Muslim/Rajput Rathor	Cattle , buffalo
	Hanumangarh, Jaipur	Rewari & Raika	Rajput	Cattle, goat, camel
		Gujjar	OBC, Hindu	Cattle , Buffalo
	Ganganagar, Bikaner, Jaisalmer, Barmer	Rath	Rajput/Muslim	Cattle (Rathi type of breed)
	Marwar, Jaisalmer	Sindhi Muslim/Sipahi	Rajput/Muslim	Cattle, sheep
Gujarat	Kachchh	Ahir	Hindu/Yadav	Cattle
	Gir Forest	Charan	Muslim	Cattle
		Rabari & Raika	Rajput	Cattle, goat
	Rajkot	Galvi	Muslim/OBC	Cattle
	Gir, Alech, Barda Forest	Bharwad	ST	Sheep, goat,cattle
	Gir Forest Region	Charan	Hindu	Cattle
		Gujjar	Hindu/Muslim/Sikh	Buffalo, cattle
	Kachchh	Jath	Muslim	Cattle, camel
	Saurashtra	Mer	Hindu	Cattle, Camel (occasionally)
		Rewari or Rabaris & Raika		Cattle, goat, camel
Maharashtra		Galvi	Muslim/OBC	Cattle
	Western Maharashtra, Ahmadnagar, Aurangabad, Nashik	Dhanger	Hindu	Sheep
		Golla	Hindu	Cattle
Himachal Pradesh	Dharamkot, Kangra, Chamba	Gaddi	Hindu	Sheep, goat
		Gujjar	Hindu/Muslim/Sikh	Buffalo, cattle
	Kinnaur	Kinnaura/Kannait	Rajput, Khasias, Brus	Sheep, goat
Punjab		Ghosi	Rajput Rathor/Muslim	Cattle
		Gujjar	Hindu (OBC)	
		Rath	Rajput/Muslim	Cattle (Rathi type of breed)

Land use classification and status of pasture commons in India

The total geographical area of the country is 3, 28,726 thousand hectares and the reported areas is 3, 05,903 thousand hectares.⁴² The land under permanent pasture and grazing land is a classified legal category of land use that belongs

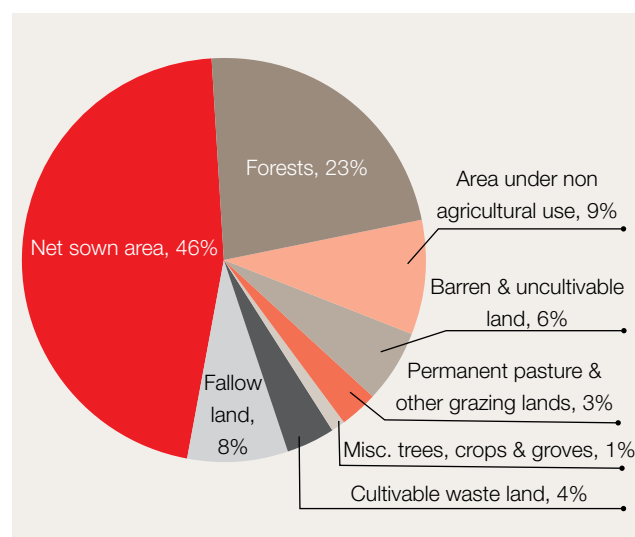
to pasture commons. The area constitutes 10,301 thousand hectares which is 3.37 percent of the total reported areas. Among other categories, although forest lands have been legally or formally used as pastures or grazing commons for the livestock of the local communities, they have indeed very restrictive or limited conditional access by some specific communities or enumerated families.

Table 4: Land use classification of India -2010-11 (area in 000, ha.)

Category of land	Area (in 000, ha.)	% of reported geographical area
Total geographical area	3,28,726	
Total reported area	3,05,903	93.06
Forests	70,006	22.89
Area under non-agriculture use	26,513	8.67
Barren and uncultivable land	17,051	5.57
Permanent pastures and other grazing lands	10,301	3.37
Land under misc. trees, crops & groves	3,267	1.07
Cultivable wasteland	12,657	4.14
Fallow land	24,589	8.04
Net sown area	1,41,579	46.28

Source: Dept of Economics & Statistics, Ministry of Agriculture, Government of India, New Delhi (2011).

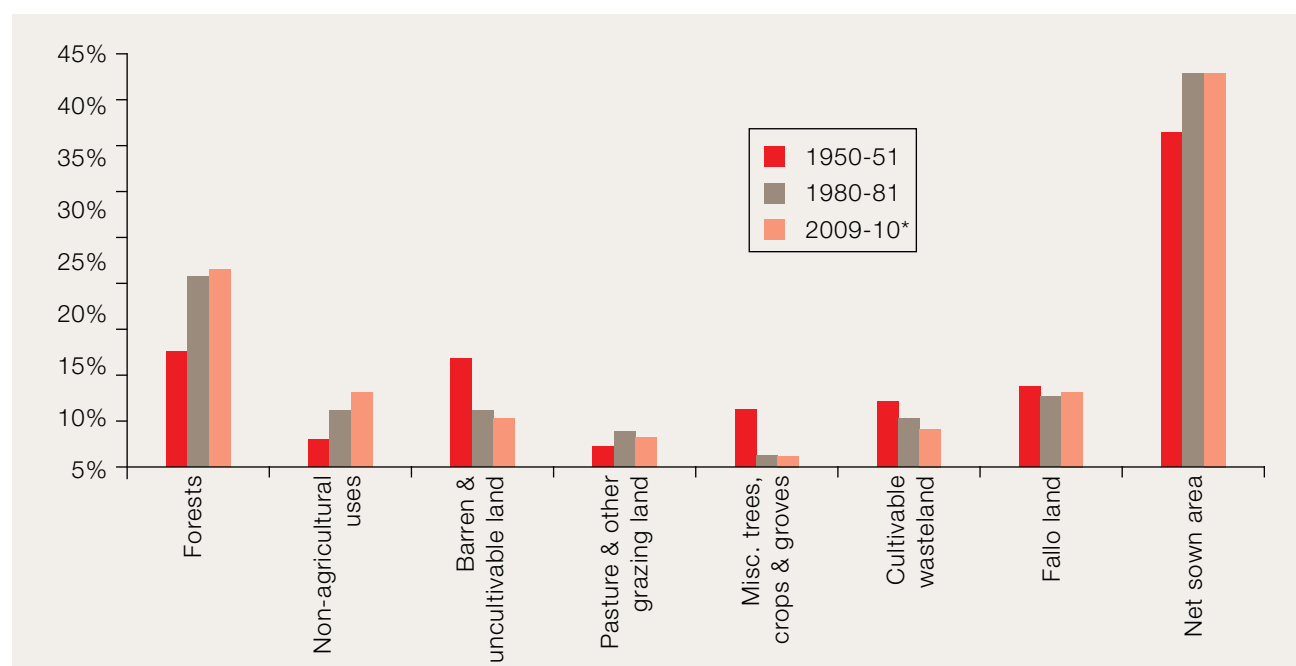
Figure 1: Land use classification of India (area in 000, ha.)



The trend (Figure 2) shows the permanent pasture and other grazing land had increased from 1951 to 1981 but between 1981 and 2010, the area of such land decreased. There has been an increase in the forest area, area under non-agriculture use and the area under agriculture i.e., the net sown area. Increase in the area of cultivation, area of non-agriculture use and increase in forest areas put under reservation seem to have been responsible for the reduced area of village commons and grazing lands in India. Between 1981 and 2010, the area of pasture land has reduced, although it had increased in a very significant manner between the years 1951 to 1981. Figure 2 clearly indicates the trends of change in land utilisation pattern in India.

⁴² Land utilisation statistics, Dept of Economics & Statistics, Ministry of Agriculture, Government of India (2011).

Figure 2: Comparison of land utilisation share in India at different periods



Source: Dept of Economics & Statistics, Ministry of Agriculture, Gol (2011).

Status of pasture commons in Gujarat

The total geographical area of the state is 19,602 thousand hectares, out of which the reported area is 19,069 thousand hectares. Out of the total reported area, 54 percent is used for agriculture and only 4.46 percent is classified as permanent pasture and other grazing land, which is much lower

than the barren and uncultivable land (13.38%) and cultural wasteland (10.28%). The area under forest coverage is only an insignificant 9.6 percent, which is of no consequence because permanent pasture and forests are supposed to play a very significant part of pasture commons. Gujarat, thus, indicates very poor classification of pasture commons, although other types of lands are sufficiently available as per the land use statistics.⁴³

Table 5: Land use classification of Gujarat

Land use types 2010-11	Area in 000' ha.	% of total geographical area
Geographical area	19,602	
Reported area	19,069	97.28
Forests	1,834	9.62
Area under non-agriculture use	1,171	6.14
Barren & uncultivable land	2,552	13.38
Permanent pasture & other grazing lands	851	4.46
Land under misc. trees, crops & groves, etc.	4	0.02
Cultivable wasteland	1,960	10.28
Fallow land	395	2.07
Net area sown	10,302	54.02

Source: Dept of Economics & Statistics, Ministry of Agriculture, GOI (2011).

⁴³ Dept. of Economics & Statistics, Ministry of Agriculture, GOI (2011), <http://eands.dacnet.nic.in/LUS-2010-11S1.pdf>

Figure 3: Land utilisation classification in Gujarat

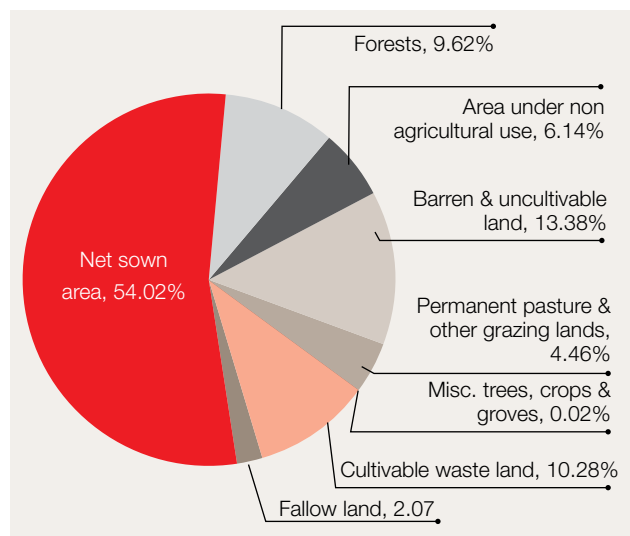


Figure 4: Status of education in sample villages in Gujarat

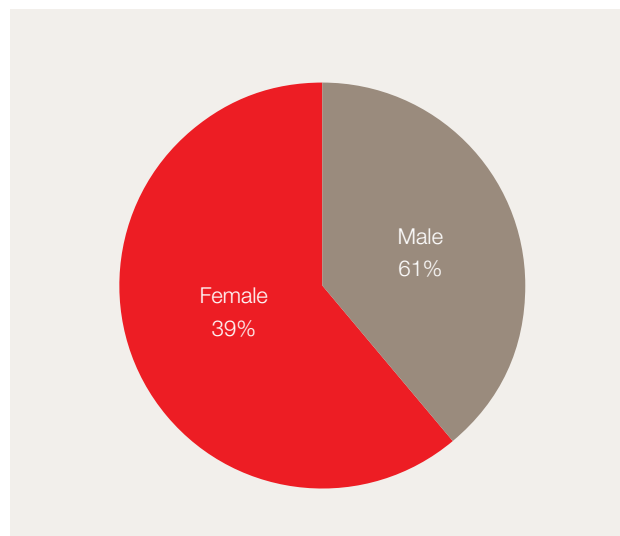


Table 6: Status of education in sample villages in Gujarat

Educational status	No. of persons		
	Male	Female	Total
Illiterate	99	118	217
1 st to 5 th class	106	71	177
6 th to 10 th class	76	51	127
11 th class and above	18	5	23
Total population	299	245	544
Total literates & %age of total literates to total population	200 (66.8%)	127 (51.8%)	327 (60.1%)
%age of total literate population	61.16	38.84	100

Source: Primary Survey, 2013

Profile of sample villages in Gujarat

The total number of HHs in the 10 sample villages of Gujarat is 8,470 with a total population of 52,963. Of the total HHs, pastoral households are 6,025 and non-pastoral households are 2,445. The entire sample pastoral HHs, at present, depends upon local grazing, although traditionally some of them were nomadic in their lifestyle. Pastoral communities such as Rabaris, Kolis, Suthars, Dharbars, Bhils, Vagharis, Thakors, Malis, Luhars, Marwads and others are found in these sample villages.

The total population of the ten study villages of Banaskantha and Kutch districts is 544,

comprising of 245 females and 299 males, with a total number of 100 HHs.

Table 7: Gender wise occupational distribution in sample villages of Gujarat

Occupation source	Primary occupation		
	Male	Female	Total
Animal husbandry	181	173	354
Agriculture	25	7	32
Housewife	0	18	18
Service	19	2	21

Source: Primary Survey, 2013

The study tried to understand the socio-educational parameters of the pastoralist communities in the sample villages. The overall literacy rate of the villages is 60.1 percent. Female literacy is at 51.8 percent while male literacy is at 60.1 percent. The ratio of male-female literacy in the total is 61 percent for males and 39 percent for females in figure 4, which indicates a considerably lower level of female literacy.

There has been a general underestimation of women's contribution to pastoral economy. Information in Table 7 shows that in Gujarat, both men and women had equal participation in animal husbandry. Out of a total of 354 persons engaged in animal husbandry, 173 are women whereas in agriculture, out of 32 persons, seven are women farmers. The table below also indicates the participation of women and men in livestock economy as the primary source of income in the sample HHs where agriculture takes a minimal role.

Status of pasture commons in Himachal Pradesh

The total geographical area of Himachal Pradesh is 55, 67,000 hectares. From the total reported geographical area of land, 1,503 thousand hectares i.e., 33.03 percent of the area is under permanent pasture. The land use data of the state shows (in Figure 5) a very good indication of legally

available area of pasture commons in comparison to other types of land use. This has better correlation with the state's pastoral economy and occupation of the states. It is much higher than the net sown areas and forest areas. The forest areas is 24.24 percent, parts of which have also been used for grazing with grazing permits also added to the actual/effective areas of grazing pasture commons beyond legal classification. The more interesting and the exception in Himachal Pradesh is that the legally classified pasture land is three times higher than the net sown area, which means the pasture land is three times more than the agriculture land. This clearly indicates that pastoral economy is the dominant practice in the state.

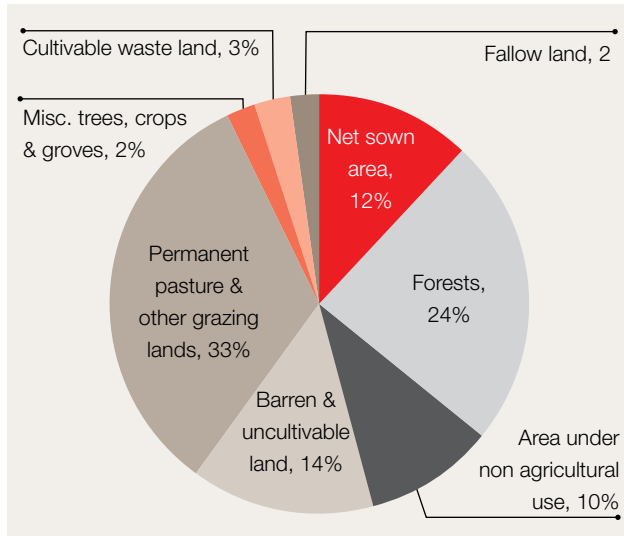
The total land under grasslands in Himachal Pradesh was 9,17,702.73 ha., which contributes to 16.53 percent of the total geographical area of the state, whereas, it was reported as 33.34 percent by the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India for the year 2003-04. The study of Indian Grassland and Fodder Research Institute (IGFRI) reveals that the portion of area under grasslands was found the maximum in Kinnaur (27.51%), followed by Bilaspur (26.14%) and Chamba (19.51%) districts and it was the lowest in Una (7.23%) and Hamirpur (8.85%) district. Kinnaur and Lahaul-Spiti districts jointly contributed to

Table 8: Land use classification of Himachal Pradesh

Land use types 2010-11	Area in 000' ha.	% of total reported geographical area
Geographical area	5,567	
Reported area	4,550	81.73
Forests	1,103	24.24
Area under non-agriculture use	468	10.29
Barren & uncultivable land	654	14.37
Permanent pasture & other grazing lands	1,503	33.03
Land under misc. trees, crops & groves, etc.	68	1.49
Cultivable waste land	135	2.97
Fallow land	79	1.74
Net area sown	539	11.85

Source: Dept. of Economics and Statistics, Ministry of Agriculture, Government of India (2011).

Figure 5: Land utilisation classifications in Himachal Pradesh



about 42.30 percent of the total grasslands (mainly temperate grasslands) but due to its location on steep slopes and inaccessible terrain, much of the pastures were still unutilised.

Status of households having permits

In Himachal Pradesh, the system of allowing grazing permits is legally prevalent, in comparison to all other states, for migratory and nomadic pastoralists for their livestock. However, granting of permits has been reduced as have the number of issue of permits. Table no. 10 shows that in 10 villages out of 151 nomadic/migratory graziers, only 112 have the permit and the rest 39 persons go for grazing without permits. At present, the average number of permits available per village is 11. The available permits and the number of migratory pastoralist HHs 40 years ago were 227 and 292 HHs respectively.⁴⁴ A more detailed analysis on this has been given in subsequent chapters.

