# Pastoral Socio-Ecological Systems in Transition: An Ethnographic Study of the Gaddis of Himachal Pradesh

## THESIS

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# CERTIFICATE

This is to certify that the thesis titled **Pastoral Socio-Ecological Systems in Transition: An Ethnographic Study of the Gaddis of Himachal Pradesh** submitted by **Aayushi Malhotra** ID No **2017PHXF0042P** for the award of PhD of the Institute embodies original work done by her under our supervision.

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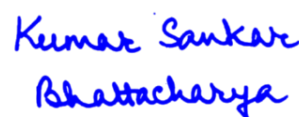Department of Humanities and Social Sciences

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# ABSTRACT

This study focuses on understanding the transitions in pastoral practices of the *Gaddis*, an agro-pastoral community located in the Western Himalayan region of Himachal Pradesh in India. It draws motivation from the recent UN declaration designating 2026 as the *International Year of Rangeland and Pastoralism* and a global gap analysis that highlights the information gaps on how pastoral systems interact with other parts of the society. Pastoralism forms a complex socio-ecological system that is linked to diverse cultures, identities, traditional knowledge, and historical experience of coexisting with nature. It shapes the distinct way of living for multiple indigenous peoples and communities across the globe. *Gaddi* is one such community that has been traditionally practicing agro-pastoralism for generations but in the recent past has observed a steep decline in its practice. This work outlines the transitions in their pastoral practices by using the socio-ecological system's perspective that helps in interpreting the complex interactions between the involved social and ecological components. Using the qualitative ethnographic research design, data for the current study was collected in 2018-2020 at Bharmour, in the Chamba district of Himachal Pradesh. Assessment of transitions in the pastoral SES of the *Gaddis* reflect an intertwined nature of their pastoral practices with other socio-cultural aspects including food practices, inter and intra-community relationships, gender dynamics and institutional practices of labour. Tracing out how the changes in these aspects co-produce the alterations in pastoral practice, this thesis sheds light on the evolving socio-ecological significance of pastoralism for the communities of practice.

**Keywords**: Agro-pastoralism, Transitions, Socio-ecological system, *Gaddis*, Ethnography

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# Abbreviations

UN    United Nations

IYRP   International Year of rangeland and pastoralism

ITDP   Integrated Tribal Development Project

TSP    Tribal Sub Plan

TPDS   Targeted Public Distribution System

SDGs   Sustainable Development Goals

SES    Socio-ecological system

SE-AS   Socio-ecological Action Situation

THP    Transhumant Pastoralism

NCP    Nature's contribution to People

# CHAPTER -1

# INTRODUCTION

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*"It is impossible to predict the future, but we can help guide and model the evolutionary processes to create the future we want".*

*(Costanza, 2014)*

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## 1.1)  General Overview and Research Context

The question of the future of pastoralism has resurfaced with the UN's declaration to observe 2026 as the *International Year of Rangeland and Pastoralism[1]* (IYRP). With this declaration that reiterates the tenets of global commitment to achieve sustainable development, particularly in social, economic, and environmental terms, discussions on pastoralism and its significance are gaining momentum (Bensada, 2017; FAO, 2021; Niamir-Fuller & Huber-Sannwald, 2020; Sa Rego et al., 2022).

Pastoralism is a type of migratory animal husbandry practice where herds and often time, households move from one place to another in search of grazing resources. It is a form of agroecological practice where livestock are reared in consonance with natural variability following specific grazing itineraries across the spatiotemporal scales (FAO, 2021). Unlike the industrial models of animal husbandry where livestock are kept in sedentary farm or ranch settings, pastoralism makes use of highly variable inputs and marginal resources with appropriate dynamic adjustments and mobility patterns (Schareika et al., 2021). It is practiced throughout the world extending from the dry, arid rangelands to the mountainous alpine grasslands where

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[1] With the support of 102 countries and 308 organizations, UN General Assembly declared 2026 as IYRP. Details are available on https://iyrp.info/

several ecological and environmental constraints restrict other forms of land use (Nori & Davies, 2007).

In a most comprehensive manner, Nori and Davies (2007, p. 7) define pastoralism as "a finely-honed symbiotic relationship between local ecology, domesticated livestock and people in resource-scarce, climatically marginal and often highly variable conditions". According to them, it also represents a complex form of natural resource management that involves a continuous ecological balance between pastures, livestock, and people. Pastoralism is also considered to be a significant contributor towards the subsistence economy in some of the world's poorest regions and developing countries as it provides employment and income opportunities to the rural poor along with taking care of their nutritional needs (Dong et al., 2016; Nori & Davies, 2007; V. P. Sharma et al., 2003). Pastoralists are also defined as 'groups or collectives who depend primarily on the products of their hoofed domestic animals and organise their settlement and mobility strategies to suit the dietary needs of their livestock' (Gifford-Gonzalez, 2005, p. 188).



*Figure 1 . Pastoralism: a sustainable natural-resource management system*
*(Source: Dong, 2016, p. 3)*
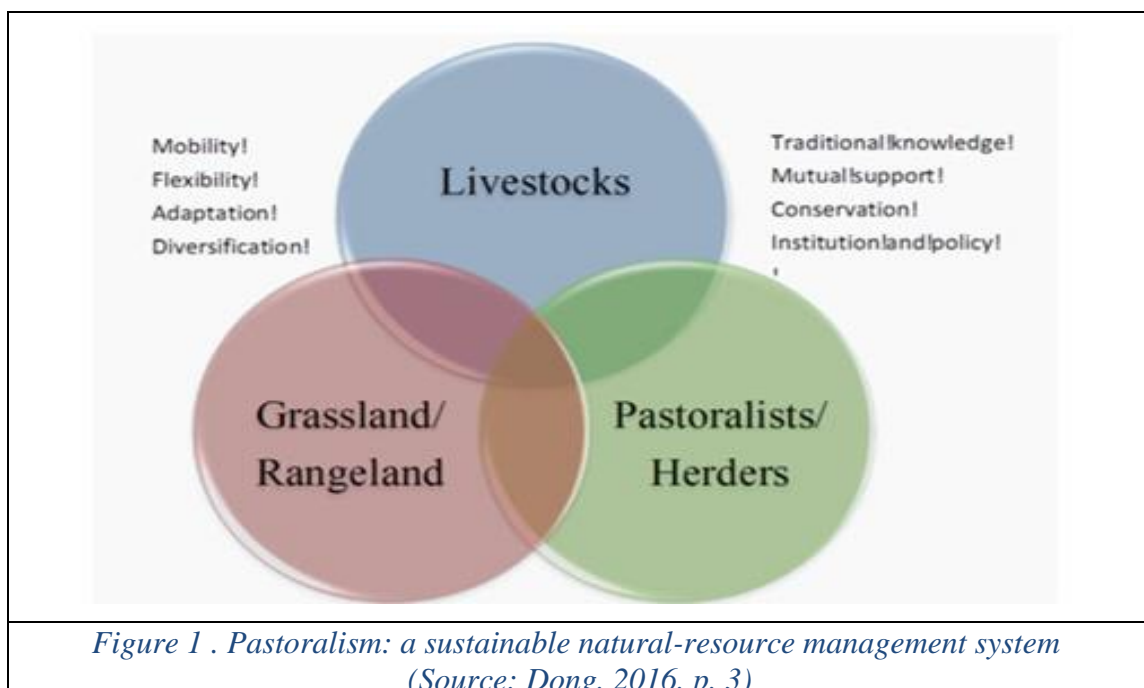
The people practicing pastoralism are mainly referred to as pastoralists, grazers, or herders but there exist several other context-specific terminologies that make their classification following a universal criterion extremely challenging (Dong, 2016; Johnsen et al., 2019). As pastoralists operate on vast ecological terrains that cover a quarter of the planet's land surface, they are also described as the '*stewards of rangelands*' (Bensada, 2017). A recent estimation suggests that around 500 million people across 100 different countries in the world depend on pastoralism for their livelihoods (Manzano et al., 2021). However, there is possibility that this number may be much larger as neatly identifying the pastoral practices based on the diverse principles of mobility, variability, and flexibility (FAO, 2021) remains a mammoth task. This also serves as a reason for hesitation to propose a common theoretical ground to study pastoralism (Dyson-Hudson, 1980), which could lead to oversimplification of diversity and differences.

Accounting for such variance, scholars have identified multiple dimensions of pastoralism ranging from a sustainable land use pattern (Hogg, 1992; Manzano et al., 2021), a type of rural economy (Behnke, 2008; J. Davies & Hatfield, 2007; Robbins, 2004), a survival strategy and means of adaptation (Dyson-Hudson & Dyson-Hudson, 1980; Meunier & Crane, 2018; Nori & Davies, 2007), a food production system (FAO, 2021; Krätli et al., 2013) to a cultural and identity marker (Gentle & Thwaites, 2016). All these ways of understanding pastoralism compositely provide an overarching idea of embedded complexity. Therefore, in holistic sense of the term it needs to be understood as a social, economic, political, ecological, and cultural system where human-livestock-land interactions acquire a centre stage (Fratkin, 1997; Manzano et al., 2021; Zinsstag et al., 2016).

Pastoral communities primarily depending on livestock rearing may also practice other secondary economic activities including small-scale agriculture or daily wage jobs to make their ends meet. Based on the livestock they rear, combination of economic activities they carry out, and the patterns of mobility they follow, their practices are broadly categorized into following types- pure pastoralism, agro-pastoralism, nomadic/semi-nomadic pastoralism, and urban pastoralism. However, scholars have contested such neat classifications based on the pastoralists strategies to economically diversify, change their migration routes, and alter their herd sizes and compositions as per the need and variable conditions they face (Dyson-Hudson, 1980; Gillin & Turner, 2022). These categories are thus found to be overlapping, which complicates the understanding of pastoralism and highlights the reason for lack of consensus in defining it (Johnsen et al., 2019).

One common strand that characterizes the diverse pastoral practices found across the world is the mobile nature of herds and their variable ecological dependence. This also remains one of the primary reasons for the multiple forms of socio-political discrimination that pastoralists face (Dangwal, 2009; Maru, 2020; Namgay et al., 2014; A. Sharma et al., 2022). Following the evolutionary thinking, pastoralism is often labelled with derogatory terms like backward, archaic or relic of the past (Maru, 2020; Mayaram, 2014; Mukherji et al., 2016; Rokpelnis, 2016). Such an outlook has remained dominant among the state and development actors who have over time and again proposed several interventions to do away with pastoral mobility and promote sedentarization among them (Fratkin & Smith, 1995; S. K. Goodall, 2007; A. Kumar et al., 2011; Nusrat, 2015). Their migratory lifestyles are pitied for the socio-economic incompatibility with the modern ways of living by invoking the binary

contradictions like settled and mobile, modern, and primitive (Maru, 2020; Rokpelnis, 2016).

Notwithstanding the prejudiced arguments that claim pastoralism to be outdated and frozen in time, recent literature challenges the widespread assumptions by stressing on the continuous evolution and adaptation observed in pastoral practices (FAO, 2021; Hauck & Rubenstein, 2017; Johnsen et al., 2019; Niamir-Fuller & Huber-Sannwald, 2020). Pastoralism has thrived over centuries and is irrefutably adapting to the changing socio-ecological conditions proving it to be a viable and rational livelihood choice even in the current times (FAO, 2021; Manzano et al., 2021; Mukherji, 2015). Amidst the growing challenges of the Anthropocene experienced in terms of depleting resources, climate change and environmental limitations, pastoralism is gradually gaining acceptance as an important natural resource usage and management system that can help in attaining multiple sustainable development goals related to livelihood and food security as well as environment, culture and biodiversity conservation (Johnsen et al., 2019; Mukherji, n.d.; Niamir-Fuller & Huber-Sannwald, 2020; Zinsstag et al., 2016).

Irrespective of deep-rooted indifference towards it, pastoralism continues to act as a significant cultural thread at many places including the Horn of Africa, which forms 'a largest conglomeration of the pastoralists in the world' (Stockton, 2012). At other places like in India, it occupies the inconspicuous interstitial spaces that sporadically shape the cultural milieu of many communities (J. Duncan, 2016; Robbins, 2004). It is believed that pastoralism has remained a crucial part of Indian culture and rural economy over the last 3500 years (Gadgil & Malhotra, 1982). A rough assessment by the German organization- *League for Pastoral Peoples and Endogenous Livestock*

*Development*, suggests that around 13 million people are dependent on traditional pastoral activities in India and contribute significantly (approximately 3%) to the national GDP (Kishore & Köhler-Rollefson, 2020).

## 1.2) Statement of Problem

Pastoralism forms a complex socio-ecological system (Samuels et al., 2019) comprising of various separable but interdependent components. These systems are under immense pressure all over the world as the linear and ecologically destructive ways of modernity overpower their existence and undermine their diverse and sustainable ways of living (Galvin, 2009; Kreutzmann, 2012; Nori & Scoones, 2019). As a praxis, pastoralism is undergoing perpetual transitions that causes these practices to either dissolve amidst the increasing external stressors or imbibe the changes through multiple adaptive and flexible responses. The decline of pastoral practices is not only a point of concern from the livelihood perspective but it also reflects larger disintegration of dependent socio-ecological sub-systems.