Status of pasture land in the village

The total area of land in the 10 sample villages of Himachal Pradesh is 16,395 acres, out of which the total grazing land is 12,125 acres.⁴⁵ Thus, the

Table 9: District wise area under grassland/grazing land in Himachal Pradesh

Name of district	Geographical area (ha)	Grasslands area (ha)	% of grass lands to total geographical area
Bilaspur	1,15,558.1	30,210.26	26.14
Chamba	6,48,898.3	1,26,625.3	19.51
Hamirpur	1,10,436.1	9,775.2	8.85
Kangra	5,63,832.3	69,781.7	12.38
Kinnaur	6,23,976.5	1,71,682.6	27.51
Kullu	5,51,195.3	66,709.1	12.1
Lahaul-Spiti	14,02,685.0	2,16,443.2	15.43
Mandi	3,98,322.9	44,900.8	11.27
Shimla	5,08,215.0	93,092.4	18.32
Sirmaur	2,87,621.6	42,858.0	14.9
Solan	1,85,800.1	34,459.4	18.55
Una	1,54,349.3	11,164.5	7.23
State Total	55,50,890.6	9,17,702.7	16.53

Source: Grasslands of Himachal Pradesh (2006), J. P. Singh, M. M. Roy, S. Radotra, Indian Grassland and Fodder Research Institute, Jhansi.

⁴⁴ The information relating to this was collected through groups and group discussions in the village and by verifying the permits issued in the name of individuals.

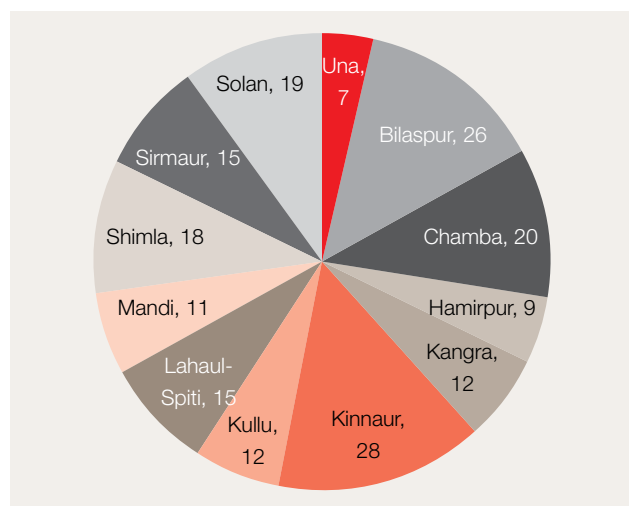
⁴⁵ The information has been collected through primary surveys in 2013 from the villages through group discussions 2013.

Table 10: Status of grazing permits & migratory pastoralist households in Himachal Pradesh

District	Study village	Status of permits of pastoral households (no. of HHs)				Total no. of nomadic/migratory pastoral HHs 40 years ago
		Total pastoral HHs	Permit at present	Permit 40 years ago	Without permit at present	
Chamba	Lahal	80	18	30	7	50
	Barahmni	24	10	20	0	20
	Garoh	35	12	15	3	20
	Nayagran	17	7	20	3	25
Kangra	Karnathu	100	18	45	7	45
	Sarajada	30	15	12	0	12
	Bahlnawal	30	16	20	0	20
	Gunehad	180	4	24	3	24
	Polling	150	5	5	7	40
	Barabhantal	132	7	36	9	36
Total		778	112	227	39	292

Source: Primary Survey, 2013

Figure 6: District-wise percentage of grasslands to total geographical area of HP (in ha.)



average total land for a village is 1639.5 acres while grazing land is 1,212.5 acres. The overall percentage of the total grazing area of the sample villages is 73.9 percent.

Profile of sample villages in Himachal Pradesh

The total number of HHs in the sample villages of two districts of Himachal Pradesh is 833, comprising of 6,487 populations, out of 768 pastoralists and 65 non-pastoralists HHs. Of the total pastoralists' households, 151 are nomadic/migratory and 617 are local pastoralists, who graze their livestock in local and village pastures.

The total sample HHs of the two districts of Himachal Pradesh is 100, with a total population of 562 consisting of 266 females and 296 males. Of the total population, the literacy rate of the sample households is 72 percent. The literacy rate of the total population of the sample HHs of females is 30.6 percent and males is 41.5 percent. The percent of female literacy, out of the total female population is 42.5 percent and 57.5 percent males out of total male literates.

Table 11: Education status of households in HP

Category	Number of persons		
	Male	Female	Total
Illiterate	63	94	157
1st to 5 th class	56	49	105
6 th to 10 th class	90	61	151
11 th class and above	87	62	149
Total population	296	266	562
Total literate population and % age of literates to total population	233 (41.5%)	172 (30.6%)	405 (72.1%)
%age of total literate population	57.53	42.47	100

Source: Primary Survey, 2013

The contribution of women in animal husbandry as a primary occupation is 22 percent, quite considerable, in the sample HHs indicated in

Table 12. Besides, it also indicates women's primary contribution to agriculture is 86 percent an extremely significant in the sample HHs.

Status of pasture commons in Maharashtra

In Maharashtra, the status of pasture land is very low i.e., 4.04 percent of the total geographical area of 30,771 thousand hectares as shown in Figure 7 below. It also indicates that in the state, agricultural land (net sown area) is the highest at 56.59 percent, followed by forests at 16.96 percent. However, the area under non-agricultural use is higher than the permanent pasture and grazing land. This seems to be an area of concern with regard to pastoral economy and pasture dependent communities of the State.

Table 12: Gender-wise distribution of occupation in the sample villages

Occupational Sources	Primary occupation			Secondary occupation		
	Male	Female	Total	Male	Female	Total
Animal husbandry	99	21	120	3	4	7
Agriculture	39	86	125	7	18	25
Labour	5	0	5	0	0	0
Housewife*	0	57	57	0	21	21
Service	53	7	60	0	0	0

Source: Primary Survey, 2013

*Do not move outside their home for the purpose of the above mentioned occupations

Table 13: Land use classification in Maharashtra

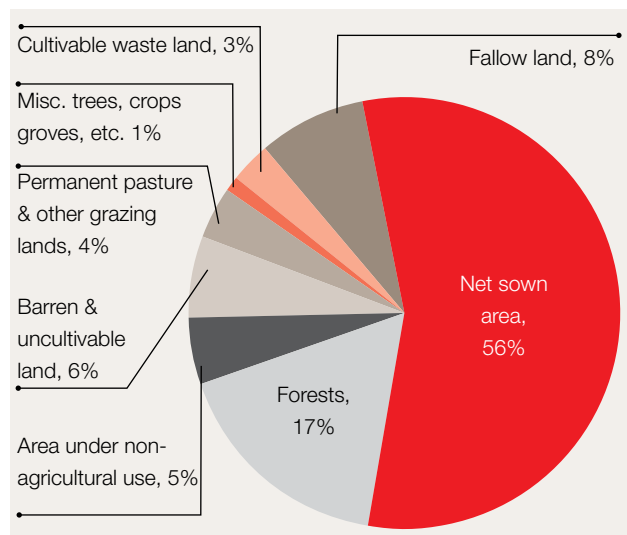
Land use types 2010-11	Area in '000 hectares	% of total geographical area
Geographical area	30,771	
Reported area	30,758	99.96
Forests	5,216	16.96
Area under non-agriculture use	1,449	4.71
Barren & uncultivable land	1,731	5.63
Pasture & other grazing lands	1,242	4.04
Land under misc. trees, crops & groves, etc.	250	0.81
Cultivable wasteland	919	2.99
Fallow land	2,545	8.27
Net area sown	17,406	56.59

Source: Dept. of Economics and Statistics, Ministry of Agriculture, Government of India (2011).

Profile of sample villages in Maharashtra

The total population of the sample village is 476, out of which 213 are female and 263 are

Figure 7: Land use classification in Maharashtra



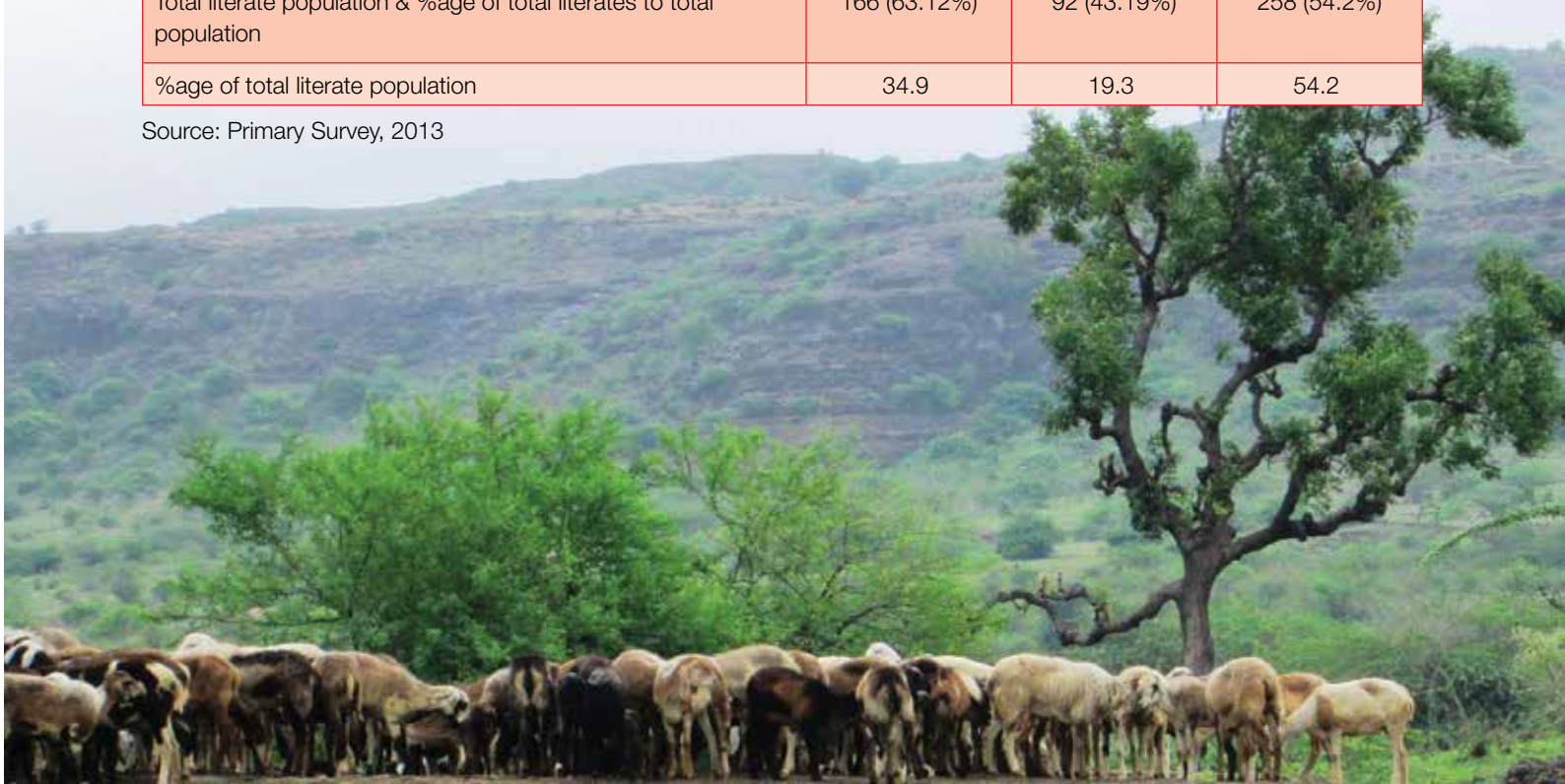
male out of the total 100 HHs, 50 each are from Nashik and Ahmadnagar districts. The total HHs in the ten sample villages of Maharashtra is 3,096 comprising of 1,165 pastoralists and 1,931 non pastoral HHs with a total population of 16,373. Of the pastoralist HHs, 560 belong to nomadic pastoral tribes while 605 are local pastoralists. The pastoral communities living in these sample villages are Hindus – Hind-Thakurs, Gukhs, Dhangars, Thakurs, Bajaras, Marathas and Bhils. Dhangars are found to be traditionally nomadic tribes who are recognised by the Government of India as nomadic scheduled tribes in Maharashtra.

Table 14 shows that the total literacy rate of the study village is 54 percent, which is much lower than the state average of 82.9 percent. Of the total literacy rate, females represent 36 percent while males are 64 percent. The percentage of literacy to the total number of literates of their respective populations is 63.12 percent for males and 43.19 percent for females.

Table 14: Educational status of sample villages in Maharashtra

Educational status	No. of persons		
	Male	Female	Total
Illiterate	97	121	218
1 st to 5 th class	69	45	114
6 th to 10 th class	72	38	110
11 th and above	25	9	34
Total population	263	213	476
Total literate population & %age of total literates to total population	166 (63.12%)	92 (43.19%)	258 (54.2%)
%age of total literate population	34.9	19.3	54.2

Source: Primary Survey, 2013



Gender-wise distribution of the source of occupation in Table 15 clearly indicates that the contribution of women in animal husbandry is significant, in contradiction to the usual perception. This also indicates that although pastoralist women contribute significantly to the pastoral economy, they are not taken into account by the so-called mainstream economists and demographers. Women, besides doing their

household work, which has not been under assessment and recognised in the mainstream economic and occupational category, are also contributing to livestock breeding and comparatively, they are contributing much higher to the economy. The table also indicates that agriculture is taken as a very minor occupation by the pastoralist HHs, and it is not even the secondary occupation.

Table 15: Gender-wise occupational status of sample villages in Maharashtra

Occupational category	Primary occupation			Secondary occupation	
	Male	Female	Total	Male	Female
Animal husbandry	185	124	309	0	4
Agriculture	7	4	11	4	0
Labour	2	1	3		
Housewife	0	45	45		

Source: Primary Survey, 2013

Status of pasture commons in Punjab

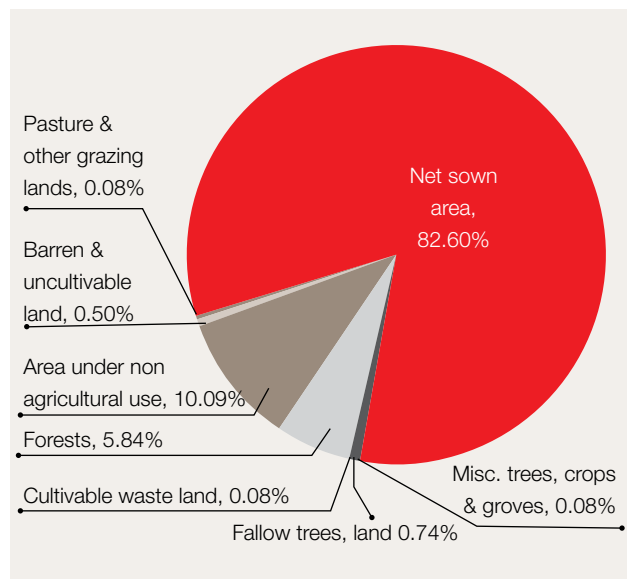
As per the land use classification statistics of the State of Punjab, Figure 8 shows that out of the total geographical area, 82.6 percent is used for cultivation as the net sown areas, which is the highest among all the states of India as well as among the sample states in the present study. Out of this, only the area of 4,000 hectares i.e., 0.08 percent of the total geographical area is classified as permanent pasture land. This is an extreme situation in any state which has completely ignored the use of CPR by the most marginal of the communities by corporatising the system of land use and agriculture. The forest area is only 5.84 percent while 10.09 percent is under non-agriculture use, where CPR for the poor are practically abandoned. The vesting of rights and its utilisation are with the *panchayat* but the law itself seems to be a mockery by the state because the common pasture land is nearly non-existent for which Panchayat can play a role. From the total geographical area only 0.08 percent of the land is under permanent pasture.

Table 16: Land use classification in Punjab

Land use types 2010-11	Punjab	% of total geographical area
Geographical area	5,036	
Reported area	5,033	99.94
Forests	294	5.84
Area under non-agriculture use	508	10.09
Barren & uncultivable land	25	0.50
Pasture & other grazing lands	4	0.08
Land under misc. trees, crops & groves, etc.	4	0.08
Cultivable waste land	4	0.08
Fallow land	37	0.74
Net area sown	4,158	82.61

Source: Dept. of Economics and Statistics, Ministry of Agriculture, Government of India (2011).

Figure 8: Land use classification in Punjab



Profile of sample villages in Punjab

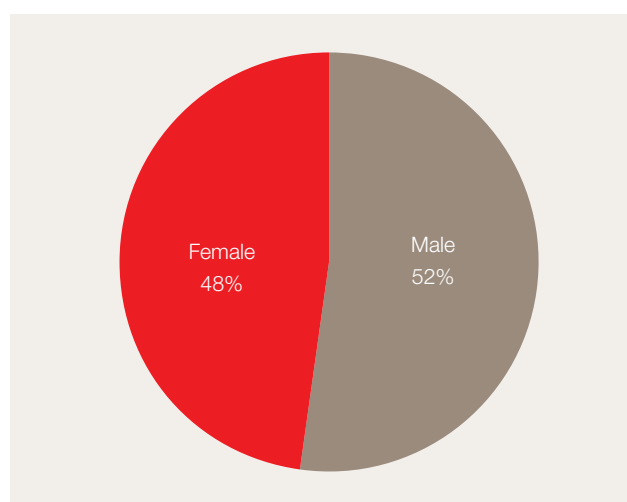
The total number of HHs in the sample villages is 8,030 for a population of 42,600 with the total number of pastoral households at 6,770 and non-pastoral HHs at 1,265. Of the total pastoralist HHs only 11 are nomadic/migratory graziers while the balance 6,659 HHs consists of local graziers. Only 11 HHs have grazing permits from the forest departments. The total area of the sample villages is 13,600 acres, out of which 2,030 acres is grazing land, which is 14 percent of the total land area. This is not necessarily the legally classified pasture and grazing land but is in effect used for grazing. The communities involved in livestock breeding are Jat Sikhs, Mahjabi Sikh, Ramdasi Sikhs, Parjapats, Mehra Sikhs, Muslims and others.

Table 17: Education status of sample villages in Punjab

Education category	No. of persons		
	Male	Female	Total
Illiterate	185	133	318
1 st to 5 th class	26	26	52
6 th to 10 th class	38	34	72
11 th class and above	38	34	72
Total population	287	227	514
Total literates & %age of total literates to total population	102 (52%)	94 (48%)	196 (100%)
%age of total literate population	19.8	18.3	38.1

Source: Primary Survey, 2013

Figure 9: Status of literacy of sample households in Punjab



The overall literacy rate of the sample village is 38.1 percent. Out of the total literates, 48 percent are females while 52 percent are males. However, the average literacy is very low among pastoral HHs.

Animal husbandry is a dominant occupation of males in the sample villages of Punjab as shown in Table 18. As indicated, the role of women appears to be very limited, although their domestic engagement has not been accounted for. Agriculture seems to be almost non-existent for pastoral family HHs in Punjab. However, the number of people engaged in labour can be examined further to form a link between lack of availability of pasture commons and the detachment of the people from the occupation of

Table 18: Gender-wise status of occupation in the sample villages of Punjab

Occupation category	Primary occupation			Secondary occupation		
	Male	Female	Total	Male	Female	Total
Animal husbandry	110	5	115	0	0	0
Agriculture	3	0	3	3	0	3
Labour	91	29	120	2	11	13
Housewife	0	124	124	0	2	2

Source: Primary Survey, 2013

open grazing. This is largely because of the fact that landless families get involved in labour when they do not get any independent opportunities for livelihood for their survival. So with no availability of village pasture commons, along with promotion of corporate farming seems to be the common problem in Punjab, particularly for those landless and disposed marginalised communities.

Status of pasture commons in Rajasthan

The State of Rajasthan has only 4.94 percent of the total geographical area as legally categorised permanent pasture and grazing lands, although, the state's contribution to the national GDP from livestock economy is significantly high at eight

percent. Besides, the state is taking several initiatives and implementing a number of schemes for the development of pasture lands and grasslands. The state has also drafted a common land policy for the effective governance of village common land in the state. All these initiatives are based upon the concern (as shown in Table 19) that a very low percentage of area is classified as commons. The table indicates that the net sown area (used as agriculture area) in the state is 53.54 percent while 12.35 percent of the area is cultivable waste land (eligible for cultivation). It means that the land use classification tending more towards cultivation while putting very low areas of pasture land, as per the requirements of the State depending significantly on pasture economy. This is the critical area of concern as reflected in Figure 10.

Table 19: Land use classification in Rajasthan

Land use types 2010-11	Area in 000' hectares	%age to total reported geographical area
Geographical area	34,224	
Reported area	34,270	
Forests	2,743	8.00
Area under non-agriculture use	1,889	5.51
Barren & uncultivable land	2,379	6.94
Permanent pasture & other grazing lands	1694	4.94
Land under misc. trees, crops & groves etc.	21	0.06
Cultivable wasteland	4,233	12.35
Fallow land	2,962	8.64
Net area sown	18,349	53.54

Source: State Wise Land Use Classification (2011), Dept of Economics & Statistics, Ministry of Agriculture, Government of India.

Figure 10: Land use classification in Rajasthan

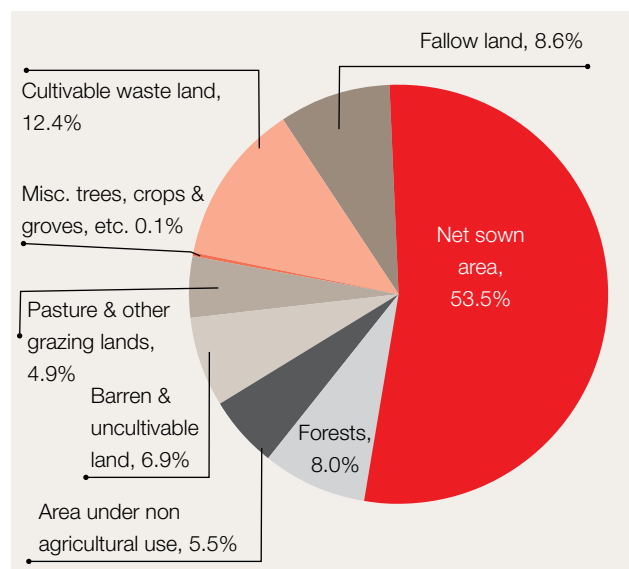
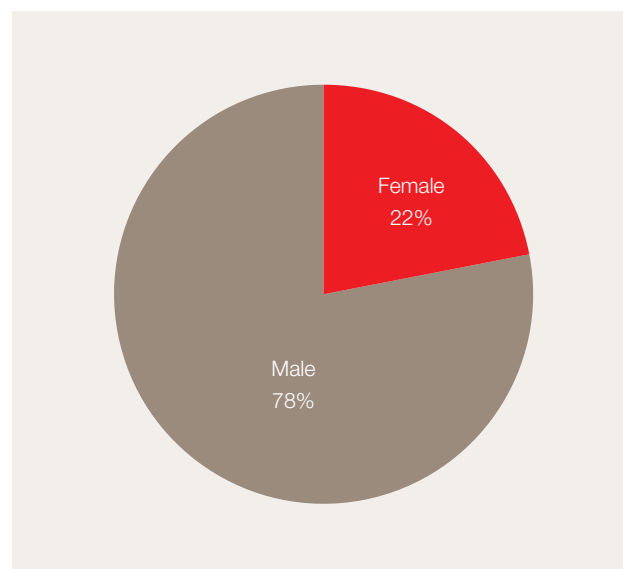


Figure 11: Literacy rate of sample households in Rajasthan



Profile of sample villages in Rajasthan

The total number of sample HHs of Rajasthan is 2,283 for a population of 11,250. While grazing of livestock in local areas is more predominant, they are occasionally taken outside to the nearby states of Haryana and Punjab during the post harvesting of crops. During calamities and droughts, the livestock is taken for migratory grazing. Traditional nomadic pastoralists like Raikas, Rabaris and Bhils take their livestock for migratory grazing.

The communities practising pastoral occupation, both traditional and non-traditional, in the sample villages are Megwals, Rajputs, Muslims, Bhils, Kumars, Bishnois, Mallis, Suthars, Rebaris/Raikas, Purohits, Naiks, Jogis, Dalits, Oddas, Nais, etc.

The education status of the sample village in Rajasthan as shown in Table 20 indicates that the overall literacy rate is 47.8 percent. Out of the total number of literates, males constitute 78 percent while at 22 percent; a very low literacy among women is indicated. Out of the total female

Table 20: Education status of sample villages in Rajasthan

Educational category	No. of persons		
	Male	Female	Total
Illiterate	144	121	265
1 st to 5 th class	92	35	127
6 th to 10 th class	81	18	99
11 th class and above	16	1	17
Total population	333	175	508
Total literates & %age of total literates to total population)	189 (78%)	54 (22%)	243 (100%)
%age of total literate population	37.2	10.6	47.8

Source: Primary Survey, 2013



Table 21: Gender-wise distribution of occupation in sample villages of Rajasthan

Occupation Category	Primary Occupation			Secondary Occupation		
	Male	Female	Total	Male	Female	Total
Animal husbandry	146	28	174	106	16	122
Agriculture	148	30	178	108	16	124
Labour	5	0	5	61	12	73
Housewife	0	100	100	0	12	12

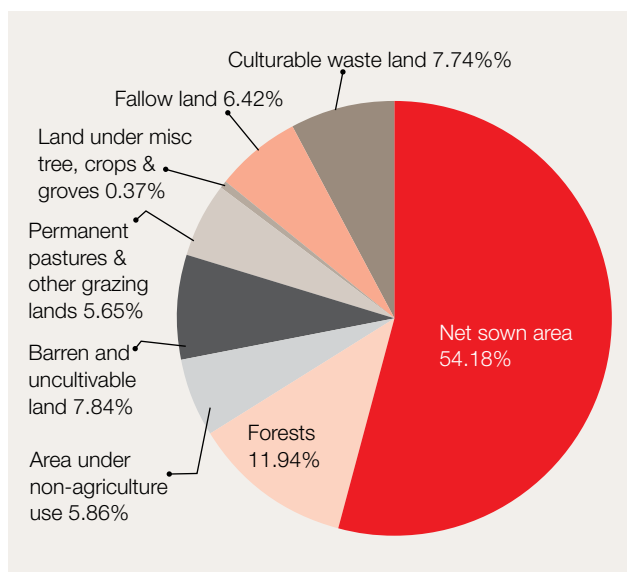
Source: Primary Survey, 2013

population, only 30.86 percent are literate while out of the total male population, 56.76 percent are literate.

Unlike in other states, in the sample villages of Rajasthan, the participation of women in animal husbandry is comparatively low as indicated in Table 21. However, they seem to contribute substantially in the domestic care of animals at home though this has not been calculated as part of pastoral occupation. The table also indicates that the contribution of animal husbandry and agriculture to the economy is almost equal. Besides, both animal husbandry and agriculture are taken as primary and secondary occupations by the majority of the HHs.

The overall findings of land use pattern in all the five states covered indicate that the availability of pasture land is the highest in Himachal Pradesh

Figure 11 A: Consolidated land use classification of five sample states



Source: Dept of Economics & Statistics, Ministry of Agriculture, Government of India, New Delhi (2011).

and the lowest in Punjab. The topographic feature of the terrain may be a factor for this difference but more than that, government policies and legislations on land use contribute to a large extent. In the case of Punjab, the importance given to agriculture on a massive scale has led to this situation despite its potential for livestock economy. Despite this emphasis on agriculture, pastoral communities continue to move from place to place in search of grazing land to feed their animals. Commons land has been reduced over the years due to various factors like diversion of commons for agriculture and other so-called development projects, encroachments by the vested interests of influential people in different villages. Although there have not been many changes in the pasture commons in Maharashtra as per study findings, the numbers in the pasture community is less as compared to other covered states. As regards the socio economic status of the pasture community, including that of women and men, the findings have not shown any progressive change. They remain marginalised with a low literacy rate. Social problems of the community which have been analysed based on the primary surveys will be highlighted in subsequent chapters. However, one fact that comes out clearly is that the lack of a land use policy and the state apathy towards regulating and managing commons affects the dependent communities the most.

The size of total geographical areas of five sample states is 95200 thousand hectares and the reported area is 93680 thousand hectares. Figure 11 A indicates permanent pasture and other grazing land is only 5.65 percent. The barren and uncultivable land is 7.84 percent which could be used as grazing land.

Study Findings



Status of pasture commons: examining & revealing facts from the ground

The village level information of five states is examined with specific focus on the status of pasture land, pastoral communities, nomadic and local pastoralists, the status and trends of livestock, income generated by HHs from livestock, their access to grazing, management of village commons, nomadic or migratory pastoralists and their issues related to grazing permits. Analysis and interpretation are also made of factors responsible for changing livestock and reduced areas of commons, impact of changing livestock on pastoral communities, availability of grasslands, women's contribution to pastoral

occupation, aspects of animal healthcare, insurance and government support. The report has also tried to document the plight of the nomadic pastoralists in their access to grazing areas including the personal problems they face in their routes of mobility.

Ground reality in Gujarat

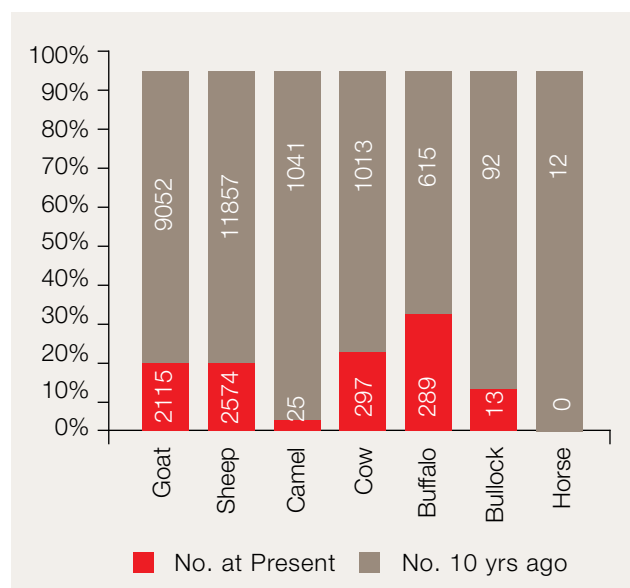
For sample HHs of Gujarat, for the last ten years, the status of livestock has come down seriously, irrespective of their types except for a new arrival. Sheep and goats are considered to be the main grazing dependent animals, the number of which has seriously declined by 78.29 percent and 76.62 percent respectively, since the last ten years as indicated in Table 22.

Table 22: Livestock status & trend of pastoral households in sample villages of Gujarat

Types of Livestock	Number at Present	Number 10 years before	Status & trend in livestock	%age trend of change in livestock
Goat	2,116	9,052	-6,936	-76.62
Sheep	2,574	11,857	-9,283	-78.29
Camel	25	1,041	-1,016	-97.60
Cow	297	1,013	-716	-70.68
Buffalo	289	615	-326	-53.01
Bullock	13	92	-79	-85.87
Horse	0	12	+12	+100.00

Source: Primary Survey, 2013

Figure 12: Livestock status and trends in sample villages of Gujarat



Source: Primary Survey, 2013

Numerically, sheep and goats are the main grazing livestock. Figure 12 indicates changing trends of livestock in sample HHs in 10 villages of Gujarat, which shows that there has been a significant decline in the rate of change in livestock population like sheep, goats and camel, which is a matter of serious concern.

The drastic decline in the number of livestock, especially goats and sheep since the last 10 years is attributed to lands being diverted for agriculture to different companies causing shortage of grazing land. Along with this, insufficient availability of grass and fodder for livestock in the existing available grazing land as well as private encroachment on government land has caused a decrease in the number of livestock. Trends and status of livestock

in Raviya village of Banaskantha is reflected in Table 23. A detailed case study of village Raviya given in the subsequent section clearly narrates changing trends in livestock population and area of pasture commons.

Income base of pastoral households

The total annual income generated from livestock such as goats, sheep, cows and buffaloes per family is Rs. 88,580. In the sample villages, the highest income derived from buffaloes by pastoral families is Rs. 25,340, the income from sheep is Rs. 25,100 per annum, followed by the income from goats at Rs. 19,400. The average livestock income of sample HHs in Banaskantha is Rs. 1,03,320 and Rs. 73,840 in Kachchh district. The annual income of sample HHs from goat and sheep are the highest, as indicated in Table 24.

The livestock-wise percentage of income of sample HHs shows that income from buffaloes is the highest at 29 percent, followed by income from sheep at 28 percent, from goats at 22 percent and from cows at 21 percent, as indicated in Figure 13. Significant increase in the overall income level of pastoral HHs would help to improve their prosperity. If the resources upon which pastoral economy is essentially dependent are sincerely protected and managed, it would in turn, enhance the national economy and prosperity of the country as a whole. This can only take place if access to such resource base – i.e., pasture land and village commons - is not denied to pastoral communities, the poor and the landless. Such an economy would be able to eradicate poverty and hunger in the country.