Recent literature highlights the array of issues that pastoralists all over the world are encountering within the limits of their situated contexts, which include unsupportive policies, development interventions, political subjugation, dwindling common pool resources and climate change. Combination of such factors are resulting in multiple social as well as ecological transitions that determine change and continuity in pastoral practices of the communities that have traditionally practiced it for generations.

Himalayan communities like that of the *Gaddis* of Himachal Pradesh, are also experiencing similar shifts resulting in an uncertain future of their traditional pastoral practices. For them, pastoralism is more than just a livelihood strategy that helps them to adapt to the environmental conditions, as it is deeply rooted in their socio-cultural milieu. At times, the rationale for practicing pastoralism for them surpasses even the economic and ecological explanations on account of its socio-cultural relevance (Ball et al., 2020; Sa Rego et al., 2022). As Ghai (2021, p. 15) explains, "pastoral rationality is embedded in deep structures of culture understood as a way of life that is intimately connected with nature and less dominated by economic values of market production". For these communities, pastoralism is not only a way of 'making a living', but also accounts for 'the way of living in itself' (Khazanov, 1994). Thus, any change in pastoralism is ought to have profound impacts on their socio-cultural fabric and vice versa.

Existing studies do not capture this co-relation between various on-going transitions in the pastoral practices and the socio-cultural life of these communities. Their narrow focus remains on the mere ecological or economic/developmental aspects, which eclipses the holistic understanding of transitions in pastoral systems. In addition, the skewed development models pushed by the local governments also decouple the embedded social systems from ecological systems (Li & Li, 2012) further obscuring the implications of changes in them. Such a lacunae in understanding the indivisibility of social and ecological aspects comprising pastoral systems limits our ability to utilize the untapped potential of pastoralism in achieving various SDGs that can help the nation-states move towards a resource-efficient, and socially inclusive green economies (Niamir-Fuller & Huber-Sannwald, 2020).

In this study, we accordingly try to explore the socio-ecological interconnectedness in pastoral system of the *Gaddis* that currently stand at the cusp of change and/or transformation. We argue that socio-cultural factors operating at the micro levels of society and ecology play an important role in influencing the transitions in pastoral systems and vice versa. With the help of evolving socio-ecological frameworks and transition theory, we thus, aim to shed light on the altering socio-cultural significance of pastoralism that largely determines its continuity and change for traditional pastoral communities. This investigation will help in drawing important insights into the resilience, renewal as well as the metamorphosis of pastoralism.

## 1.3) The case of the *Gaddis* of Himachal Pradesh

*Gaddis*, a traditional agro-pastoral community located in the Western Himalayan region of Himachal Pradesh is a scheduled tribal group for whom pastoralism holds a major socio-ecological, cultural, political, and economic importance. Also known as the 'shepherds of the snowy ranges' (Chakravarty-Kaul, 1998), *Gaddis*' pastoral practices have been continuing over generations. Their constitutional status as a tribe was also primarily a result of the perceived remoteness, and economic deprivation attributed to their traditional agro-pastoral occupation that culturally separates them from the other communities dwelling in the region (Kapila, 2008). For decades, pastoralism has governed *Gaddis*' communal identity and even their socio-economic status within and outside the community in the state of Himachal Pradesh. Even today, despite the multifold changes in its actual practices, it continues to be a key cultural referent for their community cohesion (John & Badoni, 2013).

At present, *Gaddi's* pastoral practices stand at the crossroads with an uncertain future. Although a constant decline in its practice has been recorded since 1990's with the conception of government sponsored planned development interventions (Mukherjee, 1994), the current transitions in it have become much more complex than ever. Recent studies sporadically document different aspects of *Gaddi* pastoralism including its role in identity creation, state making and affirmative action (Kapila, 2003, 2008), usage of common pool resources, biodiversity conservation and negotiation with the state (Axelby, 2007, 2016; Saberwal, 1996a, 1996b), influence of development interventions (John & Badoni, 2013) and ecological impacts of changes in their transhumance pattern (A. Sharma et al., 2022).

All these studies collectively point at the gradual changes in *Gaddi* pastoral practices that has led the community to a juncture where negotiations between their traditional ways of life and exogenously introduced development related activities is clearly visible. However, it is yet to be understood how the socio-cultural factors play out amidst such transitions and respond to the declining pastoral practices. The outdated coverage of ecological changes in the region and socio-cultural life of the *Gaddis* remain a reason for such a knowledge gap. Lack of research in this direction also presents a critical research gap regarding the evolving socio-cultural significance of pastoralism for the community that has been traditionally identified for its pastoral occupation. Therefore, an ethnographic qualitative design was formulated to explicitly focus on documenting the narratives of change that could provide an understanding of the dynamics of pastoral transitions among the *Gaddis*.

### 1.4) Research Objectives and Questions

This study is motivated by the current state of knowledge that on one hand reflects the dwindling status of pastoralism and on the other, its ability to provide a sustainable future. Based on the research problem discussed above, we focus on exploring the socio-cultural predicaments in pastoral practices and the on-going transitions in them. Our major goal is to fill the widening gap in pastoral research, policy, and practice in India by unpacking the everyday understanding of transitions in pastoral system as experienced by the people of the *Gaddi* community. Through these experiences, we aim to delineate the ever-shifting interactions between the social and ecological components of the pastoral system that determine the continuity or change in it. Thus, the fundamental objective of this research is to produce a holistic and an interdisciplinary account of the socio-ecological transitions and their cultural implications within a pastoral system of the Gaddis.

The broad research objectives that we attempt to accomplish through this research are-

- ➢ To understand the socio-ecological transitions in the Gaddi pastoral system
- ➢ To identify the cultural dimensions that regulate such socio-ecological interactions in the *Gaddi* pastoral system
- ➢ To understand the association between on-going transitions in pastoral practices and the socio-cultural changes among the *Gaddi*s
- ➢ To assess the role of socio-cultural changes in influencing the importance as well as the future of pastoralism for the *Gaddi* community

To achieve these objectives, some of the key questions raised in this thesis are-

➢ What are the important socio-ecological components and interactions that comprise the *Gaddi* pastoralism and how are they changing over time?

➢ How do the community members interpret the decline in pastoralism and its implications in socio-ecological terms?

➢ Who are the actors involved in the *Gaddi* pastoralism and how does their agency affect its functioning?

➢ How have the *Gaddi* pastoral practices changed over years and how do these changes relate with the evolving socio-cultural milieu of the *Gaddis*?

➢ What are the impacts and unintended consequences of such transitions in pastoralism at both individual and community levels?

➢ How do the local experiences and understandings inform the significance and future of the *Gaddi* pastoral practices?

## 1.5) Basic Concepts and Theoretical Underpinnings

Academic disciplines ranging from anthropology, sociology, ecology, geography, development studies and economics study pastoral concerns in diverse ways. To add to that list, an emerging interest in multifunctionality of pastoralism as a sustainable livelihood strategy, efficient resource management system, a crucial food security tool and a resilient land use practice has diverted a great deal of attention from the interdisciplinary fields of sustainability science and socio-ecology towards it. Socio-ecology is a growing field of knowledge that allows to explore the interlinkages and interdependence between social and ecological systems (Colding & Barthel, 2019). It acknowledges the inherent complexity in human-environment relationships and

provide critical frameworks to understand the integrated functioning of various components that comprise them.

Socio-ecological systems approach fundamentally borrows from the system's theory, which perceives a system as a dynamic set of interconnected elements. These coherently organised elements interact to achieve a purpose and produce a pattern of behaviour over time (Meadows, 2008). The interactions between them consequently result in feedbacks that may reinforce or modify subsequent behaviour of individual elements or even the whole system (Berkes & Folke, 1994). Similar complexity and interconnectedness are mimicked by the social and ecological systems that interact to produce specific outcomes. Studying them as interrelated and co-evolving parts of a larger system is an alternative to discard the artificial distinction and duality between the nature and culture (Fabinyi et al., 2014). This duality has been extensively challenged in Anthropology for decades (Descola, 1994; Descola & Palsson, 1996; Ingold, 2000); however, its interdisciplinary reach has remained restricted.

In anthropological tradition, studying human-environment interactions started with the proposition of cultural ecology by Julian Steward since 1950's. This school of thought explores the culture, technology, and environment triad and sheds light on the ways environments are understood and utilized in culturally prescribed manner. With no generalized conclusions, cultural ecology- both as a problem and method-suggests ways for reviewing local human-environment interactions and cultural adaptations (Haenn & Wilk, 2006). However, it side-lines the subjectivities, meanings, emotions, and individual motivations that characterize the human interactions with environments (Barrett, 2009). The overemphasis over objective conditions in cultural ecology led it into many criticisms and disapprovals. It also highlighted a strong need to move away from the reductionist or deterministic ideas of

theoretical dualism (like nature-culture or agency-structure) and pave a way for evolved frameworks that envision societal and environmental issues to be co-evolving (Moran & Brondizio, 2013). With such a realisation for complementarity than segmentation and increased dialogue between natural and social sciences, system's thinking to conceptualise socio-ecological or human-environment interactions came into existence (Moran & Brondizio, 2013; Ostrom, 2009; Petrosillo et al., 2015).

Recent meta reviews (Colding & Barthel, 2019; Herrero-Jáuregui et al., 2018; Partelow, 2018) highlight the penetration of SES concept across disciplines that strive to understand the evolving socio-ecological conditions and more importantly, the global change. According to these comprehensive studies that take into consideration the literature from over the last 20 years, SES as a concept finds multi-dimensional usage in developing an understanding of complexity between the natural and social world. It has been sporadically used in pastoral literature to demonstrate the interconnectedness of social and ecological components. However, most of the research and knowledge as well as the vocabulary and concepts used to theorize pastoralism as a socio-ecological system remains fragmented.

Extending this limited body of knowledge, in this thesis, we utilize the concept of SES to make a gradual shift from the disciplinary silos towards an interdisciplinary investigation of embedded complexity in pastoralism. To do so, we adapt from the variety of available definitions and frameworks to understand the combined nature of socio-ecological transitions in pastoral SES of the *Gaddis*. The following sections contain the operational definitions and details of these concept and framework are elaborated.

### 1.5.1) Socio-ecological systems

Socio-ecological or human-environment systems are defined in multiple ways. In this thesis, we borrow from Elinor Ostrom's (2007, 2009) idea of socio-ecological systems (hereafter SESs) that provides a diagnostic approach to understand the complex interactions between social and ecological components. According to Ostrom, "SES are composed of multiple subsystems and internal variables within these subsystems at multiple levels that are analogous to organisms composed of organs, organs of tissues, tissues of cells and cells of proteins" (2009, p. 419). Following the human body's analogy, she proposed SESs as multilevel, nested and a complex system that comprise resource systems, resource units, actors, and governance systems. All these subsystems within the larger SES interact to produce system level outcomes that feed back into the system as well as the components invariably (McGinnis & Ostrom, 2014; Ostrom, 2009). It is the non-linearity in these interactions and looped nature of feedback generated within the SESs that make them highly complex and difficult to discern (Refer to Figure 2, p.21). The components as well as the interactions between them are determined and defined according to the problem at hand. Using system's thinking, dynamic interactions and feedback between the social and ecological components are conceptualized to study the subsequent change in the system.

In simpler terms, SESs are the summation of interactions among the people and nature that remain interdependent and co-evolutionary in character (Andrachuk & Armitage, 2015; Colding & Barthel, 2019; Petrosillo et al., 2015). The indivisibility and co-evolution of these interactions makes it difficult to interpret them as linear cause-effect relationships. SESs show strong interlinkages between the social, economic, ecological, cultural, political, technological, and other components that

function in an integrated manner. Theoretically, they are defined as adaptive systems that observe nonlinear and cross-scale dynamics between its components and display irreducible uncertainty in terms of outcomes and emergent behaviours at the system's level (Bennett & Reyers, 2022).

SESs approach emphasizes the integrated concept of 'humans-in-nature' (Petrosillo et al., 2015) that disagrees with the dominance of one over another. According to Preiser et al. (2018), six main defining features of a socio-ecological system are-

1. They are relationally constituted i.e., instead of the individual components, it is the interactions between the components that constitute the system's behaviour and properties.

2. They are adaptive in nature i.e., they continually adjust to the changing conditions based on the feedback processes between the components.

3. They demonstrate dynamic and non-linear interactions between the components i.e., the components of SES interact in multiple ways which doesn't always follow a linear pattern.

4. They have no clear boundaries i.e., SESs are more of an abstraction than a concrete entity that are used to understand a particular problem in hand.

5. They are contextual. i.e., SES, its components, and interaction between them are highly context dependent.

6. They maintain complex causality and emergence i.e., the interactions in SESs are not unidirectional and linear, and hence they generate such complexity that cannot always be predicted.

Although, socio-ecological system's framework has its roots in collective action theory and was originally conceptualized to solve governance related problems in common pool resources, its current scope of application goes far beyond (Partelow, 2018). Recent reviews show a wide range of application of SES concept and frameworks in diverse sectors including fisheries, forestry, coastal management, rangeland, and different food production systems (Herrero-Jáuregui et al., 2018; Partelow, 2018). As it offers an experimental ground to study varied problems with converging social and ecological interactions, we use SES approach to theoretically and analytically guide this study to capture the nuances of changing pastoral practices of the *Gaddis*. SES approach extends the understanding of pastoral transitions on the system's level by highlighting the adjustments in its components as well as the interactions between them. From being a dominant traditional livelihood strategy and a way of life to its current state with indefinite future, the on-going changes in the *Gaddi* pastoral system are probed using the theoretical concept of transitions, as discussed in detail in the next section.