Table 23: Changing status of livestock in sample village of Raviya, Gujarat

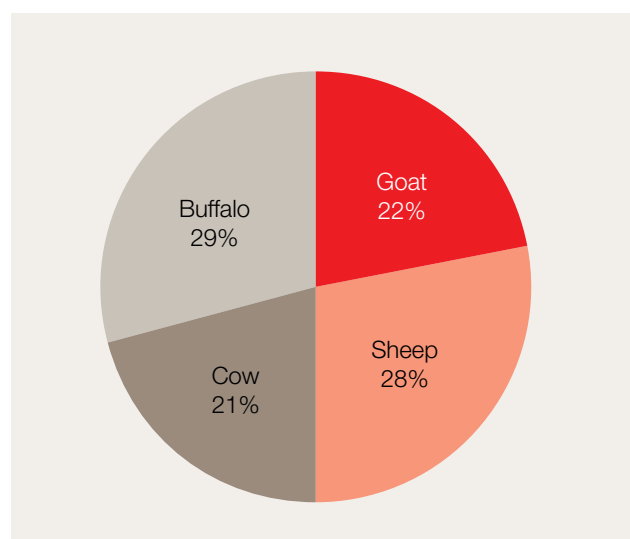
Livestock	Goat	Sheep	Buffalo
Present status	141	184	23
Number 10 years ago	650	1,135	49
Decreasing livestock	509	951	26
%age of reduced livestock in sample HHs of village Raviya	78.3	83.8	53.1

Source: Primary Survey, 2013

Table 24: Annual livestock income of sample households in Gujarat

Livestock types	Annual income from livestock (amount in rupees)					
	Gujarat	Average/HHs	Banaskantha	Average/HHs	Kachchh	Average/HHs
Goat	19,40,000	19,400	7,40,000	14,800	12,00,000	24,000
Sheep	25,10,000	25,100	15,00,000	30,000	10,10,000	20,200
Cow	18,74,000	18,740	11,80,000	23,600	6,94,000	13,880
Buffalo	25,34,000	25,340	17,46,000	34,920	7,88,000	15,760
Total	88,58,000	88,580	51,66,000	1,03,320	36,92,000	73,840

Source: Primary Survey, 2013

Figure 13: Livestock-wise percentage of annual income of sample households

The total land in the sample villages in the state is 14,500 acres while the grazing area is only 1,140⁴⁶ acres, which is only 7.86 percent of the total area. In the sample villages of the two districts, the total stall fed livestock is 105 and all are from Banaskantha.

Access to grazing and grazing permits for pastoralist households

The areas used by villagers in the sample villages are more than 19 in number of which the number of grazing areas located within Banaskantha is

nine while 10 are in Kachchh. While a few HHs graze their livestock in specific areas, a greater number of sample HHs around Banaskantha take their livestock for migratory grazing. Details of grazing areas, outside their own village, used by sample HHs in Gujarat is given in Annexure V. The ownership of the areas as per the information of the sample respondents are also indicated in which the grazing areas within Kachchh district is under the *gram panchayat* whereas in Banaskantha, eight grazing sites are under the Revenue Department while only one is managed by the *panchayat*.

Ground reality in Himachal Pradesh

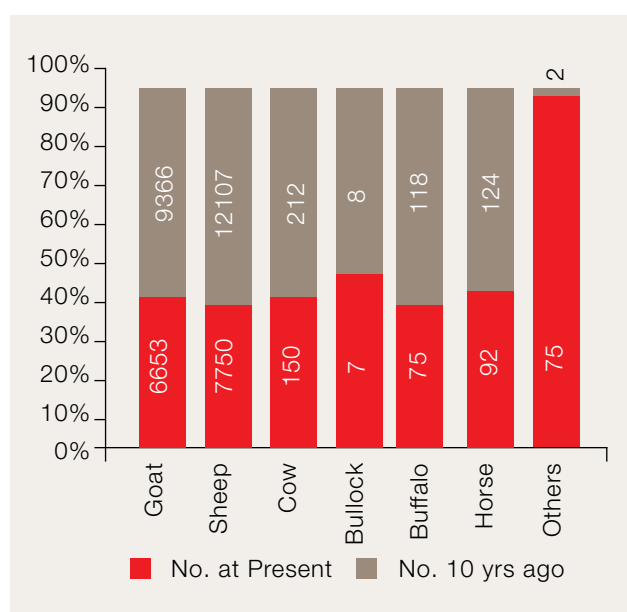
There has been overall decrease in the number of livestock in the sample villages of Himachal Pradesh, as indicated in the livestock-wise data in Table 25. During the last 10 years, the number of sheep has reduced by more than 36 percent while the number of goats has reduced by 29 percent. The number of bullocks, cows and horses has also reduced significantly. Surprisingly, the number of donkeys has increased from two to 75 as compared to the figure in the last 10 years. However, as compared to other states, the reduced trend in livestock among the sample HHs of Himachal Pradesh as indicated in Table 25 is less in number.

⁴⁶ This is not an exact figure but an approximate one collected from the sample villages through focus group discussions (FGDs). This may be at variance with the actual figure in the revenue record.

Table 25: Status and trend of livestock of sample households of Himachal Pradesh

Types of livestock	Number at present	Number 10 years ago	Trend in number > <	Trend in %
Goat	6,653	9,366	-2,713	-29.0
Sheep	7,750	12,107	-4,357	-36.0
Cow	150	212	-62	-29.2
Buffalo	7	8	-1	-12.5
Bullock	75	118	-43	-36.4
Horse	92	124	-32	-25.8
Donkey	75	2	+73	+3,650

Source: Primary Survey, 2013

Figure 14: Status and trends of livestock of sample households of Himachal Pradesh

Source: Primary Survey, 2013

The changing trend in livestock population in the last 10 years is a matter of concern among the pastoralists. As shown in Figure 14, decrease in the number of the main categories of grazing livestock like sheep and goat is approximately more than one third their number 10 years ago.

Pastoralism is a source of economy not only for the practicing pastoralist communities but also for the state and the country as well. In Table 26, information given by the sample HHs reveals that livestock provides substantial contributions which adds to the family incomes significantly. In Himachal Pradesh, the annual average income per sample HH from sheep is Rs. 44,415, while from goats it is Rs. 28,780. The total average income from livestock is Rs. 75,035 per sample HH. The average annual income from livestock

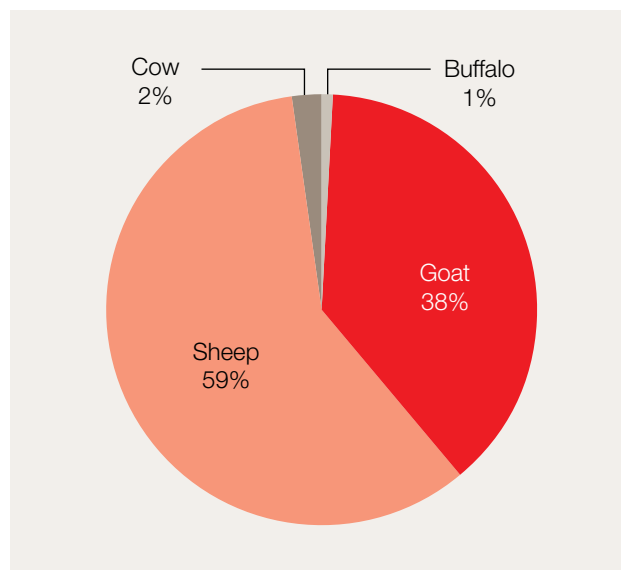
Table 26: Annual income from livestock in sample villages of Himachal Pradesh

Livestock type	Himachal Pradesh		Chamba		Kangra	
	Annual income	Average income/HH	Annual income	Average income/HH	Annual Income	Average income/HH
Goat	28,78,000	28,780	11,75,000	29,375	17,03,000	28,383
Sheep	44,41,500	44,415	14,92,000	37,300	29,49,500	49,158
Cow	14,4,000	1,440	10,000	250	1,34,000	2,233
Buffalo	40,000	400	0	0	40,000	667
Total	75,03,500	75,035	26,77,000	66,925	48,26,500	80,442

Source: Primary Survey, 2013



Figure 15: Livestock-wise income of sample HHs in Himachal Pradesh



per sample HH in Chamba is Rs. 66,925 while it is Rs. 80,442 in Kangra. The livestock-wise income of the sample HHs in Himachal Pradesh as shown in Figure 15 indicates that of the total livestock income, the highest incomes derived from sheep and goat are 59 percent and 38 percent respectively.

Access to grazing areas of sample households in Himachal Pradesh

It is reported that the total number of pasture areas being used by sample villages for grazing their livestock, outside and inside the districts, both in

summer and in winter, is 112. This comprises of 36 grazing sites used by sample HHs of Chamba district and 76 grazing areas used by the sample HHs of Kangra district. The routes and grazing areas of the sample pastoral HHs of Kangra and Chamba district have been indicated in Annexures I, II, III & IV.

During winter, the sample HHs of Kangra migrate outside the district with their livestock to specific grazing areas in Bilaspur, Hamirpur, Hoshiarpur, Una, and Solan (Annexure-I). Similarly, in winter, the sample HHs of Chamba district go with their livestock for migratory grazing to different pasture areas like Bilaspur, Una and Hamirpur, which is indicated in Annexure-II.

During summer, the sample HHs of Kangra district graze their livestock in the pasture areas in different parts of the same district. The summer grazing areas of the sample HHs in Kangra district with specific areas used by the sample HHs of specific villages are indicated in Annexure III. As indicated in Annexure IV, the sample HHs of Chamba go for migratory grazing to Laholspiti district, as well as to other different parts of Chamba district to graze their livestock during summer.

Form No. 15 ORIGINAL
FOREST DEPARTMENT HIMACHAL PRADESH
PALAMPUR FOREST DIVISION

Permit 1033 Book No. 11
 नम्बर इजाजतनामा 1033/11 बुक नो 11

Name: Sh. Chhanna Ram Singh
 नाम: श्री चन्ना राम सिंह

Residence: D.S. 66, C.A. 1000, H.P.
 निवास: डी.एस. 66, सी.ए. 1000, हि.प्र.

सकलत: 7/10/19/2012-12/2012-12/2014-15

Date of expiry of grant	Description of timber or other produce	No. or quantity	Rate	Amount	Remarks
अवकाश के समाप्त होने की तारीख	किरण लकड़ी इमारत या दिवार पैदावार	तादात या निकदार	दरदर	रकम	बंकिमत
1	2	3	4	5	6
2012-11	11000	1-20	12000	240000	
2011-12	12000	1-20	12000	240000	
2012-12	12000	1-20	12000	240000	
2012-12	12000	1-20	12000	240000	
2012-12	12000	1-20	12000	240000	
2012-12	12000	1-20	12000	240000	
2012-12	12000	1-20	12000	240000	
2012-12	12000	1-20	12000	240000	
2012-12	12000	1-20	12000	240000	
2012-12	12000	1-20	12000	240000	

Dated: 200 15-03-2015
 तारीख: 15-03-2015

Signature: [Signature]

भारतगण हमार एक मात्र सहारा
 इकाई संरक्षण सम्य हमार।



Pradesh is given in the box. There are 39 nomadic pastoralist families who do not have permits. These families either use grazing permits belonging to others or alternatively, go with persons who have grazing permits. However, the number of permits has been reduced at the moment even though the number of pastoral HHs and animals they own has been increasing. The permit regime in Himachal Pradesh has imposed restrictions on the issue of fresh permits to pastoralist HHs. Thus, despite the fact that pastoralism is not only a potential but a viable economy in Himachal Pradesh that has sufficient pasture land, the number of nomadic graziers has reduced due to restrictions on the issue of permits. However, there are several other factors as well. It has also come to light that those HHs that possess permits face less harassment from the Forest Department (subject to conditions of formal regulations and restrictions) or any other formal institution than those who do not possess permits.

Ground reality in Maharashtra

There has been a decrease in the number of main livestock like sheep and goats in the sample HHs in Maharashtra as indicated in Table 27. During the last 10 years, the sheep population has reduced by 16.7 percent while the goat population has reduced by 18.2 percent. Although there is a declining trend in the number of livestock in the sample pastoral HHs shown in Maharashtra, the extent of decline in comparison to other sample states like Rajasthan, Punjab, Gujarat and Himachal Pradesh does not actually indicate a serious change. The buffalo population of sample HHs indicated a slight increase in number.

Access to grazing and grazing permits for pastoralist households

Grazing permits available in sample villages of Himachal Pradesh, as already mentioned in detail in the previous chapter, reveal that a comparatively better system of license exists in the state than in any other sample state. At present, there are 112 grazing permits available in the sample villages while 40 years ago, the number of permits was 227. A sample copy of the grazing permit and identity card issued by forest department in Himachal

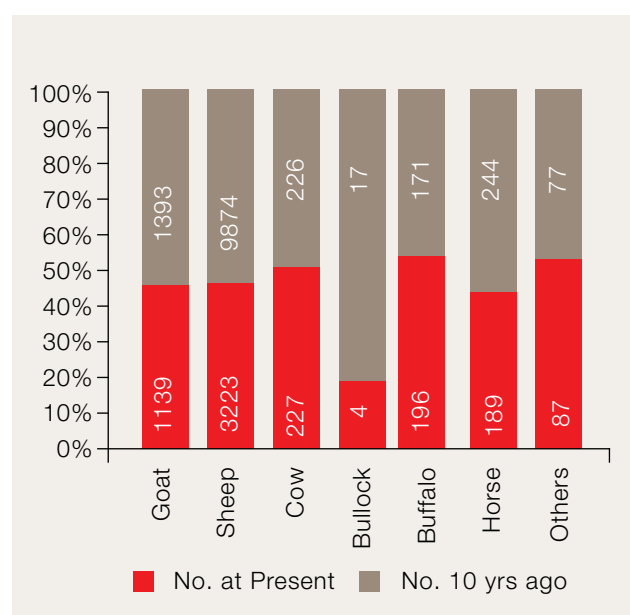
Table 27: Status and trend of livestock of sample households in Maharashtra

Types of livestock	Number at present	Number 10 years ago	Status/trend	%age of increase or decrease
Goat	1,139	1,393	-254	-18.2
Sheep	8,223	9,874	-1651	-16.7
Cow	227	226	+1	+0.4
Bullock	4	17	-13	-76.5
Buffalo	196	171	+25	+14.6
Horse	189	244	-55	-22.5
Others	87	77	+10	+13.0

Source: Primary Survey, 2013



Figure 16: Status & trend in livestock of sample households in Maharashtra



Source: Primary Survey, 2013

The figure 16 also indicates the trend of change in the number of livestock of sample HHs in Maharashtra between the present and 10 years before. Only the buffalo population has increased slightly; buffaloes are dependent both on stall feeding as well as grazing on fodder and leaves.

The total annual income of sample HHs in Maharashtra from livestock as indicated in Table 28 is Rs. 53,50,000, which works out to Rs. 53,500 average income of a single sample HH per annum. Hence, the income from pastoral occupation is very significant in comparison to other sources of income in rural India.

The average income per sample HH from sheep is Rs. 40,130, which is the highest among livestock, followed by Rs. 8,900 from goats, while from buffaloes it is Rs. 2,530. The average income of sample HHs in Ahmadnagar is higher than

Table 28: Annual income from livestock of sample households in Maharashtra (in rupees)

Livestock types	Maharashtra	Average/HHs	Nashik	Average/HHs	Ahmadnagar	Average/HHs
Goat	8,90,000	8,900	75,000	1500	8,15,000	16,300
Sheep	40,13,000	40,130	22,73,000	45,460	17,40,000	34,800
Cow	1,89,000	1,890	0	0	1,89,000	3,780
Buffalo	2,53,000	2,530	65,000	1,300	1,88,000	3,760
Horse	5,000	50	0	0	5,000	100
Total	53,50,000	53,500	24,13,000	48,260	29,37,000	58,740

Source: Primary Survey, 2013

the average income of sample HHs in Nashik district. On the whole, the income from sheep and goats gives the highest contribution to the practicing sample pastoral HHs in Maharashtra. Figure 17 clearly indicates that livestock-wise, the annual income from sheep is 75 percent while the annual income from goats is only 17 percent which together constitutes 87 percent of the total livestock income of the sample HHs. Therefore, pastoral economy in rural Maharashtra is a viable option and can contribute effectively to the livelihood of pastoral HHs in particular and to the economy of the state in general.

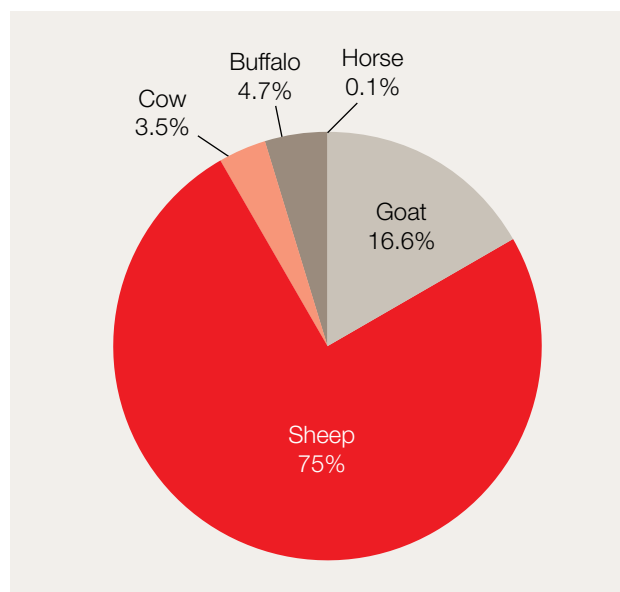
Access to grazing and grazing permits for pastoralist households

Information gathered through FGDs of pastoral HHs indicated that the total number of HHs in the sample villages are 3,096 with a population of 16,373, comprising of 1,165 pastoralists and 1,931 non-pastoralist HHs. Of the total pastoral HHs, 560 belong to nomadic/migratory groups while the balance 605 HHs are local pastoralists. Local pastoralists refer to those pastoralists who graze their livestock within the local grasslands.

None of the sample HHs in Maharashtra has grazing permits available with them. However, the nomadic pastoralist families have been grazing their livestock without permits by paying bribes to forest officers as informed by the groups as well as the respondents of sample HHs. They expressed the opinion that since they do not have any official permission they face restrictions and humiliation at the hands of the officials as well as the local villagers, while moving with their livestock.

The total area of the village as shared by the participants, is approximately 49,618 acres, of which the total area available for grazing is 3,380 acres which is a mere 6.8 percent of the total area of the sample villages. All the respondents informed that they had access to their village grazing areas though the quality and quantity of grass available to them for grazing their livestock varied. Earlier, the total period of

Figure 17: Livestock-wise percentage of annual income of the sample HHs in Maharashtra



grazing in the village pasture lands of the sample villages was 1,570 persons days which was now reduced to 920 persons days, i.e., 58.60 percent as compared to the previous number of days.

Ground reality in Punjab

The status of the main livestock like sheep and goat population in sample HHs of Punjab has come down to 62 percent and 45 percent respectively in comparison to their number 10 years ago. Such a change in the trends of major grazing animals has been attributed to factors such as the paucity of permanent pasture land in all the sample villages and the restricted mobility faced in these villages for grazing livestock outside. The massive diversion of land for intensive agriculture is also another reason for such change in the availability of grassland/fodder for livestock and grazing land. Table 29 also indicates that the cow population has increased by 20 percent while the buffalo population has increased by 35 percent in comparison to their numbers 10 years before in the sample HHs of Punjab.

Table 29: Status and trends in livestock in sample households of Punjab

Livestock types	Number at present	Number 10 years before	Status/trend	%age of increase or decrease
Goat	1,527	2,785	-1258	- 45.2
Sheep	1,792	4,722	-2930	- 62.0
Cow	41	34	+7	+ 20.6
Buffalo	50	37	+13	+ 35.1
Bullock	4	5	-1	-20.0
Horse	1	3	-2	- 66.7
Donkey	4	2	+2	+100.0

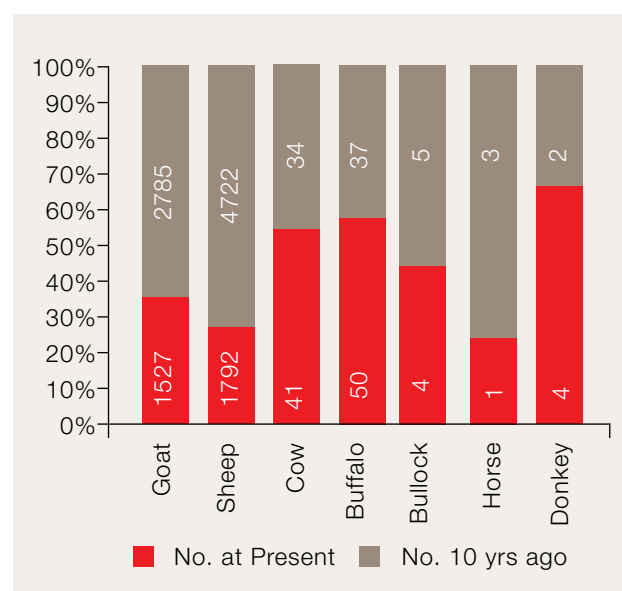
Source: Primary Survey, 2013

Indicating trends in livestock population, Figure 18 clearly shows that there is a serious decline in sheep and goat population since the last 10 years. The figure also indicates that in comparison to the goat population, the sheep population has declined very rapidly.

A few of the following reasons are responsible for the reduced number of sheep population in the sample HHs: (1) scarcity of grazing land or village commons (2) restriction and lack of permits for grazing livestock (3) problem of better marketing of the products (4) very low price of wool (5) death of livestock due to diseases (6) availability of other job opportunities which causes shortage of contract labour (*goalas*) for grazing. Other details are dealt with in the following section of this chapter.

Income from livestock contributes significantly to the livelihood of the sample HHs of pastoral communities in particular and to the state economy in general. Table 30 shows the average income from livestock per sample HH is Rs. 29,011. The average income per HH from sheep is Rs. 15,710 while the average income from goats is Rs. 12,621, which is a substantial and healthy income for the survival of the family. This is reflected more prominently in Figure 19 about the livestock-wise percentage of income of the sample HHs in Punjab, out of which 54 percent is from sheep and 43 percent is from goats amounting to 97 percent of the total. The balance three percent of the income is contributed from buffaloes (2%) and cows (1%).

Figure 18: Status and trend of livestock in sample households of Punjab



Source: Primary Survey, 2013

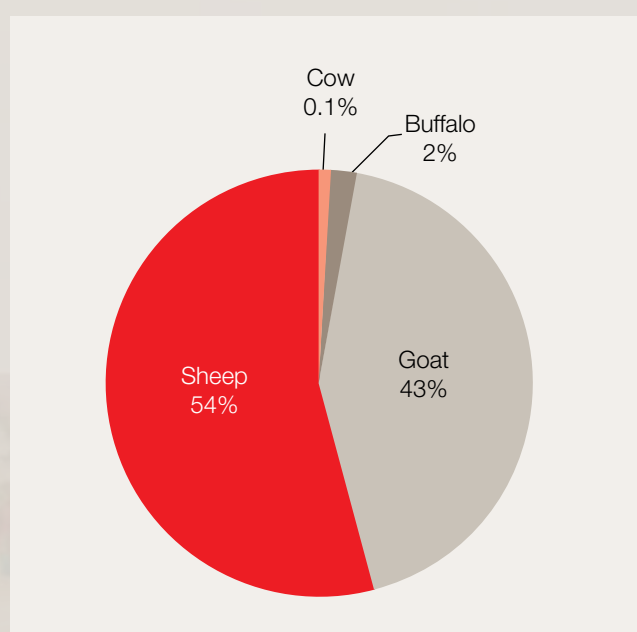


Table 30: Annual income from livestock of sample households in Punjab (in rupees)

Livestock types	Punjab		Bhatinda		Firozpur	
	Amount	Average income/hh	Amount	Average income/hh	Amount	Average income/hh
Goat	12,62,100	12,621	5,85,000	11,939	6,77,100	13,276
Sheep	15,71,000	15,710	7,36,000	15,020	8,35,000	16,373
Cow	17,000	170	10,000	204	7,000	137
Buffalo	51,000	510	19,000	388	32,000	627
Total	29,01,100	29,011	13,50,000	27,551	15,51,100	30,414

Source: Primary Survey, 2013

Figure 19: Livestock-wise average annual income of sample HHs in Punjab



Access to grazing and grazing permits for pastoralist households

The total number of pastoralist HHs in the sample villages is 6,770 while the total number of non-pastoralist HHs is 1,265. Of the total pastoralist HHs, only 11 are nomadic and 6,759 are local pastoralist HHs. Information collected through group discussions in the sample villages of Punjab reveals that at present, for every family, the approximate grazing period is 13 days per annum while earlier, per annum it was 24 days per family. The grazing period has been reduced by nearly 50 percent of the previous grazing period. The total area of land in the sample villages is 21,900 acres, out of which 1,200 acres belong to grazing land, which constitutes a meagre 5.4 percent of the total land. At present, the total grazing period of livestock in these lands by 100 pastoral HHs

is 1,255 person days per annum, which earlier was 2,420 person days which amounts to 48.14 percent reduction.

Of the total nomadic pastoral HHs, only 11 persons from two villages - Kawarbachan of Firozpur and Chak Attar Singh Bala of Bhatinda districts have seven and four grazing permits respectively. Others, who do not have grazing permits, face many challenges from local villagers as well as forest and revenue officials when take their livestock for grazing.

According to the HH information available on access to grazing, more than 48 sample HHs of Bhatinda district use more than 16 grazing sites outside of their own village pasture lands when they take their livestock for grazing. Out of this, only two HHs use two grazing sites in Sangriya district. Similarly, in Firozpur district, nearly 47 sample HHs in nine villages are using more than 20 grazing sites outside their own village, out of which only five HHs are in one village, Kabber Bachha, visit five different sites in Faridkot district during winter. However, none of these five HHs possesses any grazing permits for their livestock.

Ground reality in Rajasthan

In the state of Rajasthan animal husbandry, which contributes significantly to the economy of its rural population, has been taken as an important source of livelihood. The main types of livestock in the state are sheep, goats, camels and cows. Sheep and goats are considered to be the main categories of livestock which provide a healthy and substantial part of the income, apart from the fact that they are consumed regularly in

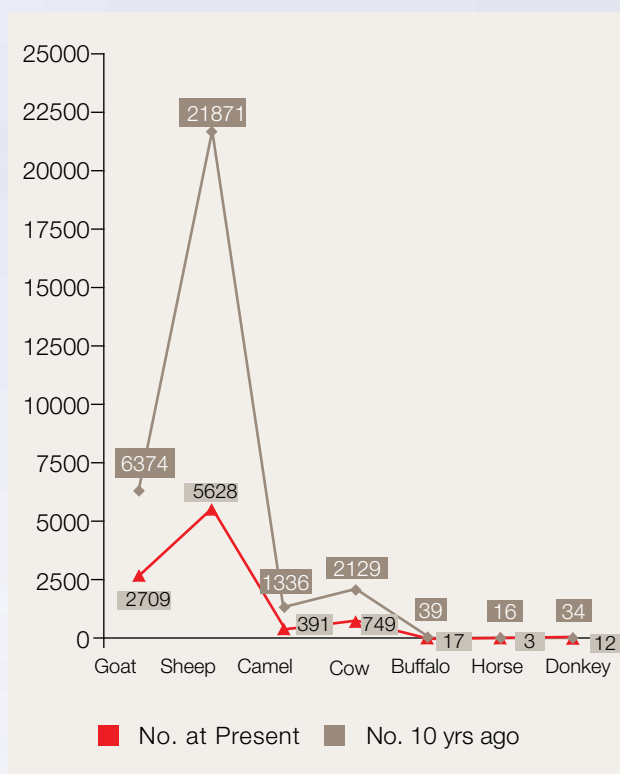
HHs. However, the changing status and trend of livestock in the sample HHs is now an important area of concern not only for the survival of such an economy but also of the community that is dependent on this economy. Table 28 indicates in detail the decreasing trend in all types of livestock over a period of 10 years, especially of sheep and goats, which are the main grazing animals.

The status and trends of livestock in the sample villages indicate that at present, the sheep population has come down by 74 percent, while goats have decreased by 57.5 percent as compared to their numbers 10 years ago. The population of camels, another important type of livestock that is used in transportation, defence and tourism has reduced by more than 70 percent.

Figure 20 is a clear reflection of the trends in the changing status of livestock in the sample villages of Rajasthan. At present, at 2,709, the goat population in the sample HHs has fallen by two thirds of its previous number. The sheep population has declined from 21,871 to only 5,628 at present, which is nearly a 75 percent decline in numbers. This is an extremely alarming situation which is affecting the most viable occupation of animal husbandry and pastoral economy of the dependent communities. This trend is attributed to the shrinking of pasture lands and grazing

lands and as a consequence, shortage of fodder for livestock. Various factors like encroachment of commons land, diversion of land to agriculture and companies, frequent drought and calamities and non-availability of quality grasslands and

Figure 20: Status and trends in livestock in the sample households of Rajasthan



Source: Primary Survey, 2013

Table 31: Status & trend of livestock in sample households of Rajasthan

Type of animal	Number at Present	Number 10 years ago	Trend in status	%age of trend
Goat	2,709	6,374	-3665	-57.5
Sheep	5,628	21,871	-16243	-74.3
Camel	391	1,336	-945	-70.7
Cow	749	2,129	-1380	-64.8
Buffalo	17	39	-22	-56.4
Horse	3	16	-13	-81.3
Donkey	12	34	-22	-64.7

Source: Primary Survey, 2013



occupational mobility, among others has affected the economy of pastoral HHs. This is analysed in the subsequent section of this chapter.

In addition to this, there are other reasons, as shared by the sample HHs, for the declining population of livestock. As times are changing and a greater number of youth are receiving higher education, they are not willing to continue with the pastoral occupation of their forefathers. With the availability and shifting of new businesses and job opportunities, the profitability of this occupation is at stake, leading to the gradual downsizing of HH livestock population. Moreover, there is no suitable market for selling livestock products. Besides, the low cost of milk and other products due to an inadequate marketing system is proving to be a disincentive for pastoralist families, leading to a reduced number of livestock.

The Border Security Force, which used to purchase camels earlier, has now stopped using them as a means of transportation in deserts. The increasing number of vehicles for easy and speedy transportation, thus, is also another reason of the reduced numbers of camel population.

In addition to this, during droughts, the livestock is affected by diseases leading to their death on a large scale.

Annual livestock income of sample households in Rajasthan

The total annual income from livestock in sample HHs of Rajasthan, as indicated in Table 32, is Rs. 22,23,000 where an average HH income per annum is Rs. 22,230. Livestock-wise, the annual average income of a sample HH from goats is Rs. 9,880, while from sheep the average income is Rs. 8,850 and from camels, it is Rs. 3,500. Figure 21 indicates that at 44 percent, the percentage income from goats is the highest, followed by sheep at 40 percent and camels at 16 percent. The average HH income in Jodhpur indicates that the average income is three times the income in Jaisalmer.

Access to grazing and pasture commons of sample households in Rajasthan

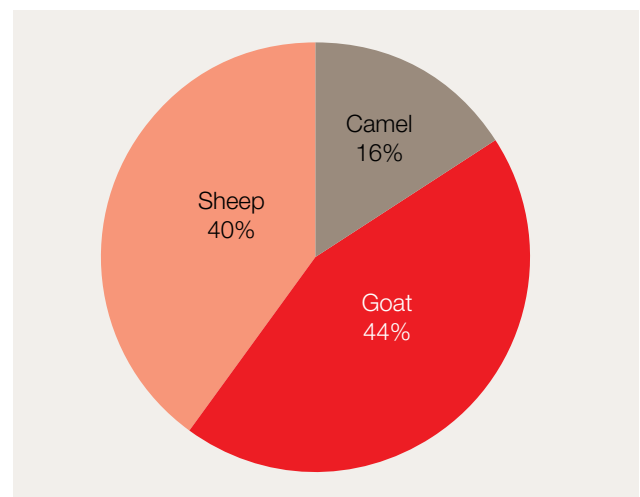
None of the sample HHs in Rajasthan is a permit

holder. Most of them today avoid taking their livestock outside for grazing.

Large areas of Rajasthan are under arid and semi arid climatic zones and are thus affected by drought and other natural calamities. During droughts (*akaaal*), it is necessary to take the livestock outside the district or state for migratory and nomadic grazing. This saves graziers from huge losses that would otherwise have to be incurred not only by having to procure fodder for their livestock but also to save the animals from various diseases which cause their death on a large scale. Information volunteered by a 23 year old and other experienced pastoralists in group discussions held in Rawara village of Jodhpur district revealed that during such periods of drought, when there was a water crisis and no grassland for grazing, the livestock would have to be taken outside the state for their survival as well as for the survival of the pastoralists.

In Rajasthan, even apart from seasons of drought and calamities, livestock is usually also taken for migratory grazing outside the state. Traditionally, the Raikas are nomadic pastoralists living in Rajasthan, their system of pastoralism being migratory and nomadic in nature. Thus, along with other pastoral communities, they take their herds outside the district or even the state for grazing. There is no existing permit regime/system as such for grazing of livestock in the sample villages.

Figure 21: Livestock-wise annual income of sample households in Rajasthan



Dr. Deepak Sharma of Baap Veterinary Department volunteered the information that grazing permits in Rajasthan are only issued by the *sarpanch* and veterinary doctors during *akaals*.

Discussions also revealed that at present, the usual practice people adopt is that they take permission for transportation of livestock for selling them outside the state after which, they load the livestock in trucks and take them to Haryana or other places nearby for grazing. This system of permission for transportation is used for livestock grazing because of the lack of grazing permit system in the state. Those participating in the discussion revealed that this permission is actually taken from the local *sarpanch* and *pashu kendra* (veterinary centre). As such, grazing permits for livestock are not allowed legally.

Respondents in all the sample villages unanimously informed that they did have access to grazing in the village pasture lands but the availability of good grasslands was very poor. They also informed that there was not a single sample village where the pasture management committee existed for management of the commons.

Problems confronted by States related to pasture commons

There is no doubt that the reduced areas of common pasture lands raise great concern among the practicing pastoralists who face serious restrictions, both direct and indirect, for free grazing of their livestock for survival. The present section deals with aspects of land use

change, factors determining the reduced size of pasture lands, availability of grasslands and reduced access to grazing by pastoralist HHs in five sample states. Various factors are attributed to these problems, while some are found to be common in all the states, a few of them are found to be very different and unique to a particular state. The following common factors are attributed to the shrinking size of village pasture lands.

Problems related to the size of grazing land

- The commons is perceived as the monopoly and control of the government and villagers, thus, have no rights over it. Therefore, there is no opposition to the commons being diverted for other purposes, leading to a serious downsizing in the area of grazing land.
- Encroachment on grazing land by individuals to accumulate more land for vested interests reduces the area.
- Construction of factories, buildings and roads on grasslands besides development activities of the state on the village common grazing land.
- Reduced area of grazing land due to plantations promoted by the Forest Department.
- Land use change through conversion of grazing land into agriculture and horticulture.
- Cultivation on government wasteland and grazing land by the landless has reduced the area of grazing land.