**1.5.2) Conceptualizing Transitions in SES at the cusp of change and continuity**

Transition as a term is loosely used across academic literature to reflect on the process of change. As a dictionary term, it is understood as a shift from one place, state, subject, or condition to another. However, as a concept in social sciences it has acquired several meanings that have continually evolved over decades. In 2000's, transition thinking emerged as a major influence for determining sustainable energy and environment related policies that later spawned across disciplinary boundaries (Chappin & Ligtvoet, 2014). Lately, transition is used as a unifying concept to

comprehend the global change (Kralik et al., 2006) in all walks of life ranging from macro scale of climate change to the micro level of household energy consumption. It helps in taking a cue from the current trajectory of change to design alternative and better pathways for a sustainable future.

In this thesis, we operationalize the term in context of system level changes in pastoralism that stem out of the varying socio-ecological interactions over time. It is used to illustrate the continuous process of change rather than merely focusing on any particular outcome of it. The idea of transition overlaps the concept of transformation, which is often synonymously used in the sustainability literature to identify the long-term and large-scale outcomes of the processes of change (Chappin & Ligtvoet, 2014; Hölscher et al., 2018). However, transformation lacks the consideration for 'continuity', which dynamically pairs with the concept of 'change' (Jandreau & Berkes, 2016). Therefore, we opt to focus more on the transitions than transformations as our objective is to highlight the shifting relevance of pastoralism from a socio-ecological standpoint. Transitions help in conceptualizing change as a dynamic and on-going process without fixating it in normative evolutionary categories.

In pastoral literature, transition is a commonly used term that collectively denotes the processes of change as well as the outcomes of it. It is utilized in myriad of ways to explain the changes pastoral practices are undergoing. For instance, Schareika et al. (2021) explain the critical transitions from free range pastoralism to sedentary ranching in Central Africa. Their study while highlighting the changing meanings of animal husbandry practices for the local communities also detail out the continuum between pastoralism and ranching. Such co-existence of variable, but overlapping practices at the same time, are important to understand that transition is a

dynamic phase with indefinite outcomes. Another recent study by Carrer et al. (2020) shed light on the pastoral transitions towards modernity that involves increased interaction with the free market and extra local economic structures. Their findings suggest a non-linearity in the processes of change, which emerge at an intersection of multiple social, historical, economic, and political factors. In their opinion, transitions in pastoralism shouldn't be understood following an evolutionary approach that assumes the replacement of one type of practice with another. It should rather be seen as forming a continuum between traditional and modern practices that are essential for sustainability and resilience.

Transitions in pastoral practices have been identified by many other scholars who focus on variable aspects like adaptations and coping strategies that pastoralists utilize to persist (Galvin, 2009; Wangchuk & Wangdi, 2015) or to devise the alternative and sustainable pathways that eliminate the pastoral vulnerabilities (FAO, 2018). In addition, there are researchers that take into consideration the transitions in pastoral migration patterns (Chakraborty, 2017), livelihood diversification (Rahimzadeh, 2016; Schmidt & Pearson, 2016), ecological changes and herd compositions (R. Singh et al., 2015). All these studies, despite their different approaches towards transitions, collectively highlight the changing dynamics within pastoral systems. They implicitly point out the shifting interactions between the components of the system that in some cases may lead to a change while in others demonstrate a continuity of similar practices.

Based on this idea of change and continuity, in this dissertation we use the concept of transitions to stress on the processes of shifting interactions between system's components. As one of the key objectives is to understand the significance

of pastoralism for the community of practice, concept of transition remains useful to make sense of how the oscillations between change and continuity takes place.

Transitions characterize all pastoral communities across the world that currently are in an unstable state because of multiple internal and external forces of change acting on them (Niamir-Fuller & Huber-Sannwald, 2020; Schareika et al., 2021; R. Singh et al., 2015). With an uncertain future in sight, the social and ecological dimensions of these systems are altering to result in changes for the functioning of whole system. These changes, on the surface, remain difficult to count, observe and apprehend. Hence, no single metrics or statistic is fully competent of capturing the degrees of change that a social system undergoes in relation to the ecological processes. The reason is the complex and chaotic nature of interactions and feedbacks that characterize these systems. As a result, only a few variations are documented and measured while many of them remain immensurable and consequently, undertheorized. In the case of pastoral systems, cultural ramifications of the consequent socio-ecological changes represent the latter. Thus, the goal in in this thesis remains to delineate such multilinear transitions that impart a dynamic character to the overall pastoral system by following a framework described in the next section.

## 1.5.3) Theoretical and Analytical framework

Keeping the research gaps and objectives in mind, this study takes inspiration from the transition literature in Socio-ecological system's studies. Three different frameworks including- Socio-ecological framework (McGinnis & Ostrom, 2014), social-ecological Action Situations (SE-AS) framework (Schlüter et al., 2019) and the

model of cultural dimensions of socio-ecological systems (Poe et al., 2014) collectively form the basis of theoretical and analytical conceptualization of this study. These frameworks have been proposed under different rationales to address a diverse set of questions, but they provide a converging understanding of SES interactions. In this study, we adapt from these frameworks accordingly by accepting and discarding the elements to suit the need of the research problem. The adapted framework can be understood as a 3-step process where first step is to descriptively organise the practice of pastoralism as a system, second includes understanding the on-going interactions and resulting transitions within the system and the third and final step is to interpret the emerging implications of those transitions.

Firstly, to understand pastoralism as a socio-ecological system, SES framework (McGinnis & Ostrom, 2014) that provides the basic vocabulary of concepts and ideas to perceive the placements and arrangements of different social and ecological components is used. This framework (refer to Figure 2, p.21) lays a foundation for the idea that SES operates as a system with several multi-tiered components that generally include resource systems, resource units, actors and governance systems, which interact within the larger backdrop of social, economic, political, and environmental settings. Interactions between these components result in focal action situations that further influence each individual component resulting in dynamic feedback loops (McGinnis & Ostrom, 2014). This framework prescribes a list of multi-tier variables that are assessed based on the problem in hand. However, we only use the first-tier variables to represent the boundaries, interactions and functioning of the components in the pastoral system. Following the ethnographic nature of the current study, variables and categories that emerge from the local

understanding would be used in place of the predetermined labels as suggested in original framework.



*Figure 2 Socio-ecological Framework (McGinnis & Ostrom, 2014)*
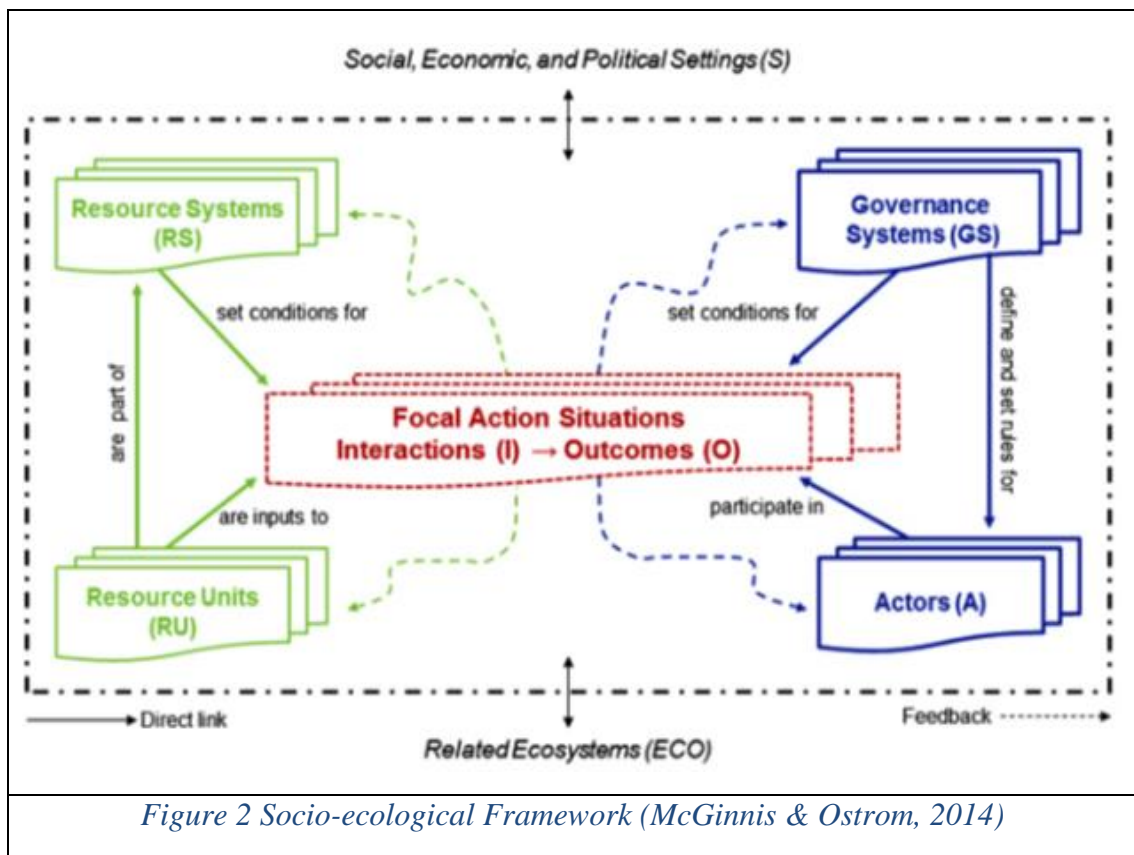
In the next step, we borrow from the social-ecological action situations (SE-AS) framework (refer to Figure 3, p.23) that helps in shedding light on the key interactions in the ecological and social domains and understand the on-going nature of transitions using the analytical category of action situations (Schlüter et al., 2019). As per this framework, multiple action situations i.e., different kinds of contextual interactions between the components exist variably on the temporal and spatial levels of the SES. These action situations simultaneously exist within one system and combine to yield the emergent phenomena of different nature including purely social or purely ecological to complex social-ecological ones, depending upon interactions being considered. Within one SES, it remains possible that direct interactions between

just the social components or just the ecological components also generate collective and complex outcomes for the larger system. Therefore, deconstructing the nature of interactions and transitions remain important. Deriving from this framework, different interactions between the socio-ecological components of pastoral systems are considered to comprehend the emergence of cultural dimensions as well as the impacts of the on-going transitions on them.



*Figure 3 Social-ecological Action Situation Framework (Schlüter et al., 2019)*
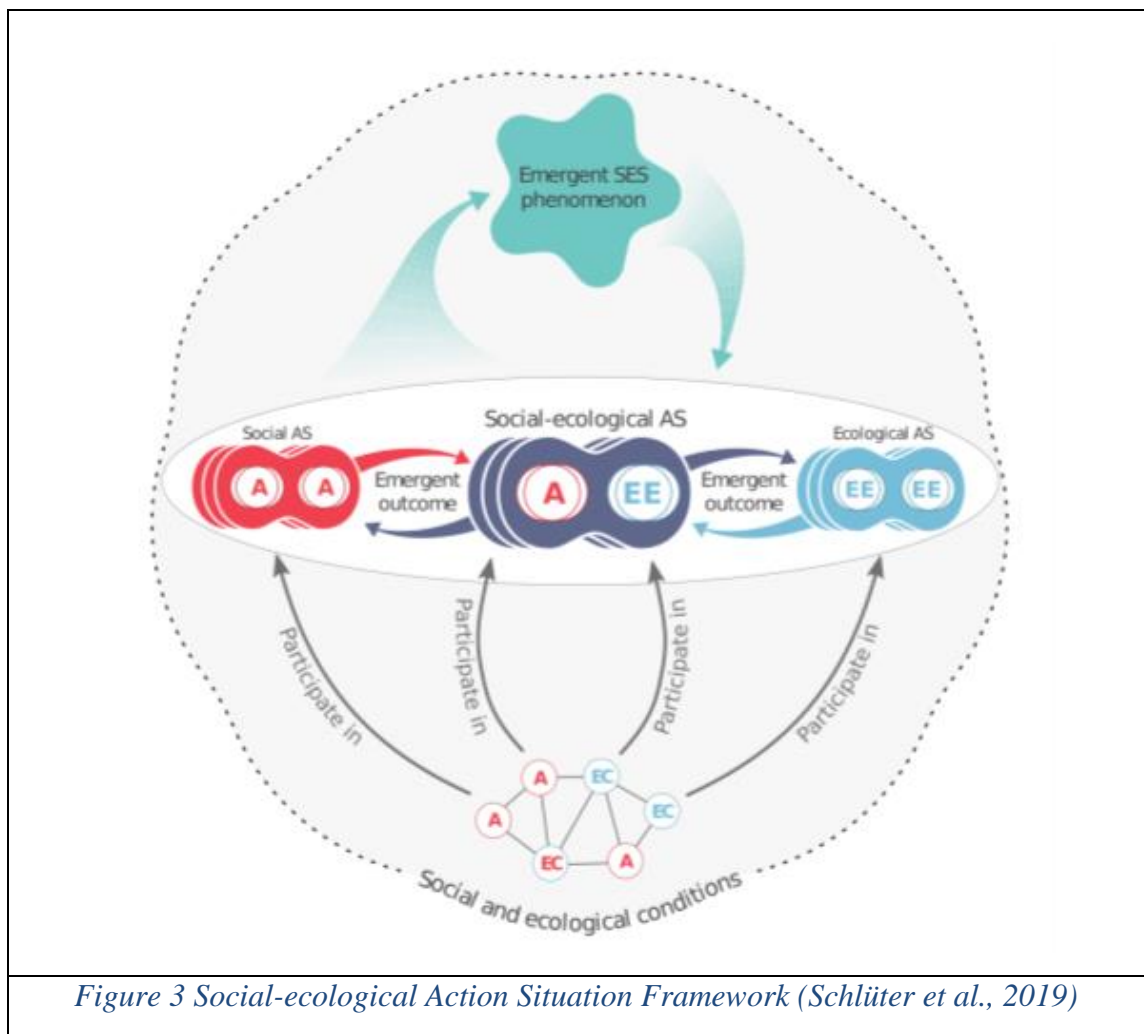
Proceeding to the last step of the theoretical-analytical framework, different cultural dimensions of the pastoral SES are conceptualized by adapting the model suggested by Poe et al. (2014). Based on this model (refer to Figure 4), five fundamental cultural aspects are suggested to emerge out of the interactions in the

SES. It includes- meaning, values and identities; local ecological knowledge and practice; livelihood dynamics; governance and access; and bio-cultural interactions (Poe et al., 2014). Although placed in separate categories, some of these aspects observe overlaps between them which makes it difficult to draw neat distinctions. Nonetheless, in the current study we only borrow a general understanding from this conceptual model to organise, analyse and interpret the collected data to understand the cultural transitions in pastoral socio-ecological system of the *Gaddis*.



**Meanings, Values, and Identities**
- Define a person or community and constitute a 'way of life'
- Attributed to objects, places, relationships, practices, and processes
- Enlivened through language, relationships, and practices
- Develop through ecosystem interactions
- Form and informed by 'cultural models'
- Dynamic, heterogenous, changing over time and space

**Local Ecological Knowledge and Practice**
- Cumulative knowledge of the environment and its social and spatial conditions
- Embedded within sociocultural processes
- Continually regenerated through practical engagements with ecosystems

**Livelihood Dynamics**
- Formal and informal economic activities
- Noncommercial harvests for household use or exchange
- Linked to culture, knowledge, social relations, and traditions
- Job satisfaction, quality of life, and occupational and place identities

**Governance and Access**
- Mechanisms of control, rules of access, decision-making processes
- Tied to philosophies, norms, relationships, and knowledge systems
- Varied dynamics across spatial and organizational scales
- Entangled with political issues of power and inequalities

**Bio-cultural Interactions**
- Varied food web effects on sociocultural phenomena
- Cultural keystones species play fundamental roles in social systems and cultural identity
- Culturally-based restoration and management creates 'bio-cultural landscapes'
- Changing enviroments impact cultural connections to ecosystems and cultural wellbeing

*Figure 4 Conceptual Model of Cultural Dimensions of Socio-ecological System (Poe et al., 2014)*

In general, a combination of these frameworks (as shown in Figure 5) with the theoretical guidance from cultural ecology, environmental anthropology and concept

of SES helps in enhancing the understanding of transitions and emerging outcomes at the socio-ecological level. Specifically, it enables a better visualization of the transitioning pastoral systems not only in the conventional terms of resources and management strategies but even the cultural attributes that are a result of plural interactions between the social and ecological components.



*Figure 5 Theoretical- Analytical Framework of the current study*
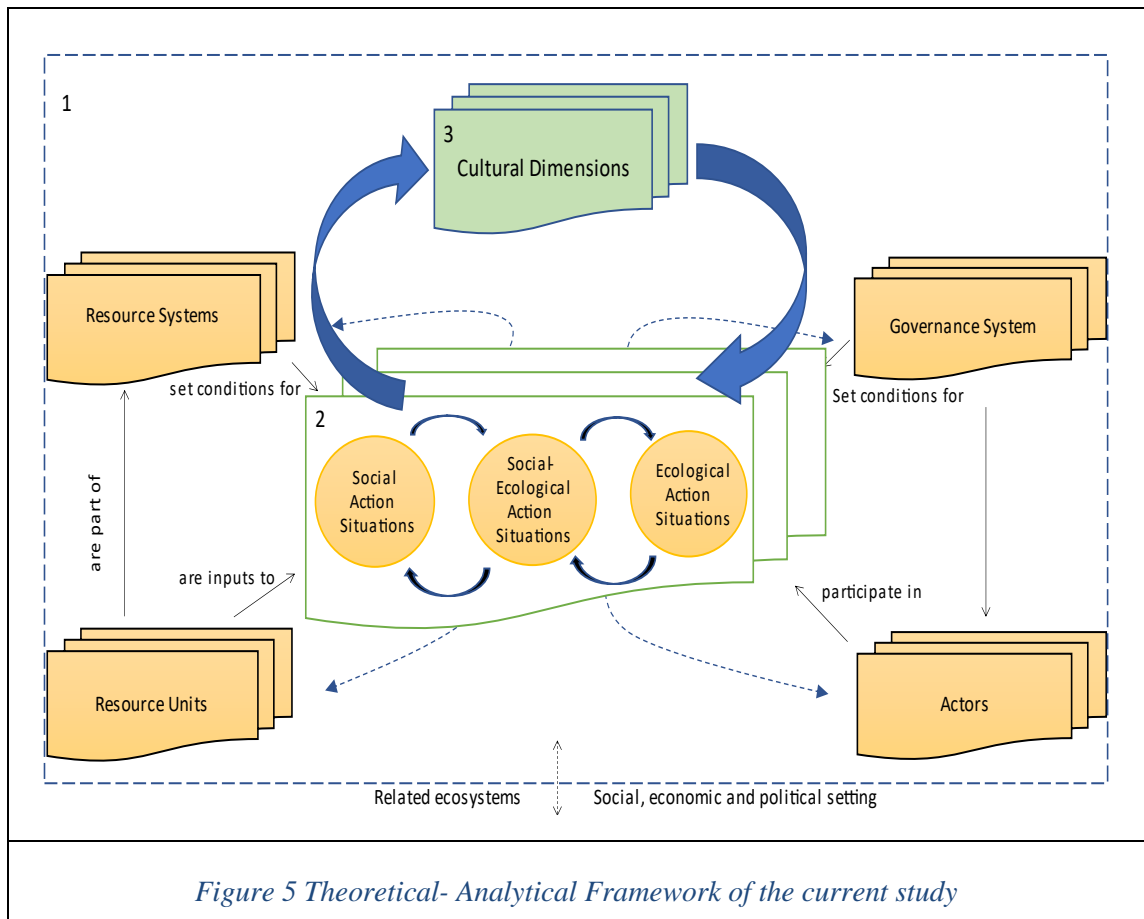
## 1.6)    Relevance of this study

This study remains a timely contribution towards a wider call for strengthening the knowledge base on current practices of pastoralism found across the world. With the UN's declaration of IYRP, a necessity to expand our understanding on the on-going transitions and transformations in pastoralism has come to the fore. As a response to such a need, this study critically engages with the global gap analysis that found

pastoralism to be a 'case of benign neglect' (Johnsen et al., 2019). It contributes to advancing the understanding on pastoral functioning from a novel perspective of socio-ecological systems (SES). SES approach allows for a dynamic comprehension of the interactions between social and ecological components involved in pastoralism instead of perceiving them as fixed entities in time. The observations made through this study are analytically extendible and valid for other pastoral communities not only in India and South Asia but all other parts of the world where pastoralists are undergoing similar transitions. This study makes the following contributions at empirical, theoretical, and methodological levels:

- It extends the socio-cultural understanding of contemporary pastoralism in general, and transhumant mountainous pastoralism in specific, by updating the classical interpretation that otherwise perceives them to be frozen in time.

- It also adds to the on-going discussions on theorizing continuity and change in human-environment interactions by comprehending the multilinear processes that take place within a system. By conceptualizing pastoralism as a socio-ecological system that comprise multiple resources, governance rules and norms and actors and their corresponding agency, cultural explanations of everyday transitions that affect the human-environment relationships in the pastoral system of the *Gaddi* is provided. It helps in shedding light on embedded complexity, causation, and interconnectivity among the involved variables.

- As it relies on the emic perspective of people that emanates from their lived reality, this study makes efficient use of qualitative methods in examining socio-ecological systems and transitions in them. SES studies till date remain predominantly engrossed with quantitative estimations that provides incomplete understanding of relational, cultural and context specific transitions. Thus,

breaking away from that monotony, the importance of ethnographic and qualitative methodologies in comprehending the dynamic and interactive socio-ecological processes is highlighted through this research.

- At last, this study also remains relevant for guiding the future research on pastoralism to recognize the role of cultural elements in mediating the transitions in pastoral systems. By emphasising that socio-cultural dimensions, which remain entangled within the SES interactions are also dynamic in nature, we establish the relevance of locally meaningful categories for analysis of change and continuity.

## 1.7)   Organization of the thesis-

For a coherent and systematic flow of ideas, this thesis is organized into 8 chapters (refer to Figure 6) that are thematically arranged to understand the transitions in the *Gaddi* pastoralism. Chapter 1 comprises the general introduction and background of the study along with the highlights of its relevance and purpose derived from the existing debates in the literature. It also presents a brief statement of the problem followed by research objectives and questions, and the operational definitions and theoretical concepts used throughout the thesis.

Chapter 2 is based on a thorough review of literature that is thematically arranged to understand pastoralism on scale across the world, in India and among the *Gaddis* of Himachal Pradesh. This comprehensive review offers an interdisciplinary insight on the existing pastoral research and helps in explaining the gaps that the current study aims to fill. It mainly reflects on the definitions and concepts of pastoralism, presence of pastoralism in the world and in India along with mentioning

the existing studies on the *Gaddis*, in a chronological manner. It also reviews the relevant works of theoretical and conceptual importance for the proposed study.

In Chapter 3, methodological standpoint covering research design, methods and tools of data collection and analysis utilized in the study are elaborated. The research context and the step-by-step procedures followed for data collection are also discussed in detail in this chapter. Chapters 4-7 are based on the themes that emerged after data analysis and present the relevant findings of the study in tune with the research objectives.

In Chapter 4, trade-offs observed in food practices, social structure, and land use patterns in the backdrop of changing pastoral practices are discussed. Here, we highlight how the transitions in pastoralism are not restricted only to livelihood change but spill over to the other socio-cultural aspects of community life. In Chapter 5, we explore the pastoral transitions in terms of changing intra-community relationships among the farmers and pastoralists. The focus of this chapter remains on the shifting reciprocities and their implications at socio-ecological levels. In Chapter 6, prevalent gendered dynamics in the *Gaddi* community is discussed in consonance with their pastoral practices. Here, we examine how the changing gender norms relate to the altering status of pastoralism in the *Gaddi* community and impact its continuity. Chapter 7 outlines the labour dynamics and shifting nature of institutional arrangements around it in the *Gaddi* pastoralism. Labour, being a critical aspect in pastoralism, plays an important role in influencing the socio-ecological processes and thus, have a determining role in all the on-going transitions.

Lastly, in Chapter 8, we comprehensively synthesize the findings into coherent inferences that provide crucial insights for the socio-cultural and pastoral transitions

among the *Gaddis*. We reiterate the importance of socio-ecological system framework and conclude by highlighting the contributions of this study. Limitations and future scope are also mentioned to guide the future research on similar issues.

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Methdology

Chapter 4:Tradeoffs and transitions in food practices

Chapter 5: Agricultural-Pastoral reciprocity: Shifting relations of exchange

Chapter 6: Gender dynamics and shifting pastoral practices

Chapter 7: Labour dynamics and shifting pastoral practices

Chapter 8: Synthesis and Conclusions

Appendix

References

*Figure 6 Thesis Map*

# CHAPTER 2

# LITERATURE REVIEW

## 2.1) Introduction

In this chapter, we comprehensively explore the pastoral contexts in India and the world following an interdisciplinary approach to shed light onto the current state of knowledge. To do so, a critical review of the existing literature that includes published journal articles and thesis, official documents and reports, grey literature as well as popular media write-ups discussing different issues concerning pastoralism was conducted. A thematic approach was followed for an orderly analysis and compilation of literature that helps in distinctly identifying the existing research gaps. In addition, the literature establishing a connection between pastoral studies and scholarly works on the socio-ecological systems was also carefully examined. Such an assessment helps in understanding the effectiveness of socio-ecological system's frameworks in conceptualizing pastoralism and the associated transitions. It also provides the further details on the adapted SES model and frameworks discussed in the first chapter.

This review is structured to flow from general understanding of pastoralism across the world to specificities in India and among the *Gaddis*. It comprises an analysis of research trends and trajectories across the pastoral contexts and highlight the areas that need a renewed research focus. Keeping the cultural dimensions of SES in the backdrop (as mentioned in chapter 1), the pastoral literature is assessed to understand the documented nature of socio-ecological interactions and transitions among different pastoral communities. The two important converging aspects that

emerge out of the diverse literature are- crisis in pastoralism and the future of these practices, which remain in tune with the research problem and objectives of this study. Through this chapter, we establish the need for re-examining the pastoral systems using a cultural lens and a socio-ecological system's approach for developing more holistic and better understandings of transitions.