In addition to the above, the reduced area of pasture land in *Himachal Pradesh* has been caused due to the construction of hydro power projects and dams as the topographic features of the state are

Table 32: Livestock-wise annual income of sample households in Rajasthan, Jodhpur & Jaisalmer (in rupees)

Livestock type	Rajasthan		Jodhpur		Jaisalmer	
	Annual income	Average income/HH	Annual income	Average income/HH	Annual Income	Average income/HH
Goat	9,88,000	9,880	7,78,000	15,560	2,10,000	4,200
Sheep	8,85,000	8,850	6,62,000	13,240	2,23,000	4,460
Camel	3,50,000	3,500	2,40,000	4,800	1,10,000	2,200
Total	22,23,000	22,230	16,80,000	33,600	5,43,000	10,860

Source: Primary Survey, 2013

suitable for such projects. However, in proportion to the land use, access to grazing and availability of grazing land is comparatively much better than in other states. The increasing attempt for diversion of common pasture land at the political level will affect the pastoral community and the significant benefit they have been deriving from such occupation.

Similarly, in *Rajasthan*, the factors responsible for the shrinking size of pasture land has been attributed to faulty surveys and settlement operations, inadequate management and protection measures and diversion of the common land to private companies.

The settlement was done nearly 58 years ago, before 1955, when inadequate attention was given to reservation of *gochar* land. The land, which had been traditionally known and used as *gochar* or common pasture land, was actually categorised and recorded as government wasteland, instead of as grazing land.

The State Revenue Law of Rajasthan restricts diversion of some categories of land, which are under the control and management of the *gram panchayat* and are formally recorded as *panchayat* lands like: *gairon* or *gochar* (grazing land), *oran* land (*devasthan*), *shamshaan* (cremation ground), *kabristhan* (graveyard), *paithan* (catchment area), *agore* (tank reserve), *nadi* (river) and *talaab* (pond). However, in actual practice, these lands are misused and diverted to companies or other individuals for private use.

There are other categories of lands, which have been used as *de facto* grazing lands, but are recorded as government lands (*gair mumkin khatedari*). The District Collector has the power to take decisions over diversion or allotment of such lands for other uses. Taking advantage of the law, the District Collector, Jodhpur, used his authority and allowed diversion of these *de facto* grazing lands to a solar company, instead of settling the land as *gochar*, based on the characteristics of the present land use.

Plantation of babul plants over grazing lands and waste lands by the Forest Department is another problem which restricts access to the area of grazing.

With the establishment of solar plants around the sample villages in Jodhpur District, the value of land has become very high. This has led to emergence of real estate companies and land mafias and their subsequent impact on encroachment of village common land.

Problem in availability of grasslands/fodder density

There has been substantial reduction in the quality and quantity of grassland found due to the following different reasons:

- The increasing population and the number of pastoralist HHs causes higher pressure on pasture land.
- Degradation of forests and grazing lands without proper protection and regeneration initiatives.
- Climatic changes adversely affect the growth of grass in the grasslands and foliage on bushes and trees.
- Inadequate rainfall causes reduced growth of grasses and fodder for which grazing lands are gradually converted into barren fields.
- Increasing agricultural practices and extensive use of machines has reduced the post harvesting growth of grasses and fodder for livestock.
- The grasslands have turned into barren fields due to low rainfall.
- Lack of protection of pasture or grassland.
- Increasing population puts more pressure on the available grasslands limiting the average area needed for livestock.
- In rural areas, water bodies, which are mostly located close to grazing lands, are an inevitable feature.

Besides the common factors listed above, which have caused reduced availability of grasslands and fodder density, the following additional factors are also found in specific states.

In **Himachal Pradesh**, due to the bad condition of winter pastures, pressure on summer pastures is increasing.

The regeneration of grasslands is affected due to decrease of water logged areas with high humidity in the high altitude terrains.

Increasing incidence of “control burning” makes renewed growth of grasses and bushes difficult.

The problem of weeds (locally named *Lantana*, *Kalibasuti*, *Nilaphulnu*) and plantations of pine trees on grasslands reduces grass regeneration.

Dust from cement factories destroys grass, fodder and other trees and bushes which are used for livestock grazing.

Dust from national highways makes the grass unsuitable and difficult for the livestock to graze on.

An interesting fact discovered in Himachal Pradesh is that pastoral communities in the state still get a better scope for livestock grazing on post harvested agricultural land left fallow.

The frequent occurrence of droughts (*akaaal*) faced in *Rajasthan* as it is part of the semi-arid and arid zones. Lack of rain does not allow restoration of grasslands.

Problems regarding access to grazing land

- Lack of grazing permits always keeps graziers in fear of fines and harassment by the forest department and the police. Grazing permits are not made available or issued to all pastoralists. Decline in the quality of grass and fodder for livestock automatically reduces community use and access to grazing lands.
- Denial of access to grazing lands by local people and conflicts with them on grazing over the same patch of land, affects their own use.
- Restrictions imposed by the forest department and local villagers constrain free access to grazing commons.
- Restrictions imposed on the existing grazing lands by the forest department.
- Local people refuse to allow grazing on their lands.
- Conflict with local people for grazing on the same patch of land,
- Declaration of protected areas, sanctuaries, parks and other development works limit the access to grazing areas.
- Restrictions on grazing become stronger due to changing times and reduced areas of

pasture land. There is increase in the frequency of harassment which sometimes leads to bribing of forest officials and local villagers.

The forest department in Maharashtra is putting serious restrictions on access to grazing land in protected areas and in other forests areas.

In the state of *Punjab*, the availability of pasture common land is extremely low. A vast area of land is covered under agriculture while only a very small part is available for grazing. Canals, roads, *nalas*, graveyards and railway tracks have been used for grazing. In addition, in the post harvest period, only a few days are available for grazing.

In Punjab, the number of grazing animals has reduced and are being substituted by an increased number of big, stall-fed animals due to steep scarcity in the availability of open grazing land. The number of sheep and goats continue to decline significantly.

In *Gujarat*, reduction in pasture land areas is attributed to the absence of village level committees for management of pasture commons, resulting in increased individual encroachment on pasture lands.

The total number of person-days of grazing in the sample villages at present is 740 as compared to 2,225 person-days before. The average period of grazing at present is reduced to 66.74 percent and the average number of grazing days in the village lands of pastoralists has come down to one third i.e., 33.2 percent as compared to the earlier number.

Problems related to pastoral occupation

Besides the above mentioned problems, there are other associated issues which affect the survival of pastoral occupation. This section deals with occupation related problems other than those concerning grazing lands, faced by pastoralist HHs.

- Lack of a proper animal healthcare system leading to death of livestock afflicted with various diseases during mobility. This also creates significant loss to the economy.
- Heavy fines have always been imposed on the

local villagers by the forest department.

- Conflicts with local villagers and sometimes payment of money to local villagers for grazing livestock.
- Problem of a good market for the animals and their products, including wool.
- Restriction by other local villagers for grazing on their village common land.
- Scarcity and non-availability of drinking water for livestock close to grazing land.
- Regular conflicts with land owners and villagers in the grazing routes.
- Conflicts with villagers, local *goondas*, forest officials and others are very common.

In addition to the above problems commonly found in all the states among pastoral communities, there are also a few different state specific problems.

Problems of shearing and purchase of wool from shearing points at remunerative prices and in time is found to be a problem in *Himachal Pradesh*. Before shearing, it is necessary to properly wash and clean the sheep. This requires suitable water bodies and additional man power for the entire activity associated with the process of wool collection. Also, the problem of traffic and flood lights faced by livestock and pastoralists during

the movement causes serious difficulties and casualties while passing the roads at frequent turnings in *Himachal Pradesh*.

In *Rajasthan*, non-availability of grazing permits with the pastoral HHs leads to a reduced number of nomadic and migratory graziers. Police harassment on the roads is another constraint faced by pastoralists.

Personal encounters and plight of nomadic pastoralists

Problems faced by nomadic pastoralists are much more serious than those faced by their local counterparts. While moving with their livestock along the grazing routes, the following challenges are faced by nomadic/migratory graziers.

- Though such incidents occur only sometimes, nomadic pastoralists experience a sense of insecurity because they face problems of money, ornaments and livestock being stolen by mischievous elements along their grazing routes
- Poor marketing of wool, milk, animals and other goods fetches a low price for the products.
- Pastoralist HHs have to face healthcare problems because they are exposed to



frequent change of climatic conditions and lack of proper food, etc.

- Natural disasters like floods, heavy rains and storms cause personal losses as well as loss of livestock. No support is provided for the loss of livestock.
- Problem of shelter and food during monsoons and the winter season.
- Problem of drinking water for humans and fuel wood for cooking.
- No subsidies and/or insurance for pastoral HHs.
- No insurance cover for livestock in case of death due to accident and disease.
- While moving with livestock from one place to another, there are chances of meeting with road accidents which might cause death of livestock.

Besides these above mentioned problems which are commonly found among the pastoral communities in the five states, the study also revealed a few state specific problems.

In Maharashtra, nomadic pastoralist children are deprived of education due to their continuous mobility with their families. No alternative arrangement is available for the education of these children. For example, the Dhangars are nomadic tribes in Maharashtra which always move with their families.

Livestock always face the risk of being attacked by wild animals.

Livestock also face the risk of contacting common diseases like cold, fever, *lar*, *kharkut*, *palbi*, *ghatsarp*, *fugna*, paralysis and *tiva*.

Understanding the contribution and plight of women pastoralists

The contribution of women to pastoral occupation is significant but it has not been discussed in any mainstream research relating to pastoralism. In fact their role among pastoralists and in the pastoral production process and management of commons has received no attention. In Punjab and Himachal Pradesh, women are involved in (1) collection of fodder for livestock

(2) wool processing, extracting milk, ghee and other livestock products (3) stall feeding, fodder collection and other domestic care of livestock and support in local grazing.

In Gujarat, the study revealed that the contribution of women in pastoral occupation or livestock breeding is much higher than men, in addition to their performance in everyday household jobs. They not only stall feed the livestock but also contribute in other associated activities for the care of livestock.

In Maharashtra, the contribution of women in pastoral occupation is as follows:

- Active involvement in local grazing and partly in migratory grazing in the case of nomadic communities.
- Care of livestock at home, stall feeding, fodder collection etc., are done by women.
- In case of Dhangars, a nomadic tribe, traditional pastoral community women contribute in all domestic work like food preparation, livestock care and child care, besides, support in grazing.
- Processing of wool, extracting milk, ghee and other livestock products.

In Rajasthan, except in the nomadic tribe Raika, due to socio-cultural barriers, women are not traditionally allowed to go for livestock grazing outside. Besides, it is believed that large size livestock may be difficult for women to manage. Because of this, the community is not in favour of sending women outside for grazing of livestock.

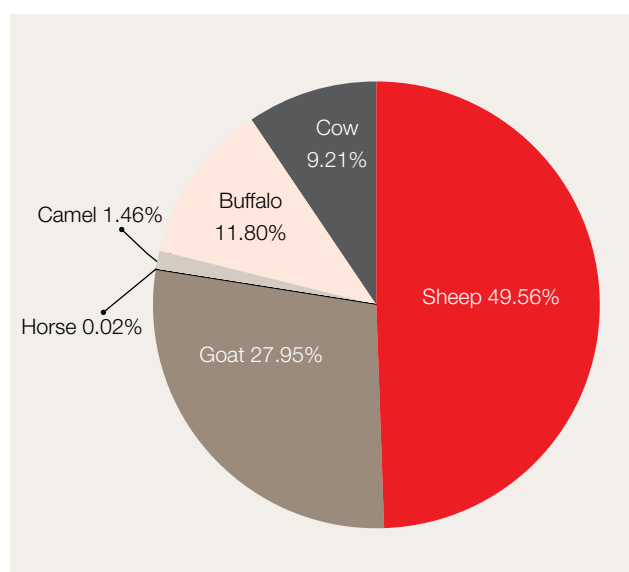
The plight of women pastoralists during mobility is an important issue and of great concern, and which unfortunately is not getting enough attention. Women are more vulnerable than men when exposed to so many difficulties of carrying their belongings, fetching water and fuel wood for cooking in difficult weather conditions, health related problems, shelter for rest, etc. This, among other problems, makes women pastoralists over burdened. Moreover, the government is not sympathetic towards such nomadic women and does not pay adequate attention to the difficulties faced by them.

Table 32 A: Status and trends in livestock population of sample villages of five states

Types of livestock	No. at present	No. 10 year ago	Status/ Trends	%age of decline
Goat	14144	28970	-14826	51.18
Sheep	25967	60431	-34464	57.03
Cow	1464	3614	-2150	59.49
Buffalo	367	716	-349	48.74
Bullock	288	386	-98	25.39
Horse	285	399	-114	28.57
Donkey	91	38	+53	+139.47
Camel	416	2377	-1961	82.50
Others	87	77	+10	+12.99
Total	43109	97008	-53899	55.56

Source: Primary Survey, 2013

Figure 22 Livestock-wise annual income of sample HHs of five states



Source: Primary Survey, 2013

Table 32 B: Livestock-wise annual income of sample households of five states (amount in rupees)

Livestock types	Total	Avg. hh income
Goat	6704900	13409.8
Sheep	11889630	23779.26
Cow	2208890	4417.78
Buffalo	2829530	5659.06
Camel	350000	700
Horse	5050	10.1
Total	23988000	47976

Source: Primary Survey, 2013

Table 32 A indicates that for last 10 years the number of major grazing animals like sheep and goats are declining significantly. The number of sheep is reduced by more than 57 percent and goats by 51 percent of the sample households of five states. The overall decline of livestock of the households in five states is 55.56 percent. It is a serious matter of concern that if such trend continues the livestock population will vanish within a short span of time. Lack of attention on such a critical area has contributed to the alarming situation.

Figure 22 indicates highest percentage of income from sheep (49.56 %) followed by goats (27.95%) from the total livestock income annually by a sample household. The table shows total income from livestock of a sample households is Rs. 47976/-.

CASE STUDIES

Generation gap and plight of women pastoralists

Bhavri Devi, a woman leader in Akhadna village said that women and children who are in the business of animal husbandry are most unhappy. “But we are fighting for change”, she states, “We have travelled around Madhya Pradesh, Punjab, Haryana and other districts in north and south Rajasthan for livestock grazing. We are proud to preserve our traditional occupation despite facing and experiencing so many difficulties and sorrow. However, as it is part of our life and livelihood means, we derive happiness from this occupation.” Bhavri Devi was apprehensive as she observed that the present generation is not capable enough of preserving this culture and the pastoral system of livelihood. Being illiterate, she felt sad because she feels education finds its own place in the tradition of animal husbandry.

Najara Kanwar of Sangori village is aged 60 years. She revealed that women do not go on the road with their livestock in search of grasslands because they are insecure and afraid of harassment. As a social constraint, women do not dare to speak openly and loudly against harassment. On taking the help of the nearest police station she says, “We cannot fight. Our job is to be silent. What do we report to the police station? Women are not progressive enough to come forward and raise their voice in front of a male.”

“Women are linked with animals. It is a part of our culture and tradition,” was the sad comment of Kanwar. She also added that the poor landless people survived here only by keeping a dozen

sheep and goats, since they did not have land for cultivation. Besides, encroachment on village pasture land by the big farmers also affected those landless families, who critically depend upon open and common grazing lands.

Shrinking of the commons - effects of globalisation

Land grabbing by the mafia has minimised the area of the village pasture land and reduced the quality of grass and the grasslands. This is substantiated by Chetu Ram of village Sekhasar. Chetu Ram, aged 55, belongs to village Sekhasar, Jodhpur. Head of a family of six members, Chetu Ram derives his main income from animal husbandry. At present, he has 100 sheep and 50 goats. Chetu Ram says that the livestock feed mainly on grasses and leaves. Currently, the grassland has changed into thorny bushes.

There is insufficient availability of fodder and grasses, both in terms of quantity and quality. Therefore, the livestock is surviving by eating these thorny bushes and poor quality of grasses. Secondly, the bhumafia (land grabbers) and large farmers have occupied the pasture lands. Now he is moving with his livestock to the Mewar region of southern Rajasthan. Chetu Ram also informed us that the number of families going in for nomadic or migratory grazing has been reduced due to the shrinking of pasture lands and grasslands.

The Raikas, as traditional nomadic pastoralists, have reduced their mobility significantly because of the lack of availability of good grasslands for animals. He cited his village as an example of this. He stall feeds his livestock at home due to

inadequate area of pasture land and grasses but at the same time, observed that stall feeding is not beneficial for sheep and goats.

Young Lisma Ram of village Sanguri of Jodhpur district has passed the 10th class. He belongs to the Rewari (nomadic) community of southern Rajasthan. Lisma Ram states that there is a sharp decline in rainfall which is making it difficult to restore the grasslands and feed the livestock. It is difficult to retain the animals since there is difficulty in getting sufficient and quality grasslands. For him the biggest problem today is to get any village pasture land free from encroachment.

Lands used by the villagers for grazing purposes have been taken over by companies and solar (plant) projects have been established there, as a result of which, there are no open spaces available for grazing livestock. There was a good variety of grass, locally called sewan ghas, which was very good for livestock. This used to be available around the village common land but has vanished or is difficult to find today, he explains.

During the settlement, no land was created or reserved for the gochar in the village by the government. However, the authorities had kept large areas under the waste land category, which was traditionally used for grazing purposes. Now-a-days, these lands have been mined indiscriminately, causing accidents and casualties for the livestock. During the last one year, Lisma Ram has lost nine sheep that fell into mined cracks and died like other livestock in the village.