## 2.2) Pastoralism- Definitions and Concepts

Pastoralism is defined by multiple scholars differently based on the context of their research. Out of the plethora of definitions that exists, not even one entirely justifies the levels of variability it beholds. One of the descriptions that comes closest to being the most holistic definition of pastoralism used globally is that "it is a finely-honed symbiotic relationship between local ecology, domesticated livestock and people in a resource-scarce, climatically marginal and highly variable conditions" (Nori & Davies, 2007). While representing a complex form of natural resource management, pastoralism remains an important economic and cultural way of life that makes use of extensive grazing on rangelands[2] for livestock production (Secretariat of the Convention on Biological Diversity, 2010). The people practicing pastoralism are broadly called as pastoralists but are also identified using a variety of labels such as herders, graziers, cowboys, shepherds, criançeros, livestock farmers and many other colloquial names (Niamir-Fuller & Huber-Sannwald, 2020). They are considered the stewards of rangelands that cover a quarter of the planet's land surface making pastoralism to be a most widespread pattern of land use across the world (Bensada, 2017; Manzano et al., 2021). Apart from that, pastoralism is associated with a

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[2] Rangelands are grasslands, shrub lands, woodlands, wetlands, and deserts that are grazed by domestic livestock or wild animals

provision of high value food, protection of the globally important biodiversity and ecosystems (Bensada, 2017).

Pastoralism is also considered to be a significant contributor to the subsistence economy of some of the world's poorest regions and major developing countries as it provides employment and income opportunities to the rural poor along with taking care of their nutritional needs (Dong et al., 2016; Nori & Davies, 2007; V. P. Sharma et al., 2003). For its survival and continuance, pastoralism requires an unremitting balance between the three axes of a Pasture-Livestock-People complex (Dong et al., 2016). According to (Fratkin, 1997), it is the human-livestock-land interactions that matter the most. Irrespective of what vocabulary is used to define that nature of pastoral practices, the main characteristics as compiled by (Scoones, 2020) include living off the uncertainty, mobility, flexible land controls, market linkages, dynamic social formations, moral economies and range of political networks.

Pastoralism is also defined to be an adaptive system to overcome stressful environments and risks by using means of mobility, flexibility, and diversification (Dong et al., 2016; Fratkin, 1997; Kreutzmann, 2012; Namgay et al., 2014; Nori & Davies, 2007). UNEP & IUCN's (2015) report calls pastoralism to be "one of the most sustainable food systems on the planet". Moreover, it is also a means of livelihood that is acknowledged as an indigenous practice carrying an immense cultural significance (Gentle & Thwaites, 2016; Manzano et al., 2021). Pastoralism to be precise is a cultural system shaped by many physical, socioeconomic, and historical forces (Verma & Khadka, 2016).

Importantly, pastoralists play a vital role in the two way flow of ecosystem services[3] as they derive fodder and water for their livestock and simultaneously contribute in maintenance of stability of the ecosystems by the virtue of their collective activities (Secretariat of the Convention on Biological Diversity, 2010). Contrary to the popular perception, which relegates it as a remnant of the past, pastoralism is an adaptation to the changing survival conditions and does not merely form a transitory stage on the path of modern development (Kreutzmann, 2012). According to the recent data, extensive pastoralism occurs on about 25% of earth's land area including the dry lands of Africa and the Arabian Peninsula to the highlands of Asia and Latin America (Dong et al., 2016; FAO, 2021; Manzano et al., 2021; Scoones, 2020). Spread across a vast expanse of variable geo-physical conditions, pastoral practices embody more differences than uniformity across contexts. Pastoralists like all other people make their everyday decisions within the specific political, economic, environmental, and socio-cultural contexts (Yeh et al., 2017). These decisions produce the characteristics of any pastoral community that shows a wide range of variations adopted over a long period of time particularly in terms of mobility, economy, and social aspects (Biagetti & Howe, 2017). The categorical differences emerging out of these accounted variations can be additionally employed to understand the pastoral systems based on the reared livestock species and herd size, cultural affiliations, flexible management systems and changing ecological conditions (Bhasin, 2013; Biagetti & Howe, 2017).

There are different forms of pastoralism practiced across the world depending upon the production activities, types of mobility and resource patterns and the labour

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[3] Ecosystem services include the outcomes, conditions or processes of naturals systems that directly or indirectly benefit humans or enhance social welfare e.g. Food production, water supply, regulation of biodiversity, carbon sequestration etc. *(Source: Encyclopaedia Britannica)*

dynamics involved (Scoones, 2020). Based on the production activities, some communities follow 'pure pastoralism' where herding activities remain the sole livelihood while some practice it in combination with agriculture that is recognised as 'agro-pastoralism' (Bhasin, 2013; Fratkin, 1997). For agro pastoralists, both herding and agricultural activities remain equally important sources of livelihood and subsistence. These practices help them to transform the extensive but physically marginal rangelands/wastelands into economically productive areas (Namgay et al., 2014).

Based on the mobility patterns observed, one of the major types of pastoralism is identified as Transhumant Pastoralism (THP) that remains native to several mountainous regions across the world. THP is characterized by a seasonal migration of livestock and humans between many agro-ecological zones (Gentle & Thwaites, 2016). According to various scholars, THP can be classified into two categories depending upon the pattern of movement followed during migration: vertical transhumance and horizontal transhumance (Kaul 1998; Bhasin, 2013; Dong, 2016). Vertical THP is practiced majorly by the mountainous communities who follow an up and down migration pattern across the altitude levels, while the horizontal practice is a feature of plains or plateau regions where movements across the same altitude remain common. Transhumance is a crucial institution that is well conceptualised in pastoral literature and remains important for developing harmonious interdependence between social institutions and ecosystems (Chakravarty-Kaul, 1998).

In addition, there exist nomadic pastoral practices where movement patterns are flexible with no fixed points or routes. In such cases, resource availability and variations largely determine the herder's movement (Tijani, 2017). Nomadic pastoralism is a common practice in the regions with little arable land, typically in the

dry lands of the world that receive low rainfall and face harsh climatic conditions (Dong, 2016). Both, nomadic and transhumant pastoralism demonstrate the types of adaptations pastoralists pursue to efficiently use the marginal environments characterised by climatic uncertainty and low grade-resources (J. Davies & Hatfield, 2007; Nautiyal et al., 2003).

Thus, based on such variable characteristics and components displaying the interplay of social and ecological factors, pastoralism can be defined as a complex socio-ecological system (Samuels et al., 2018; Hatfield & Davies, 2006, p. 5). According to the literature, altering climatic conditions (Hauck & Rubensteinq, 2017; Kreutzmann, 2012), varying natural resource management strategies (Umutoni & Ayantunde, 2018), ways of political negotiations (Axelby, 2007), economic diversifications (Thakur & Kahlon, 2015), and overall societal structures (Bhasin, 2013) govern the pastoral practices as well as the complex transitory situations that can be currently observed across the world. All these dimensions collectively highlight the coupled human-environment nature of pastoral systems where dynamic interactions between the social, economic, cultural, ecological and political variables take place (Dong et al., 2016)

## 2.3) Pastoralism as a Socio-ecological System

A socio-ecological system comprises inseparable and intertwined human and natural elements that operate in an interconnected and interdependent manner (Biggs, Clements, et al., 2021). Pastoral systems also demonstrate the similar complex and symbiotic relationships (Dean et al., 2021; Klein et al., 2012; Manzano et al., 2021; Zinsstag et al., 2016). They lack the clear compartmentalization between social,

cultural, economic, political and environmental dimensions that imparts them the complex and chaotic socio-ecological character (Meunier & Crane, 2018). Components in the pastoral systems along with the dynamic interactions between them vary contextually. Such variations make the pastoral systems adaptive but also present a difficulty in marking the system's boundaries that encompasses a large bio-cultural diversity (Zinsstag et al., 2016).

Literature review reveals a limited application of socio-ecological system's concept in understanding pastoral contexts. A study by Klein et al. (2012) utilizes SES framework for understanding the composition, functioning and management of rangelands as a common pool resource on which the pastoralists depend for their seasonal forage. In their study, rangelands-as a geophysical entity, is perceived as a complex socio-ecological system that determines the vulnerability or resilience of pastoral practices. Using the multiple case studies from the pastoral contexts in Central Asia, they develop two possible scenarios for a vulnerable and resilient pastoral system. Grounded in the resilience theory, their effort remains aligned with a goal to establish the importance of community-based rangeland management strategies in increasing the resilience of SES (in this case, a rangeland). Limited focus on only one of the resource systems rather than that of the whole practice of pastoralism limits the scope of this study.

Similarly, Zinsstag et al. (2016) briefly touch upon how pastoralism, constituting of diverse human and natural resource and spaces, can likely contribute towards achieving the sustainable development goals including food security and nutrition, healthy lives and wellbeing, inclusive economic growth, reduced inequalities and access to justice and sustainable use of terrestrial ecosystems.

Without stating any specific definition or analysis, this study loosely uses the SES concept to address the issues related to pastoralism and its future.

Unlike the previous studies, a recent publication by Manzano et al. (2021) titled '*Towards a holistic understanding of pastoralism'*, clearly establishes a need to perceive pastoralism as a socio-ecological system. Urging for a transdisciplinary focus, they also use the resilience framework to outline the historical processes of pastoralism, nested institutional arrangements across scales, the social and ecological outcomes, and the political, economic, and social drivers that constrain or enable pastoralism (Manzano et al., 2021, p. 653). With a specific focus on understanding the adaptation or transformations, this study remains an initiation towards developing a comparable framework that could provide a global recognition to pastoralism for its economic contributions and sustainable agendas.

Another significant contribution by Dean et al. (2021) helps in conceptualizing pastoralism as a socioecological system with heavily interlinked human-nature interactions. According to this study, pastoral systems are the complex adaptive systems that primarily aim at food production but also have cultural and environmental dimensions that go beyond the creation of physical products. Using the latest Nature's contribution to people (NCP)[4] framework, this study suggests that pastoral systems represent the interactive people-nature relationships which create, use, and maintain different services and values that substantially contribute to the ecosystem and society. Simultaneously, it also highlights a crucial gap in pastoral literature regarding the continuing changes in pastoral systems and the tangible and intangible socio-ecological impacts of such changes.

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[4] *NCP framework* emphasizes context-specific and relational values derived from the ecosystems that remain difficult to quantify. e.g., Cultural, institutional, and social aspects that have material, non-material and regulating nature (Dean et al., 2021)

Taking a cue from this emerging strand of literature, in the current study we conceptualize pastoralism as a socio-ecological system that emerges out of complex human-environment interactions and operate on a dynamic feedback mechanism. This sporadic literature, although insufficient, remains helpful in identifying the social as well as ecological components of pastoral systems.

In the next section, we critically examine the pastoral literature to comprehend the on-going research trends and trajectories across the world.

## 2.4) Pastoralism across the world

According to the UNEP & IUCN (2015), pastoral territory is spread over more than a quarter of the world's land with an estimated 200-500 million people practising it as a primary livelihood. It includes all three major types of pastoralism including ranshumance, agro-pastoralism and nomadic herding where continuous or seasonal mobility remains a key strategy for the sustainable management of resources (Kreutzmann, 2012; Maru, 2020).

Pastoralists, historical records can be well located at the centre of heated debates particularly on the human use of natural resources and social arrangements (Rokpelnis, 2016, p. 28) The major studies available explain pastoral living in context to its location, its dependence on local ecology and the influence of politico-economic factors on its practice. The main conclusion drawn from these studies points towards the increasing challenges that pastoral populations are commonly facing. It reflects a similarity of situation despite of the widespread socio-ecological diversity within pastoral contexts. The nature of the challenges that pastoralists confront today remains almost the same as it were in the late 20th century. According to Fratkin (1997), the

population growth, loss of herding lands to private farms, urban areas, increased commoditization of the livestock economy, out migration by the poor pastoralists and periodic dislocations brought about by environmental and political hazards were the major issues of late 90's. The recent literature adds to the list of those challenges and indicates the uncertain and transitioning nature of pastoral practices around the world (Behnke, 2021; Chakraborty, 2017, 2017; Galvin, 2009; Kreutzmann, 2012; Nori & Davies, 2007; Nori & Scoones, 2019; Rahimzadeh, 2016; Zinsstag et al., 2016)

Many of the recent studies aligned with the discourse of environmental conservation, climate change and degradation as well as the sustainability questions focus on understanding the impact of pastoralism on the dependent ecosystems and vice versa (Behnke, 2021; Bensada, 2017; Disperati et al., 2009; Herrero et al., 2016; Lucatello et al., 2020; Manzano et al., 2021; Niamir-Fuller & Huber-Sannwald, 2020). Simultaneously, land and the related issues including property rights, access, usage and exclusion are also extensively discussed (Caravani, 2019; FAO, 2016, 2021; Feng et al., 2019; Muhammad et al., 2019 and Thorat, 2020).