A number of casualties had taken place for the livestock because of the border fencing in the solar plants. However, neither the government nor the solar plant company was taking any steps to prevent or compensate for casualties caused to the livestock. "We fear that gradually we will lose all our animals in this way", Lisma Ram said with grief.

Livestock eat grass of a certain length and the shortage of long and good quality grass has affected the health of livestock and consequently, impacted their milk production. Nagad Singh observed that the modern (present) generation is not interested in continuing with the livestock economy. They have little interest in this productive and profitable occupation. The sheep and goat are fewer in number. He suggested that conservation and protection of village pastures and grasslands is very important and needs urgent attention from the government and village community.

Ignoring the plight of pastoralists

"Serious diseases have led to the death of livestock on a large scale. Moreover, as compared to the past, livestock and cattle are afflicted by many new diseases which are on the increase. The deaths are much more than in earlier times." He also informed us that more than 70 of his livestock had died of a disease and that the loss was too much for him to bear.

This is the story of **Jugat Singh** aged 62, of village Sekharsar. Jugat Singh explained the plight of nomadic pastoralists facing theft and difficulties of shelter while taking their livestock for grazing. "Our cattle stay in the village during monsoons. But we face problems during the summer and winter days." "Further," he points out, "thieves and mischievous persons attack our camps at night and take away the sheep. At other times, livestock are victims of road accidents, especially by trucks and other vehicles moving at a fast speed. Many cattle, mostly geriatric and old sheep die on the way back, especially when we have taken them to distances that are far away. We somehow manage to bring the cattle back home but when we go on long journeys to other states, one can contract diseases such as TB, skin diseases etc., which are incurable in the absence of proper treatment."

Champalal narrated his personal tragedy. Four years ago his son had died of snake bite. “Medical care facilities are not available here. My son’s destiny was written this way”, he said. “When I asked about insurance, the concerned officer said that deaths caused by snake bite were not covered by the insurance policy. According to this officer, people were ignorant and ill informed. Neither the government nor any insurance agency is trying to do anything tangible to solve this type of problem. Both pashus (animals) and pashupalaks (pastoralists) should be insured against accidents and accidental deaths. In this area, snake bites are very common. However, the authorities do not consider it serious enough to intervene on our behalf. In case of snake bites, we blame everything on luck.”

Degeneration of commons and survival of pastoral economy

Avinash Gangadhar Kshirsagar, a 30 year old youth of Sangamner tehsil of Maharashtra, is a pastoralist by profession. Avinash has 45 sheep and 23 goats and he mainly takes them for grazing in local village pastures. He has been doing this occupation for the last 24 years but now he is forced to minimise his occupation due to several problems caused by the non-availability of grazing land and grasses for his animals. “Day by day the village habitation has expanded affecting the grazing land of our village. Construction of a high school building and a gymnasium on the pasture land has further reduced the area of grazing land. Most of the pasture land is being encroached upon.” For this reason of the lack of fodder, Avinash has had to sell off 10 sheep and five goats. “The other important problem we are facing today is the availability of a water tank for drinking water for our livestock.

So the number of goats and sheep is getting reduced now a days. When we migrate outside the

village for grazing, we have to face frequent health related problems. Our livestock is also suffering from health related problems due to polluted and contaminated fodders, food and also water.” Now he is trying to concentrate on these problems in an effort to improve the lot of nomadic pastoralists, solve problems related to livestock and to save goat and sheep farming etc.

Kusumtel village is situated in the forested areas of Nandgaon tehsil of Nashik district. The village has 10 clusters of small hamlets. The land here is not very productive and beneficial for cultivation, which makes the people more dependent on pastoral economy. The majority of the families in this village are also practicing nomadic pastoralists. Jamati is a tribal community considered as being traditionally pastoralist. In the villages, initiatives are taken to get recognition of community forest rights, as a result of which, the resources may be well protected and managed by the villagers.

A school education system is available for the children but more and more children are going outside the village when their own livestock are being taken for grazing, so the children either do not go to school or their education is terminated. Boarding school facilities should be provided in their original village for the children of these nomadic pastoral families who have to go outside the village for grazing their livestock.

Kasari village of Nashik district is located partly within the boundaries of Aurangabad district. The village is mostly inhabited by nomadic and semi nomadic pastoralist HHs among which Dhangars are known nomadic tribes residing in the village. Sample HHs revealed that due to insufficient grazing areas, in summer, pastoralist HHs go outside for grazing their livestock. Since most of these families have to remain mobile for grazing their livestock outside districts and states, it is

difficult for them to access education facilities for their children. Hence, education of the nomadic pastoralist children is very poor. However, they realise the importance of education and now some of them are sending their children to school. It is also observed by the villagers that their pattern of grazing has gradually changed from being fully nomadic to semi-nomadic, due to the reduced access to grazing land and quality grasslands, that has led to their reduced mobility.

The grazing land in Talvade village of Nashik district is quite insufficient for the livestock. Many nomadic pastoralists come with their livestock from outside the district which increases the pressure on the grassland and as a result, reduces the number of grazing days. Discussions also revealed that some girls of the Dhangar community, who were moving with their families, had started going to schools. Now, when the graziers went out of the village for grazing of their livestock, some members of the family stayed back in the village to take care of the education of their children, along with agriculture work of the HH. In the past, when permits were available with the people, there was no problem for grazing their livestock. At present, nobody in the village had grazing permits and for this, they had to face many problems and challenges from the forest department and others during their movement out of the village.

The total area of village **Darebadi of Ahmadnagar** is 40 ha. out of which the area for grazing is only two ha. There are 60 pastoral HHs residing in the village, out of which 55 are nomadic pastoralists. Group discussions with the villagers revealed that the grasslands of the village have been depleted and reduced to barren land due to inadequate rainfall. Thus, due to non-availability of good grasslands, the livestock have been moved towards the nearby forests in search of greener pastures. During this time they face exploitation and harassment from the forest department

and police and have to give bribes. The forest officials also use abusive and filthy language for the pastoralists and sometimes physically assault them. However, they have no alternative but to bear this silently so that they may continue to feed their livestock.

Threatened survival: losing the resource and the resource base

Raviya is a village with a population of 4,500 people for a total of 1500 HHs. It is located 23 km away from Dhanera tehsil of Banaskantha district. The village is inhabited by communities like Bhils, Rabaris, Koshthis, Rajputs and Bhartharis. The public facilities available in the village are a primary school up to the 8th standard, a panchayat office, a medical clinic, a veterinary clinic and a milk co-operative. The village has shown serious decline in livestock population in the last 10 years – by 78 percent in the goat population and 83.8 percent in the sheep population. The number of buffaloes at present has also decreased by 53 percent as compared to the numbers that existed 10 years before.

The sarpanch, Bhagvan Bhai Nathubhai Rabari, belongs to a traditional nomadic pastoral community. Narrating his experiences which he recalled from memory, Nathubhai said that they had a larger area of grazing land in the past, so they didn't have to face difficulties in grazing their cattle. Now they don't have enough land for grazing and as a result, they are gradually reducing the number of livestock by selling them off. The limited area of grazing land, coupled with depleted quality and quantity of grasses and fodder has become insufficient for the survival of the livestock. At present, they have fewer cattle in their village. Loss of this occupation of animal husbandry has impacted their livelihood seriously. However, Bhagvan Bhai still hopes that one day the government will do something for them.

Seasonal route mapping grazing routes. A pilot case study from Himachal Pradesh

In Himachal Pradesh, 100 pastoral HHs have been surveyed, out of which, a sample HH of Mr. Inder Singh, resident of village Polling, Multan tehsil of Kangra district was identified as a representative case of mapping routes of migratory grazing and the problems faced along those routes. The family has been traditionally engaged in migratory grazing (see a detailed HH interview in HH Code PL-04 M). The information was generated in GIS map with the direct interaction and involvement of Mr. Inder Singh. The GIS route map is more authentic because this map was produced by taking GPS points accompanying Mr. Inder Singh, through the routes he has been using. The study has generated information on various indicators like the increase and decrease of pasture lands and pastures, theft, road traffic problems, water, grass productivity etc.

Inder's family comprises of his wife and his son. They are from the other backward caste (OBC) and belong to the Kannat/Kanait community. He has 200 goats and 120 sheep and earns

about Rs. 20,000 from goats and Rs. 50,000 from sheep annually. He has been traditionally engaged with his father in migratory grazing as his ancestral occupation since his childhood. Singh has been taking his livestock seasonally for grazing to different areas of several districts like Solan, Bilaspur, Mandil, and to a few places in Kangra. He has narrated a few of the problems he was facing during mobility with livestock which has been linked with the maps generated through GIS/GPS. He also shared some solutions to these problems. As there is no separate road for livestock to move on, sometimes, they meet with accidents while moving from place to place. In addition to this, they face another major problem of theft of material and ornaments. During this period, medical facilities are not provided to them if their livestock become sick. He also suggested that if the government provided pastoralists with police protection and medical facilities, it would be easy and smooth for them.

The detailed areas indicated in the maps are shown in annexure VI.

Conclusion & Recommendations



Pastoralism is a healthy and viable economic system that has a lot of potential to reduce poverty and promote prosperity of the rural poor. It is a significant source of revenue for rural HHs and can ensure a better livelihood for them.

The shrinking area of pasture lands and depletion of grasslands has affected the livelihood and economy of the dependent pastoral communities. The encroachment on pasture lands for vested interests, cultivation by the landless, diversion for development projects, agriculture expansion and land grabbing are some of the major factors responsible for the reduced size of village pasture lands.

The declining pasture commons caused a declining number of sheep and goats, leading to a fall in the income level of the pastoral HHs. This is because reservation of *gochar* lands does not take into consideration the sheep and goat population of the village.

Pasture commons and the pastoral economy can be saved through effective institutional arrangements for protection and management, which can ensure a better livelihood for pastoral HHs. Though the *gram panchayat* is given responsibility of

management and protection of village pasture land, their role is largely non-functional or non-effective. No consultation is made with the *panchayat* before taking any initiative on village pasture land.

Lack of comprehensive land use policy and regulation creates serious challenges in the governance of common land which in turn creates a crisis in vital land use need for commoners in the future. For example, classified pasture land is 33 percent in Himachal Pradesh while it is only 0.08 percent in Punjab. This is the result of inadequate comprehensive land use policy, inequitable and diverse land use policy in the legal framework of the states.

Promoting plantation over traditional pasture land by the forest department minimises the community's access to grazing commons.

The traditional seasonal access of nomadic communities to grazing lands has been restricted by the local villagers leading to conflict between local and nomadic or migratory graziers, caused due to reduced area of pasture lands and scarcity of quality grasslands. This has resulted in bringing down the number of nomadic graziers.



Lack of grazing permits leads to harassment and exploitation by forest officials and the police, which consequently impacts the morale of the pastoralists, leading to alienation from their traditional occupation.

A perceived notion is that the common land belongs to the government and the government can monopolise the utilisation and transfer of this land. The very lack of understanding on the classification of various categories of lands 'set-aside' for specific common use is responsible for the community not voluntarily taking part in the management and protection of common lands.

The rush for individual accumulation of property and the impact of the current development agenda, coupled with the increasing value of land is leading to "individualisation" and "corporatisation" of common land and resources. These are, therefore, factors promoting encroachment and grabbing of pasture land.

The declining size of pasture lands and the increasing pressure of grazing have accelerated the depletion of grass cover. Such situations generate conflict between locals and migratory graziers.

Intensification of agriculture by the use of machines and pesticides has reduced the availability of opportunities for grazing.

Recognition of community forest rights (CFR) of the nomadic pastoral communities on grazing and seasonal resources access under FRA 2006, due to the complex process and vastness of overlapping across districts without any strategy and mechanism of the states.

Water bodies close to the pasture lands have been dried as a result of which quality grasses and fodder are not being grown.

Despite the significant contribution of women to pastoral economy, they are not recognised as pastoralists.

Lack of proper market arrangements creates problems for sale of livestock production. There is no viable market mechanism available to the people at the local level. What is available at the district and state level is also inadequate.

Government healthcare facilities available for livestock are quite insufficient and poor. People mostly bear their own expenses along with expenses for private healthcare. Besides, there is no insurance facility provided for either livestock or nomadic pastoralists, in case of any casualty.

Key Recommendations

Policy level recommendations

A comprehensive national land use policy to regulate and manage the common land should be on a basis of urgent priority.

Amendment of state laws with strict provisions to put a ban on diversion of grazing land for any other purpose.

Make provision for reservation of land for livestock grazing after proper assessment of the need of livestock. While doing the assessment sheep and goats must be considered along with other grazing animals.

Review of the power of an eminent domain and devolution of authority to the *gram sabha* to manage and regulate the pasture commons in all states.

A National Grazing Policy to ensure the sustainable use of grasslands.

Plantation of exotic species in all grassland habitats must be completely banned.

Establish a separate department/ministry both at the central and at the state level to look after the grassland issue and coordinate inter departmental or inter ministerial communication.

Women as pastoralists should get enough place in institutional and policy matters. Equal recognition should be granted to them as pastoralists.

Immediate recognition of CFR of nomadic pastoral communities on grazing and seasonal resources access under FRA 2006.

Strict compliance with the Supreme Court order on common land. (Petition (Civil) CC No. 19869 of 2010)

There is need to mainstream the potential and strengths of the pastoral economy which contributes significantly to the national economy, through national and state level campaigns. Besides, pastoralists should be granted community access and rights over pasture commons.

Alliance building and policy advocacy involving the pastoral community leaders, policy makers, civil society and government actors for the rights of pastoral communities in India and policy dialogue at the national level.

Recommendations for safeguarding the common lands

Ensure eviction and strict action against encroachments on common grazing land with heavy punishment to land mafia for land grabbing.

Put a complete ban on the diversion of pasture land and other common land to companies for development projects.

Issue grazing permits to pastoralist HHs with permission of grazing in protected areas near irrigation canals and dams.

Prohibit any plantation and construction over *gochar* land without informed consent of the *gram sabha*.

Empower the *gram panchayat/gram sabha* to protect and manage the village commons land and constitute a pasture management committee in each village with adequate financial and technical support.

Exclude all pasture lands from being declared as "Protected Area" category and make a separate protection and management mechanism for them.

Both the state and the central government should bring about pro-pastoralist policies after considering all aspects related to it - as an economy, eco-system and a way of life.

Map all critical grasslands and desert habitats as a comprehensive land/water use plan. Encourage and provide appropriate legal backing to community conserved areas containing grasslands and deserts.

Transfer of ownership of lands to the *panchayat* will give them more autonomy to take decisions with respect to the use of the land and act effectively.

Recommendations for solutions for restoration of pasture commons/grasslands

Construction of rain water harvesting structures



(ponds and tanks) for water conservation in dry areas.

Effectively engage the *panchayat* for management, protection and development of pasture land.

In places like Himachal Pradesh, plantations of pine trees should be discouraged on grazing lands and steps should be taken for eradication of weeds from grasslands.

Poisonous insecticides should not be allowed to be sprayed by anybody on weed/grasses.

Factories should not be allowed to dump their waste material over pasture lands.

Formation of committees at different levels on grazing issues.

Implement programmes like “*Maru Gochar Yojana*” in arid and semi-arid zones of Rajasthan and Gujarat, with promotion of plantation of *seban* grass (a variety of grass that is very good for the health of livestock).

Put a ban on plantation of *babul* plants on village pasture land

Ensure drinking water facilities for livestock and regeneration of grassland, construction of water tanks and revival of traditional water bodies near every pasture land. These need urgent priority.

Make check dams to check floods and massive landslides.

Recommendations for solutions to improve plight of pastoralists

Taking livestock outside without permits for

grazing is leading to harassment and restrictions by officials, locals and police. Issue of permits with legal recognition can minimise such problems.

Mobile healthcare facilities should be provided to pastoral communities along their grazing routes.

For the security of migratory graziers, separate and special protection measures should be taken at institutional levels through the local police to check for theft and other kinds of harassment.

The Wool- Federation must ensure the purchase of wool from the shearing point/places in time and on remunerative prices in order to avoid/minimise inconvenience to migratory graziers.

The natural calamity claim process must be made simpler to ensure that benefits are given to each affected person.

Fairs should be organised for livestock in order to give incentives to pastoral communities at the block level.

Proper arrangement should be made for the collection of skin, bones and wool of livestock. A (village) *panchayat* level collection centre (*mandi*) should be established.

Besides night shelters/sheds, waiting rooms should also be provided for nomadic pastoralists along their routes of mobility for their livestock.

Educational facilities should be provided by the government for the children and mobile ration cards should be provided for nomadic pastoralists.

Insurance policies for animals should be ensured along with loan subsidies for pastoralists.

The animal husbandry department should organise awareness camps on animal health.

Credit card facilities to be provided to all pastoralists.

Pro active and pro-pastoral action should be taken by government officials at the local level with the pastoral communities.