The emergent trend in global literature acknowledges the importance of pastoralism and its several contributions that can suitably be channelized to achieve the sustainable development goals. Recognising the resilience and ecological responsiveness of pastoral practices, McGahey & Davies (2014) label pastoralism as a 'green economy' that has several social, environmental and economic benefits. Interestingly, this turn comes after a long period of distress and ignorance that had pushed pastoralism to the margins. Multiple studies discuss rising vulnerability among the pastoral livelihoods across the world (Hogg, 1992; Johnsen et al., 2019; Kreutzmann, 2013; Muhammad et al., 2019; Nori & Scoones, 2019; Samuels et al.,

2019; Schmidt & Pearson, 2016; Smith, 2015; Tiwari et al., 2020; Wangchuk & Wangdi, 2015).

At the same time, a substantial body of literature providing promising evidence for pastoralism to be ecologically and economically viable occupation in the times of climate crisis is also emerging (FAO, 2021; Niamir-Fuller & Huber-Sannwald, 2020; UNEP & IUCN, 2015). These studies represent the emergence of an international sentiment towards pastoralism's revitalisation (Bayer and Waters-Bayer 1989; UNEP and IUCN 2015). They call for promoting integrated practices, as observed across pastoral contexts, where a combination of crop-livestock production with minimal external inputs remains common (Breu et al. 2015; Deb 2015).



*Map 1 Distribution of Pastoralism across the world (Manzano et al., 2021)*
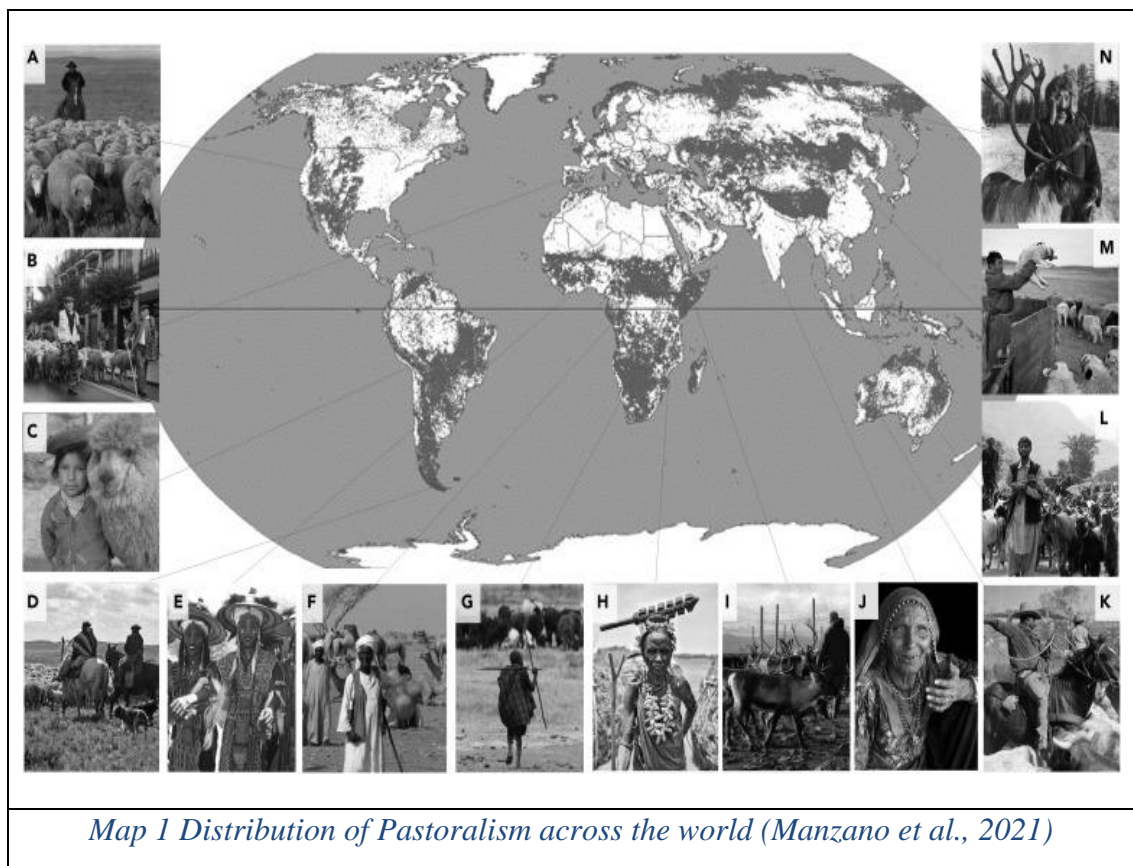
Majority of the recent literature on pastoralism remains oriented towards understanding the ecological concerns whereas the socio-cultural aspect of practicing pastoralism remains overlooked. However, these aspects remain critical amidst the on-going socio-ecological transitions when the future of pastoralism remains an unresolved query. Repeatedly, over decades various scholars (Behnke, 2021; Blench, 1999, 1999; Hogg, 1992; Kerven et al., 2012; Köhler-Rollefson & Rathore, 2017; Mukherjee, 1994; Zinsstag et al., 2016) have probed into the question of future of pastoralism to reach at inconclusive inferences. In addition to the ecological variability, socio-cultural diversity, and the transitions on local levels within the pastoral contexts makes it all the way more difficult to project the future. Because of the multiplicity in contexts, the world pastoralism cannot be looked uniformly from a single perspective. It will not do justice to local differences that the pastoral systems have at the micro levels. Therefore, to get one-step closer in specifying the focus of the study, next section elaborates on contextualizing the pastoral conditions in India.

## 2.5) Pastoralism in India

In India, pastoralism is practiced across the country from Ladakh in the North to Tamil Nadu in the South (Ramdas & Ghotge, 2006). However, it remains a highly under-valued lifestyle and production system, often misconceived of being archaic, inefficient and an ecologically unfriendly practice, as it is perceived to be in many other parts of the world (Mukherji et al., 2017). In India, there exists no official records recognising the pastoral communities or their management strategies. On the socio-cultural level, they generally have been fuzzily classified following the caste-based, ethnic, or territorial categories of Scheduled Tribes, Scheduled Castes, Other

backward classes or de-notified tribes depending upon the state-wise criteria under constitutional categorisations. Even within the occupational cataloguing, pastoralism remains overshadowed either under the agriculture or the animal-husbandry section that are practically entirely different forms of farming. Apart from that when problematized using the lens of mobile or sedentary lifestyle, often the pastoralists are equated with the nomadic conceptualizations leading in a sheer confusion (A. Sharma, 2011). This dearth of unifying definition and official recognition for pastoralists remain one major reason for their exclusion from the policy landscape in India.

Despite having a large population that is estimated to be between 13 to 35 million, no official records that account for pastoral communities exists (Kishore & Köhler-Rollefson, 2020). Along with that, a recent report estimates that there are almost 46 castes based or ethnic communities that continue to maintain their specialized pastoral identities as traditional herders (Kishore & Köhler-Rollefson, 2020; Mundy, 2021). Pastoralism represents a subsector of Indian society that has received much less attention in comparison to the other social groups from both the research and development viewpoint (George, 1985; V. P. Sharma et al., 2003). However, it has always remained in the forefront of narratives on ecological degradation without any scientific testimonies backing these claims (Saberwal, 1996b). With a revived focus on pastoral practices and increasing evidence that supports and acknowledges its various contributions in different areas of the world, review of Indian pastoral literature highlights an urgent need for deliberations and in-depth understanding of existing pastoral systems.

In this section, we provide a snapshot of pastoral conditions in India and carve out a niche for further research highlighting the issues of importance and emerging

areas of interest that need to be explored further. The aim is to comprehensively synthesise the ideas on pastoral research in India to answer the following questions that help in locating the research gaps-

- o How is pastoralism conceptualized in Indian context?
- o What are the major research trends on pastoralism in India?
- o What are the research gaps or the overlooked areas in pastoral research in India?
- o What can be the possible future directions of research in this field?

## 2.5.1) Overview of Pastoral Representation in India

Pastoralism is practiced by several communities across India in diverse ways. A comprehensive mapping done by Kishore & Köhler-Rollefson (2020) and Mundy (2021) as indicated in Map 2 shows the diversity of pastoral contexts across the vertical and horizontal axis of the country. Pastoralism is a pan Indian livelihood strategy that is strongly linked with the communal identities of several population groups. Despite no formal acknowledgement and rampant economic diversification that has led to a decline or even end of pastoralism for many communities in India, their pastoral connections still remain intact. It influences their collective identities that are expressed and invoked based on conditional circumstances and are increasingly being co-opted in the larger sphere of identity politics (Johnson, 2020; Kapila, 2008; Kavoori, 2007; Mayaram, 2014).

Amidst the scattered and sporadic literature on Indian pastoralism, a scoping study by V. P. Sharma et al. (2003), an edited volume on nomadism in south Asia by Rao & Casimir (2003) and a review on south Asian nomads by A. Sharma (2011)

remain the three integral comprehensive resources for reference. These studies provide descriptive information on many of the pastoral communities and the evolving challenges that they confront on daily basis while simultaneously highlighting the research gaps that till date remain inadequately addressed.

Starting from the North of India, *Bakerwal* pastoral practices from Jammu and Kashmir are documented by Rao (1995, 2002) and Rao & Casimir (1982). Their studies also highlight the co-existence of Gujjar pastoralists in the region. *Gujjars*, a traditional pastoral group that mainly rear buffaloes, reside across most of the north Indian states but do not form a single homogenous population group. Differences on the lines of caste and religion despite a common community title used across the state boundaries remains responsible for a stark divide. Another set of studies cover the context of Gujjar pastoralists across the states of Jammu and Kashmir, Himachal Pradesh, Haryana and Rajasthan (Axelby, 2016; Kavoori, 2007; Mayaram, 2014; Paquet, 2018; Rao & Casimir, 1982). While the context of Van-gujjars, a pastoral group from Uttarakhand, who acquired the identity of forest dwellers in addition to their pastoral affiliations, are researched by Gooch (1992, 2004, 2009) and Nusrat, (2011).

UNPERCEIVED FORMS OF LIVESTOCK FARMING

Distribution of Indian castes and communities with specialized pastoralist identities – transhumance, nomadic, semi-nomadic and village-based – and animals reared

buffalo  cattle  camels  goats  sheep  pigs  yaks  ducks

traditional pastoralist groups  (taken up pastoralism recently)

**Jammu and Kashmir** / **Ladakh**
Bakkarwal, Changpa, Gaddi, Gujjar

**Himachal Pradesh**
Gaddi, Gujjar

**Punjab**
Gaddi, Gavli, Gujjar, Rebari

**Uttarakhand**
Bhotia, Gaddi, Van Gujjar

**Haryana**
Gaderia, Gavli, Rebari

**Sikkim**
Bhutta

**Arunachal Pradesh**
Monpa

**Rajasthan**
Gayrim Gujjar, Raika/Rebari, Rath, Sindhi Muslim

**Uttar Pradesh**
Gaderia, Van Gujjar, Yadav

**Bihar**  Gaderia

**Jharkand**
Gaderia, Gavli (Baagali, Santhali)

**West Bengal**
Gaderia (Kond, Saathali)

**Gujarat**
Ahir, Bharwad, Charan, Jatt, Mer, Rebari, Sama

**Madya Pradesh**
Banjara, Dhangar, Gaderia, Rebari

**Chattisgarh**
Dhangar, Golla, Kuruma, Rebari

**Odisha**
Ghasi, Golla, Gouda, Kela, Khedia, Leheri (Gand, Kandh, Santhali)

**Maharashtra**
Dhangar, Gavli, Golakar, Kurma, Lambandani, Nandiwala/Golla

**Telangana**
Banjara, Golla, Kuruma, Lambadani

**Goa**

**Andhra Pradesh**
Banjara, Golla, Kuruma, Lambadani

Gavli, Golla, Kuruba, Mesabedar (Lambadani, Lingayat, Madiwalar, Muslims, Valmiki)

**Karnataka**

**Tamil Nadu**
Golla, Kuruba, Toda, Yadava

**Kerala**

Livestock in pastoralist systems, million (mn) heads, and percent of respective livestock in India

cattle 79%

pigs 100%  7 mn

164 mn

buffalo 59%

61 mn

0,08 mn
yaks 100%

sheep 95%

60 mn

goats 80%

103 mn

0,26 mn
donkeys 100%

0,35 mn
camels 100%

*Map 2 Indian pastoral communities and livestock reared (Mundy, 2021)*

Pastoral scholars (Axelby, 2007, 2016; Bhasin, 2013; Chakravarty-Kaul, 1997, 1998; Malhotra, 1935; Saberwal, 1996a, 1996b; M. Sharma, 2013) have also written on different aspects of the *Gaddi* pastoralism of Himachal Pradesh at length. Simultaneously, discussions on the Bhotiyas of Uttarakhand, who have traditionally been the herders as well as traders across the international borders between India, Tibet and China can be found in the works of Bergmann et al. (2012), Dangwal (2009), Farooquee & Nautiyal (1996), S. Sharma & Rikhari (1995).

The other lesser-known pastoral communities include Kinnauras who rear sheep, goat, and cattle along with horses, mules, yaks, and dzo (a hybrid animal between yaks and local domestic cattle) in the higher altitude villages of Kinnaur in Himachal Pradesh (Rahimzadeh, 2016). Another such community is the Chang pa of Ladakh, who rear sheep, goat, yak and horses to varying degrees. Jina (1999) in his work describes their pastoral practices that include the production of well-known cashmere called *pashmina.* Account of pastoralism as practiced in the Spiti valley of Himachal Pradesh is collated by R. Singh et al. (2015, 2020).

Towards the west, pastoral research documents the practices of *Raikas* of Rajasthan, who are traditionally the camels, sheep, and goats herders (Agrawal, 1992, 1992, 1993; Köhler-Rollefson, 1992, 2018; Köhler-Rollefson & Rathore, 2004; P. Sharma & Sharma, 2015, 2015; Srivastava, 1993). Studies are also available on the traditional pastoral community of *Rabaris* who predominantly belong to the states of Rajasthan and Gujarat (Duenn et al., 2017; Dyer & Choksi, 1997; Frater, 2002, 2002; Köhler-Rollefson, 1994; Maru, 2020; Mehta & Srivastava, 2019; Salpeteur et al., 2015; Thorat, 2020; Venkatasubramanian & Ramnarain, 2018). Following the current research trends, Banni grasslands in Kutch region of Gujarat is emerging as a core of

research on pastoralism in India because of the interplay of multiple influences and interests.

Apart from that, a large number of pastoral communities also inhabit the deccan plateau region and the south Indian states. These communities over generations have raised several place specific native breeds of sheep, goats, and cattle within the migratory grazing systems. Such practices have helped in preservation of diverse livestock genetic resources as well as the biodiversity in the region. Kuruba, Kuruma and Dhangars are the most prominently known pastoral groups that dwell and migrate across the deccan territory. Descriptions on these pastoral communities can be traced in the works of Murty & Sontheimer (1980) and Ramdas & Ghotge (2007) in brief.

Many pastoral communities also inhabit the North-eastern states of India including Monpas, Bhutias, Gurungs, Chettri and Serpas (Bhasin, 2013; Chettri, 2015; Farooquee & Nautiyal, 1996; R. Singh et al., 2021). These ethnically distinct communities mainly rear yaks, sheep and goat following variable seasonal transhumance patterns.

Overall, the existing literature unevenly covers the expanse of Indian pastoralism and the concerning issues. While on one hand, pastoralism in the state of Gujarat and Rajasthan is receiving greater research attention, many of the pastoral communities in other states of the country till date remain undocumented. Similar is true for the disciplinary dispositions as well. The available pastoral literature on various communities does not remain uniform in terms of socio-ecological information, creating blind spots in understanding them as holistic systems.

In this research, we focus on the Himalayan agro-pastoral community of *Gaddis* considering the availability of substantial literature that could provide both social and ecological understanding of their pastoral practices. We follow the advice offered by Guha (1997), one of the pioneers of socio-ecological research in India, who rightly pointed out that socio-ecological research should not fall into the trap of lack of disciplinary understanding but should always borrow and apply from whatever remains available. Therefore, literature on the *Gaddis* (discussed in next sections), irrespective of the subject-specific origin serves important to accomplish the objectives of this study.

## 2.5.2) Conceptualizations and definitions in Indian pastoralism

The main communities representing Indian pastoralism include *Bakarwal, Gujjars* (J&K, H.P, U.P), *Gaddis, Kinnauras, Kanets and Kaulis* of H.P, *Bhotiyas* of Uttarakhand, *Changpas* of Ladakh, *Raikas and Rabaris* of Rajasthan, *Maldharis, Bharwads, Charans and Mers* of Gujarat, *Monpas* of Arunachal Pradesh, *Golla, Kuruma* of Andhra Pradesh, *Kuruba* and *Dhangars* of Karnataka, *Todas* of Kerala, *Dhangars* of Madhya Pradesh and Maharashtra (Kishore & Köhler-Rollefson, 2020; Mukherji et al., 2016). It is quite difficult to map the geographical context for these pastoral groups, as many of them do not abide by the strict state boundaries (Mayaram, 2014). These groups show explicit variations as per the different socio-ecological arrangements mainly in terms of livestock species, cultural adaptations, social organisations, and secondary livelihood activities.

In the lack of any official acknowledgment for pastoral practices and their management systems in India, there remains an ambiguity in the way they are defined

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and described. Pastoralist or pastoralism is not a common term of reference and is rarely used in popular parlance. Despite a distinct way of managing the resources and rearing the livestock, pastoralists are clubbed with the stall-fed animal husbandry sector when it comes to the livestock census conducted by Department of Animal Husbandry and Dairying, Government of India (Kishore & Köhler-Rollefson, 2020). It adds to the existing misperception and misrepresentation of pastoralism, which already remains subject to the long-standing discourse of backwardness and misuse of natural resources (Dangwal, 2009).

Historically, pastoralism has suffered continuous exclusion and injustice from the state since colonial times in India (Bergmann et al., 2012; Bhattacharya, 2019a, 2019b). The alarmist discourse on environmental degradation that considers the pastoralist, who depend on the common pool resources for their livelihoods, as a threat has perpetuated the colonial bias even in the post-colonial state (Bergmann et al., 2012; Chakravarty-Kaul, 1998; Saberwal, 1996b; M. Sharma, 2013). Restrictions on mobility, stress on sedentary lifestyle, dispossession and displacement from the resources that remain prevalent even today have historically trickled down from the British era. To such conditions, the response of pastoral communities across the country varied. Some abandoned and settled down while others rebelled and continued (Bhattacharya, 2019a). For all those communities that endured the colonial antipathy, not much was done even after the governance regimes shifted. The lack of discussion and inclusion of pastoralism at policy levels remains a reflection of the same even today.

Amidst the lack of research, Rao & Casimir's (1982) efforts to understand and locate the pastoral communities, remain one of the primary steps towards the start of

systematic documentation of Indian pastoralism. In their study, they considered the primary dependency on livestock and mobile strategies to arrange fodder resources as two main definitional criteria for pastoral practices. Following that, various other scholars have contributed from different disciplinary backgrounds to advance the understanding and definition of pastoralism in India. From characterizing it as a caste-based economic activity that involves particular population group in extensive livestock rearing (Köhler-Rollefson, 1992; Köhler-Rollefson & Rathore, 2004) to an absolute focus on variable mobility strategies and nomadic lifestyle (S. Sharma & Rikhari, 1995), definition of pastoralism still remains vague and inadequate.

Some scholars (Dyer & Choksi, 1997; Farooquee & Rao, 2001; Frater, 2002) identify pastoralism as a traditional way of life that essentially relates with the cultural perspective of the communities practicing it. While some comprehend it as a type of resource usage pattern and ecological adaptation to the challenging geophysical conditions (Farooquee & Rao, 2000; S. Goodall, 2004; Jina, 1999).

Pastoralism is also described as a production system that guarantees subsistence livelihood by provisioning food and decreasing the environment related risks (Farooquee & Rao, 2000; Mishra et al., 2003). In this system, livestock are exclusively maintained on grazing that requires them to move in search of water and pasturage almost throughout the year. It is one of the four types of livestock production systems found in India (i.e., pastoral, forest based, integrated crop and livestock and industrial/commercial systems) that have persisted and co-evolved with the changing socio-economic and ecological conditions of the communities (Ramdas & Ghotge, 2006). At the same time, this remains a system that withholds the largest per capita number of the livestock shaping India's livestock economy (Ramdas &

Ghotge, 2006). Regardless of its expanse and contribution to the national economy that remains unaccounted, pastoralism continues to be described and popularly imagined as a pre-capitalist subsistence oriented economic system (Rahimzadeh, 2016) that doesn't fit well in the modern times.

In order to theorize pastoralism, there have been several efforts to label its types based on the economic characteristics of the practices and the mobility patterns followed.  In India, these types are recognised with several overlapping and loosely conceptualized terminologies including nomadism, semi-nomadism, migratory and mobile pastoralism, transhumance, pure pastoralism, urban or village pastoralism and agro-pastoralism (Bhasin, 2013; S. K. Goodall, 2007; V. P. Sharma et al., 2003). These broad and borrowed terms with specific meanings, however, do not explain the Indian pastoral contexts reasonably well because of the extensive diversity, continuums, and blended practices. For example, the misconception of considering all pastoralists as nomads and all nomads as pastoralists based on the mobility patterns (A. Sharma, 2011) or conceptualizing pure pastoralism just on the basis of economic pursuits without taking into consideration the caste entanglements (Kapila, 2003) remains problematic in agreeing to a single unifying definition of pastoralism in India. Moreover, the continuous shifts in social and ecological conditions that require pastoralists to manoeuvre their practices every now and then do not allow for neat watertight conceptualizations. These terms thus, remain paradoxical and contextually aligned.

As observed by Bergmann et al. (2012) in case of Bhotiyas of Uttarakhand, in pastoral systems both natural and socio-cultural resources combine to effectively produce an economic outcome that impacts and vis-à-vis gets impacted by the power

relations inscribed within those settings. To a level, this remains an appropriate definition of Indian pastoralism as it pays equal attention to all aspects including socio-cultural, economic, ecological, and political. To add to that, Agrawal's (1992) study on *Raika*'s of Rajasthan describes pastoralism in co-ordination with the technological development, as an efficient and sustainable adaptation to the marginal environments. Unlike the popular imaginaries, Agrawal suggests that pastoralists follow a rational system of decision making in tune with the multiplicity of rules and norms that govern their functioning. Such conceptualisations remain helpful to combine the pieces of the puzzle that pastoralism in India remains a part of.

Apart from that, pastoralism is also understood in the light of conservation as it helps in maintaining ecological, biological, and cultural diversity (Farooquee & Rao, 2000). With an abundance of local knowledge on livestock breeds, natural resources, weather and climate conditions, medicinal plants, diseases and disasters, pastoralists remain the store house of crucial information (Dong, 2017; Duenn et al., 2017; Köhler-Rollefson & Rathore, 2004; Rangnekar, 1994; Salpeteur et al., 2015, 2015; R. Singh et al., 2020). Additionally, pastoralism also connects the most rural and remote with the urban and developed over the exchange of information, resources and services (Rao & Casimir, 2003; A. Sharma, 2011). In many parts of the country, pastoralists remain the connecting link between several cultural groups and ecozones that observe not only the materialist transactions but also the intangible exchanges that carry immense value beyond the apparent meanings (Agrawal, 1993; Bhattacharya, 2019b; Ghai, 2021; Köhler-Rollefson, 1994; Maru, 2020)

Pastoralism also denotes a deep sense of belonging to the landscape and a cultural identity where livestock play a crucial role (Bhasin, 2013). In India, many of

the pastoral groups are integrated into the caste system, representing endogenous social groups with a professional specialisation in animal husbandry (Sharma et al., 2003, p. 1). Many of these groups affiliate to the Hindu caste structure and connect themselves to the livestock species they rear by the myth of origin that traces their descent to an ancestor (Peter, 2017). Therefore, Indian pastoralists are at times defined as 'members of caste or ethnic groups with a strong traditional association with and a specialization in livestock-keeping' (Sharma et al, 2003, p. 3).

On contrary, Roy (2003) describes Indian pastoral communities to be non-specialized and diversified groups in a sense that 'a shepherd is not only a shepherd; he is a trader, a weaver, a porter, a polyglot and anything that a situation demands him to be'. This idea sheds light on the livelihood level diversification that has remained a part of pastoralism in India since generations. However, a drastic increase in economic diversification that often times results in abandoning of pastoral practices can also be observed (Bhasin, 2013; Köhler-Rollefson, 2018; S. N. Thakur & Kahlon, 2015). Traditionally, livestock rearing in pastoral contexts has always been complemented by other small-scale economic activities like subsistence agriculture, handicrafts, and daily wage jobs that invariably broaden the spectrum of livelihood opportunities. However, with changing aspirations and several other factors that increase the hardships in pastoralism, diversification into other occupations is gradually resulting in a slow decline of pastoral activities and a changing socio-ecological dynamics (Thakur & Kahlon, 2015).

Based on the existing diversification and functioning of pastoralism, it wouldn't be wrong to call it as an accumulated expertise that is not only limited to animal husbandry. Frater (1999) in her work on *Rabaris*, distinctly make it clear that

pastoralism as a livelihood should be understood in relation with a definite skill set where one learns to navigate and plan movements, gather, and process vivid information, develop reliability and networks across population groups, and also, gather knowledge of animal husbandry. Having a significant dependency on the native natural environment (Duenn et al., 2017), pastoralism remains an efficient means of obtaining high value food, fertilizer fibre, fuel and many other agro-ecosystem services from low valued marginal resources (Bhasin, 2013; Köhler-Rollefson & Rathore, 2017).

In addition to all these explanations, a recent letter from the Ministry of fisheries, animal husbandry and dairying (GOI, 2020) also present a well-articulated definition of pastoralism, which until recently was missing from most of the official documentation in Indian context. This definition possibly provides an early reflection of government's shifting stance on pastoralism in the country amidst the growing recognition of pastoral contributions on international levels. In the letter, pastoralism is defined as, "a nomadic activity practiced by the members of caste or ethnic groups with a strong traditional association with rearing livestock by moving with the animals from place to place in search of pasture across the country ranging from mountains to the dry lands and manifests locally in various local socio-cultural practices."