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Annexures

Annexure-I: Winter grazing pastures and routes of sample households in Kangra district

District	Sample village	Outside district for grazing	Tehsil	Gram panchayat	Grazing area
Kangra	Karnathu	Bilaspur	Bilaspur		Barmana
			Naina devi	Lakhanpur	Naina Devi
		Hamirpur	Hamirpur	Awaha Devi	Awaha Devi
		Hoshiarpur	Garshankar	Kukarsuaa	Garshankar
		Una	Bangana	Tanoh	Kutlehar
	Bara Banghal	Bilaspur	Lakhanpur	Swarghat	Swarghat
			Sadar	Brahampukhar	Ksaal
			Kuddi		Dalli
		Swarghat	Kulaah	Swarghat	
		Solon	Arki		Ganna
			Baddi		Barotibala
	Nalagar		Chiyachhi	Chiyachhi	
	Gunher	Hamirpur	Hamirpur		Kot
			Jandru		Jandru
		Solon	Baddi	Kishanpura	Kishanpura
			Soddi		Jaswana
	Kandral	Bilaspur	Ghumarbin		Dhangu Jangal
					Paniyala
				Khumjhad	Lingadi
		Hamirpur		Masur Moud	Masur Moud
				Kakad	Kakad
				Kakad	Kakad
	Polling	Solon	Kasauli	Masulkhana	Masulkhana
			Nalagar	Manlokal	Dighal
Sarajada	Bilaspur			Gujjar di hatti	
		Ghumarbin		Gedda	
	Solon			Saron	
		Nalagar	Kundloh	Kundloh	
		Saai		Klawa	

Source: Primary Survey, 2013

Annexure-II Winter grazing areas of sample households in Chamba district

District	Sample village	Outside district	Tehsil	Gram panchayat	Grazing area	
Chamba	Nya Gran	Bilaspur	Jhanduta	Jaddu	Jaddu Aljaar	
				Gharan	Khamedda	
		Una	Una	Kuryala		Jamber
				Thanye Kla		Thanye Kla
	Ghado	Hamirpur	Nadon	Chudu	Jeen	
	Nya Gran		Nadon	Chudu	Jihani	
	Ghado	Una	Bangana	Rajpur	Kotlehar	
			Una	Rajpur	Una	
			Una	Rajpura	Raypur	

Source: Primary Survey, 2013

Annexure-III Summer pasture areas of sample households in Kangra district

Grazing district	Sample village	Tehsil	Gram panchayat	Grazing area
Kangra	Gunehar	Bajjnath	Gunehar	Billing
			Dyol	Kinkal
			Gunehar	Billing
			Dyol	Kinkal
			Gunehar	Salehatar
			Gunehar	Salehatar
		Multan	Bara Bhangal	Marala Dhar
				Shavdoter
				Jashari
				Jusaari
				Subdhar-3
				Gwala
	Bara Bhangal	Multan	Bara Bhangal	Tangari Got
				Dhobbu
				Dhobbu
				Kaalihani
				Nakkoda
				Saaran
				Raigaahar
				Village Mai
	Kandral	Bajjnath	Kandral	Banjar, Gaddbal, Dunga
	Karnathu	Multan	Bara Bhangal	Banjar, Gaddbal, Dunga
				Banjar, Gaddbal, Dunga
				Raigaahar
				Raigaahar
				Kaalihani
		Bajjnath	Phatahar	Kuaari
				Bhadal Dhar
				Sokkadu, Silla, Ghatani
	Dyol	Dyol	Sokkadu, Ghatani, Jabbhal, Jhapddu, Hilla, Khadnal	
	Polling	Multan	Polling	Joknal, Paani ra nada, Thinchu, Thughi
				Barei
			Bara Bhangal	Garpith
Ghoda lotanu				
Polling			Polling	Kamehad
				Kamehad
				Kathaal Kudu
				Ghoda lotanu
				Jalehar
				Gai Lun, Maraad, Dhar, Gaun dugh, Garudugh
				Gai Lun, Maraad, Dhar, Gaun dugh, Garudugh
				Van Dhar, private land, forest land

Source: Primary Survey, 2013

Annexure-IV Summer pasture areas of sample households in Chamba district

Resident district	Sample village	Grazing district	Tehsil	Gram panchayat	Grazing area	
Chamba	Brahmani	Chamba	Bharmaur	Oraphati	Oraphati	
				Khanni	Brahamani	
				Oraphati	Oraphati	
		Laholsipiti	Udhaypur			Laholsipiti
						Laholsipiti
				Khanjar	Khanjar	
				Thanpattan	Thanpattan	
	Ghado	Chamba	Holi	Nyagran	Ghado	
					Kut, Faat, Ravi paar, Kehton Mai	
					Vanna Vai	
					Dhar Dmaari	
				Holi	Dandi Dhar	
				Nyagran	Damaari Dhar	
	Lahal	Laholsipiti	Udhaypur	Bharmaur	Khanni	Lahal
					Khanjar	Khanjar
						Khanjar
	Nya Gran	Chamba	Bharmaur	Holi	Oraphati	Oraphati
					Nyagran	Nyagran
						Jaraalu Dhar
						Damaari Dhar
Tarakdu						
Bambad						
Nargun						
Ryaal Dhar						

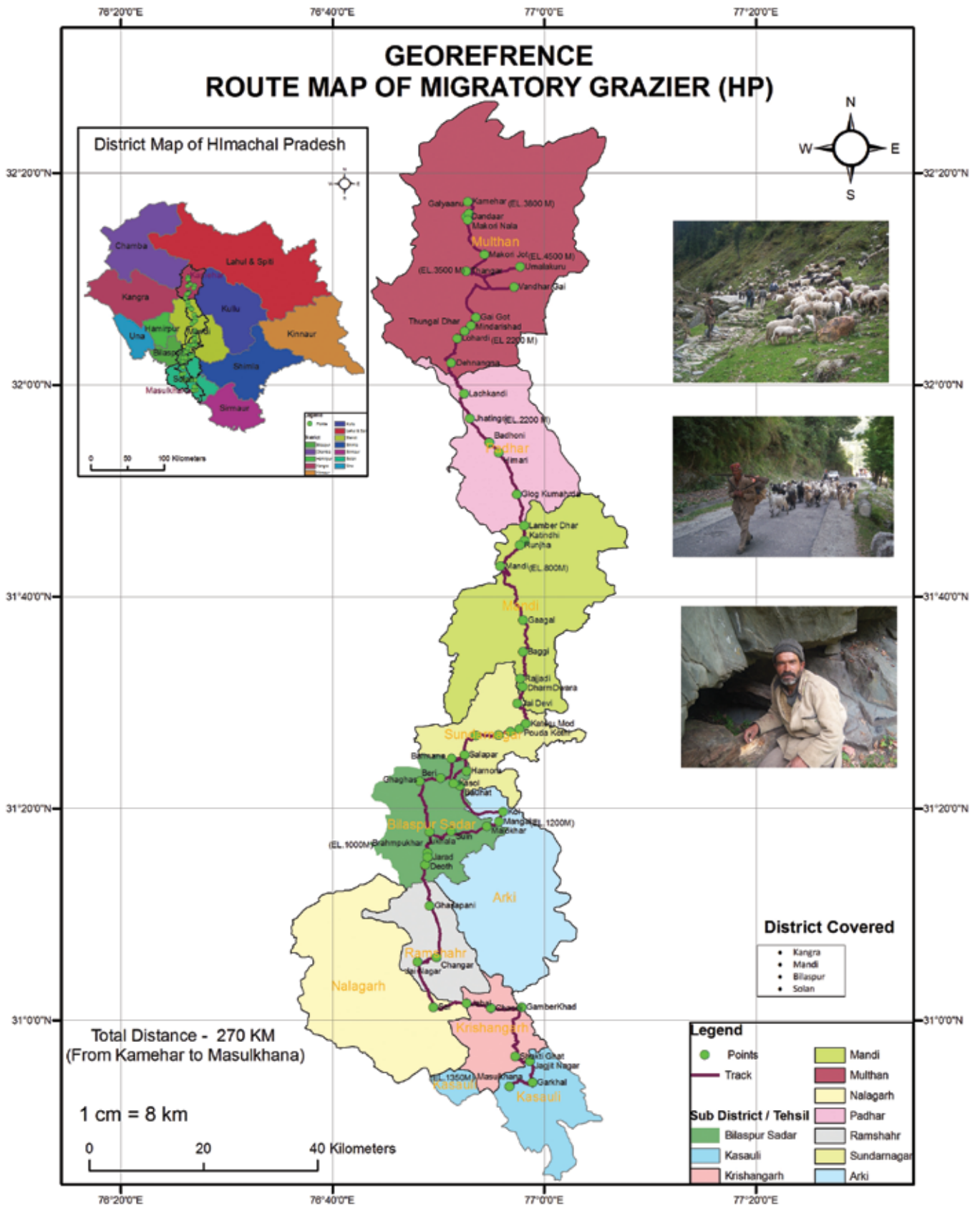
Source: Primary Survey, 2013

Annexure-V Grazing areas used by sample households outside own village in Gujarat

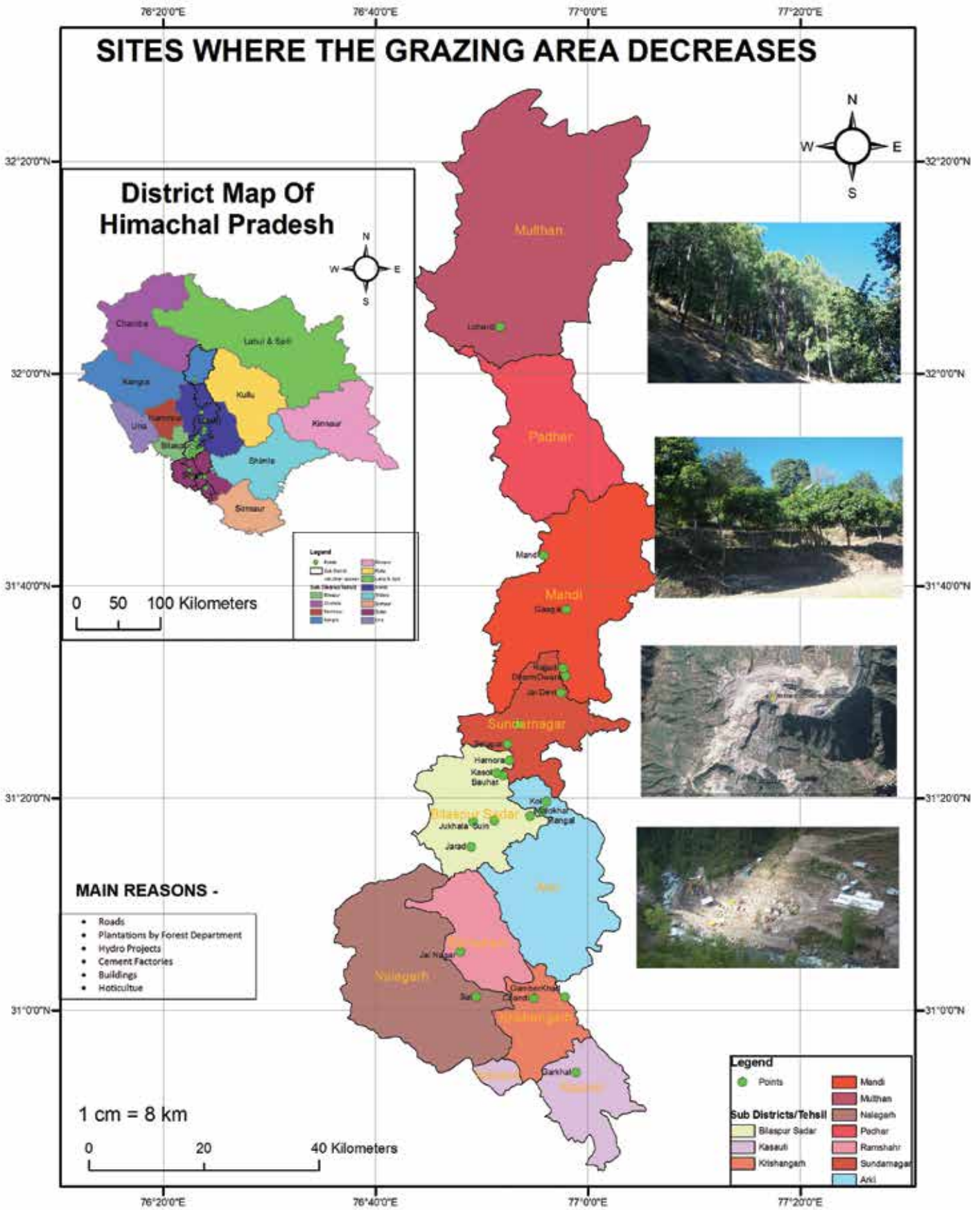
District	Grazing area	Tehsil	Forest Range	Ownership	No of HHs graze their livestock
Banaskantha	Baiwada	Deesa	Shihori	Panchayat	5
	Bhural	Dhanera	Dhanera	Revenue Dept	5
	Godar				10
	Jadiya				10
	Khimana	Deesa	Bhuj		10
	Khimat		Shihori		10
	Navamadh	Dhanera	Dhanera		10
	Nesala	Deesa	Shihori		10
	Varada	Dhanera	Dhanera		10
Kuchh	Anandpar	Rapar	Rapar		Panchayat
	Bhimasar			1	
	Hamirsar			1	
	Jajura	Bhuj	Bhuj	1	
	Kakar			1	
	Khadharvadh			1	
	Ludiya			1	
	Paiya			1	
	Pragpar	Rapar	Rapar	2	
	Vandhar	Bhuj	Bhuj	1	

Source: Primary Survey, 2013

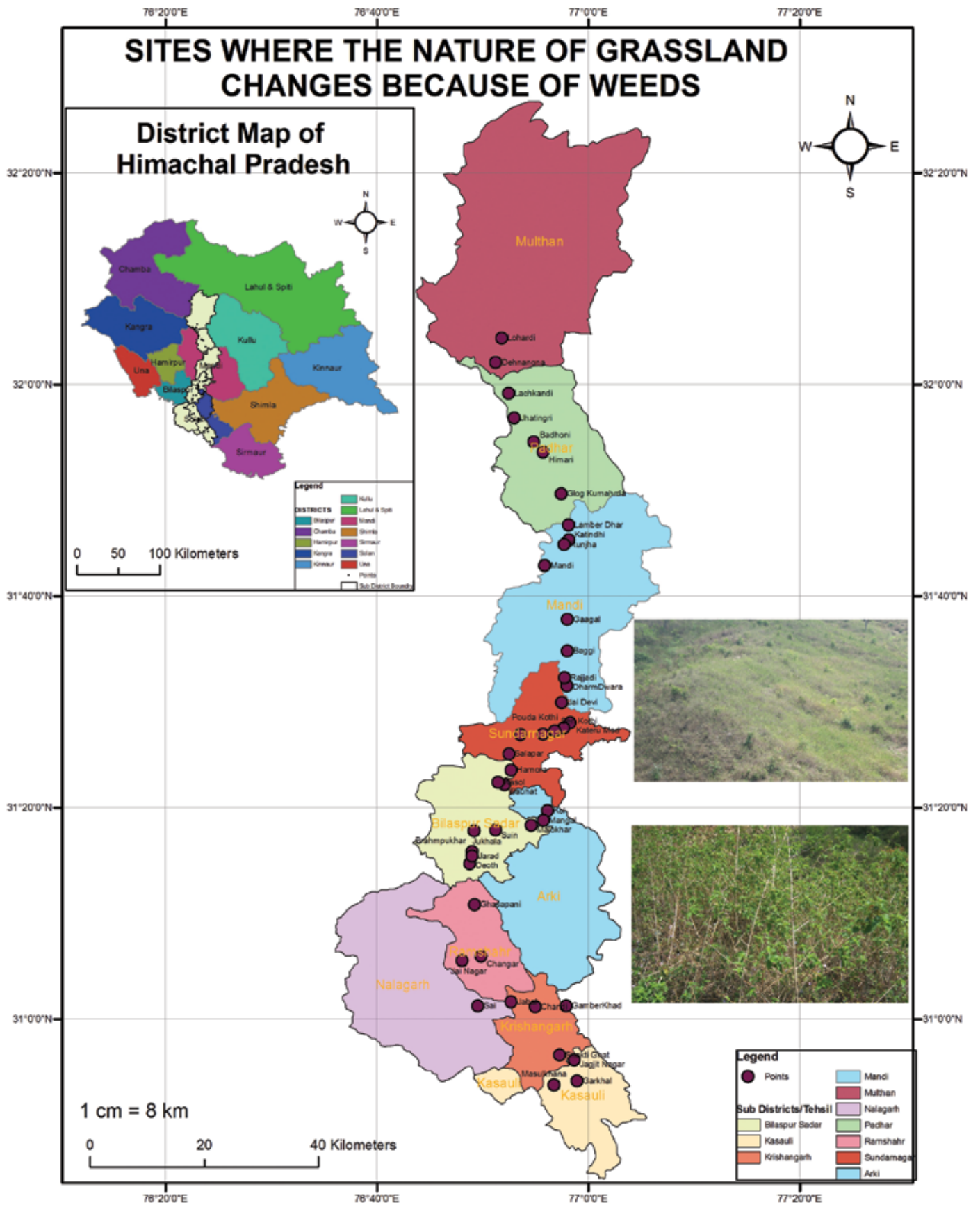
Annexure-VI



SITES WHERE THE GRAZING AREA DECREASES



SITES WHERE THE NATURE OF GRASSLAND CHANGES BECAUSE OF WEEDS



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