Therefore, based on all the multiple ways pastoralism is interpreted in India, the age-old elephant and a blind man situation is reproduced. Researchers work on different aspects of pastoralism following their disciplinary boundaries that are increasingly recognised to be problematic than beneficial. Therefore, as a first step towards the interdisciplinary and holistic understanding of pastoralism based on the

existing literature, we consider the following aspects to collectively define pastoralism in India-

- Livestock specificities based on ecological conditions and cultural worldviews
- Diverse mobility patterns suiting contextual geographical location
- Caste based or ethnicity based pastoral identities
- Mixed dependencies over mosaics of resources that are both privately owned (agricultural fields, fallows etc.) and government regulated (common resources including wastelands, forests, village grazing grounds etc.)
- Pastoral economies remain specialized and diversified at the same time
- Pastoralism operates within a larger network with inter and intra community cooperation

### 2.5.3) Research trajectories in available pastoral literature in India

Before we discuss the themes of pastoral studies and the existing research gaps, there is a need to highlight the recent developments in this sector relating both policy and practice. Since the commencement of the current study in 2017, a rise in academic and non-academic focus on pastoralism is observed across India. Although, the discussions and efforts still remain far from achieving the desired goals, a progression towards it can be witnessed. In the following section, we review the on-going developments in Indian pastoralism that essentially justify the need for conducting the current study.

## 2.5.3.1) Revitalizing Pastoralism- Recent trends in Policy and Practice

Indian pastoralism, in policy and practice has remained an overlooked primary sector that remains yet to be acknowledged independently. In the Indian National Farmers Policy (Department of Agriculture & Cooperation, Ministry of Agriculture, 2007), pastoralists are classified under a special category of farmers majorly stressing on their dependencies on common grazing resources. The document also sketchily highlights the need for land entitlements, protection of intellectual property rights and strengthening the pastoralists' role in natural resource management. However, by categorising pastoralism under the larger ambit of agriculture without recognising the embedded complexity, reinforces the *sedentist* bias rooted in agrarian development. At the same time, the diversity of pastoral practices that emerge as a consequence of variable socio-ecological conditions and is further regulated by the adaptive means of distinct mobility patterns, remains ignored.

There is no doubt that contemporarily pastoral and agrarian issues are converging and the differences between their subject matters are blurring (Scoones, 2020). But the core conceptualizations used to define both, remain disparate. Agriculture and pastoralism, irrespective of the mutual complementarity and even combined practices as observed among many of the pastoral communities in India, remain two distinct production processes situated in variable socio-ecological conditions. The inherent binaries including settled and migratory, shared and private, individual and collective that essentially are used to differentiate the two types of practices remain a basis for demanding separate policy focus for pastoralists (Kishore & Köhler-Rollefson, 2020; Mukherji et al., 2016; V. P. Sharma et al., 2003).

No government ministry in India particularly focuses on pastoral development (V. P. Sharma et al., 2003). Even if their interests align with the outline and objectives

of many of the existing government portfolios including animal husbandry and dairying; environment, forests and climate change; agriculture; tribal development and ministry of social justice, pastoralists remain neglected and sidelined. The lack of pastoral conceptualizations to understand the diversity of practices across India, census data on pastoralists and their livestock populations and the layers of socio-cultural intersectionality that these groups demonstrate, present a set of challenges that still remain inadequately addressed both in research and practice (Dyer & Choksi, 1997; John & Badoni, 2013; Kavoori, 2005; Kishore & Köhler-Rollefson, 2020; Mukherji et al., 2016; Saberwal, 2003).

Nevertheless, a recent letter from the Ministry of Fisheries, Animal Husbandry and Dairying to the concerning state departments of 11 states including Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Sikkim, Uttar Pradesh, Rajasthan, Gujarat, Karnataka, Andhra Pradesh and Orissa, requesting for collation of details on pastoral population and practices in the respective jurisdiction areas, remains one of the welcoming steps in this direction. After a long legacy of extended colonial mindset observed in the actions of the state against pastoralists (Bhattacharya, 2019a, 2019b; Chakravarty-Kaul, 1998; Roy, 2003; M. Sharma, 2013), this letter comes as a hope in addition to the existing national and international efforts that are working to ensure pastoral visibility in all possible ways.

In the last few years, many of the organisations on local and national levels have emerged in India that are working for and with the pastoral communities in different capacities. Few of them including *Centre for Pastoralism* (CfP), *Lokhit Pashu Palak Sansthan* (LPPS), *Maldhari Rural Action Group* (MARAG), *National Alliance Group for Denotified and Nomadic tribes*, *South Asian Pastoral Alliance* (SAPA), *Sahjeevan* and *Urmul Trust*, among many other, are collaborating with

several pastoral communities across the country. These organisations collectively aim at facilitating the pastoral interests, provide them a space to articulate their needs and challenges, look after the legal matters concerning pastoral issues, create market linkages and provide them a platform for larger representation. It is a result of collective efforts of such organisations that Indian pastoralism today is being represented at the international forum which observes a participation from almost 58 other countries and 300 organisations in support of declaring 2026 as an International Year of Rangeland and Pastoralism (IYRP-2026)[5] by the UN.

Considering the expanse of Indian pastoralism there remains a dearth of academic engagements and research work on it. As highlighted in the previous section, a limited published literature on Indian pastoralism is available for understanding the pastoral issues. Most of this literature that remains sporadic and scattered, captures the pastoral reality in a static manner i.e., it remains spatially and temporally bound to the time and site of the research and is infrequently updated. Thus, it lacks the aspect of dynamism, which remains integral to understand the changing pastoral conditions. It points towards a need to not only document the diverse practices of pastoralists but delve deeper into the holistic understanding and contextual socio-ecological interactions that could address the larger queries on their sustainable development. Therefore, the current study remains a timely contribution towards documenting and highlighting the changes in pastoral practices of one of the well-recognised pastoral communities of India i.e., the *Gaddi*.

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[5] IYRP is a collective effort conceptualized and steered by the Mongolian government since2016 to explore rangelands and pastoral communities in different regions of the world. They aim to obtain recognition for world pastoralists by declaring 2026 as an international year for rangeland and pastoralism that could promote and support pastoral practices and contribute to raising awareness. Link- https://iyrp.info/

*Gaddis* pastoral practices are contemporarily wavering and impacting the local socio-ecology in more than one way. While ecological changes in the landscapes they inhabit have been widely documented, the socio-cultural implications of pastoral changes as well their impact on pastoralism itself, remains underdiscussed. Tapping the opportunity, this study focuses on understanding the transitions in a manner they are perceived and lived by the community members. Factoring in the decline of pastoralism as a practice, the aim remains to understand the continuing significance of it using a system's perspective and cultural lens for analysis.

### 2.5.3.2) Overview of Indian Pastoral Research

Based on the broader research focus, available literature is thematically organised to understand the different facets of pastoralism. Although it remains a challenging task to segregate the studies into well-ordered thematic categories, but it remains important to highlight the variable attention different research areas have received so far.

- *Pastoral Ecology and related studies*

Following the popular discourse on eco-degradation and how pastoralists remain responsible for that, ecological perspectives on pastoralism in India remains divided over two arguments. One section, comprising majorly of scientists and researchers, focuses on proving how the pastoral resource usage follows a scientific and a well-behaved check and balance mechanism that generates least impact on biodiversity (A. Pandey et al., 2017; Saberwal, 1996b; R. Singh et al., 2021; Tucker, 1986) and the other, mainly the government bodies, considers them to be an environmental nuisance

supporting the Hardin's theory of tragedy of commons[6]. According to the latter, pastoralists overexploit the resources for economic reasons pertaining production and accumulation as they majorly operate on the common pool resources that largely remain ungoverned or unregulated. However, these claims mostly remain unverified and are considered to be the consequences of stringent government restrictions and lack of policy support (Saberwal, 1996b).

In favour of pastoral practices, Athani B. et al. (2015) who studied the sheep herding practices in Northern Karnataka in India, explain the benefits of penning the pastoral herds for soil fertility and agrarian economy. The interesting quantification of ecological services generated by the sheep herds in form of manure and urine that essentially provides the required nutrients to retain soil fertility, also exemplify the traditional agroecological practices. As per their estimation, 10 million headcounts of sheep in the state generate fertilizer of above Rs 850 million in one year that not only supports the on-farm activities in the region but also remains important for rejuvenation of grasslands and common areas traversed by the pastoral herds.

A. Kumar et al.'s (2011) study on the Kangayam grasslands located in south India remains one of its kind to discuss the pastoral practices and associated resources in a system manner. While highlighting how permanent land tenures and community participation can restore wastelands into flourishing pastoral resources by adopting regenerative and rotational grazing, this study yet again empirically discards the Hardin's theory. While presenting a success model for policy interventions required in the development of grazing land and community pastures in the country, A. Kumar et al. (2011) brings up the lesser-known example of well-established and well

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[6] For tragedy of commons refer (Hardin, 1968) and for details on negative impacts of pastoralism refer policy documents including the report on grazing policy in Himachal Pradesh by the state's (Grazing Advisory Committee, 1972)

flourishing pastoral system. This case study also validates the ideas of holistic management and planned grazing (Savory, 2013; Savory & Butterfield, 2016). According to Allan Savory (2013), land management cannot be planned without considering the culture, beliefs, and values of the people occupying it. In his opinion, compartmentalization of knowledge to manage environment and resources by following only the ecological principles remains problematic and hinders in developing a holistic understanding of how the nature works.

Additionally, there are some ecological and conservation-based studies that also take into consideration the overlaps between pastoral territories and wildlife protection zones. Often in India, pastoralists depending on the forests and meadows, which are home to diverse wildlife, are put into a difficult situation as their resource's dependencies are ignored and compromised for the creation of conservation spaces with no or minimum human interference. Saberwal (2003) challenges such conservation policies in his research and provide evidence for pastoral activities to be rarely degrading or causing a decline in biodiversity as preached in many of the policy documents. Similarly, R. Singh et al. (2021) criticises the conservation model followed in Indian Himalayan state of Sikkim, where the eviction of pastoralists from their traditional territories for the conservation or ecotourism purposes is driving a negative impact on the local socio-ecology while simultaneously producing multiple socio-economic exclusions.

On contrary, Harihar et al. (2014) in their study while discussing the case of Van Gujjars of Uttarakhand who traditionally migrated across the areas where Rajaji National Park and Corbett Tiger Reserve are established, favours the creation of protected area for achieving wildlife conservation goals. As an undertone, this study propagates the idea that pastoralism and wildlife conservation remain antithetical to

each other. Lending more support to the resettlement of the community outside the conservation zone, researchers justify their stance based on the desirable socio-economic prospects of relocation that provide options for livelihood diversification. Such studies rooted majorly in ecological and economic concerns, ignore the socio-cultural values that pastoralists attach to their natural landscapes, while simultaneously discrediting it as a viable livelihood and a way of life. Gaps in understanding the holistic nature of pastoral practices, therefore, seems to emerge from selective focus that reiterates the linear cause-effect relationships instead of a system understanding.

Livestock remains an essential component of the grassland as well as agricultural landscapes in India. They not only add to the faunal biodiversity but are equally important from cultural and economic standpoint. Another ecological study by Datta et al. (2015) elaborates on how the grassland based integrated farming in India provides a scope for increasing the economic capacities of small farm holders by making use of existing common pasture resources. This study perhaps, advocates for utilizing the synergies between resource systems and reintroduction of the pastoral practices into the existing farming methods. With a growing population, increasing food demands, climate change and shrinking resource bases, pastoralism-based animal husbandry provides a vital alternative in India.

Unlike many other parts of the world where most of the livestock are currently reared in sedentary ranch systems that follow the industrial agricultural models of production, India has an exemplary composition of pastoral practices. As per the Meat Atlas (Mundy, 2021), more than half the milk and 70 percent of the meat produced in India comes from the pastoral production. Yet pastoralists remain unacknowledged and under supported. With an increased inclination towards industrial agriculture that

is expanding on a rapid pace engulfing majority of common patches of land, a threat looms over the poor livestock keepers that constitute Indian pastoralism (Mundy, 2021). Despite their tremendous ecological and economic contributions, they remain bereft of resources, rights, and recognition.

In addition to the above stated studies, research works by Rawat & Uniyal, (1993); R. K. Sharma et al. (2015) and R. Singh et al. (2015, 2020) also extend the understanding of composition and functioning of pastoral systems in different ecozones. These scientific studies remain integral for providing insights on the ecological importance of pastoralism in relation with the diversity of flora and fauna as well as various conservation regimes. Majority of the ecological literature on pastoralism uses the theoretical lens of adaptation to analyse pastoral practices.

Another important aspect that the literature presents is regarding the local ecological knowledge that the pastoralists possess. Ranging from being specialized breeders, pastoralists accumulate diverse forms of local knowledge on the bio-physical environment, fodder and invasive species, livestock diets, diseases, health and grazing patterns (Bhasin, 2008, 2013; Dong, 2017; Duenn et al., 2017; Köhler-Rollefson & Rathore, 2004; Rangnekar, 1994; Salpeteur et al., 2015; R. Singh et al., 2020). With their precision in breeding techniques, timings and control they often remain at par with the animal scientists (Rangnekar, 1994). However, with no formal documentation, this knowledge is limitedly passed down over generations and is majorly gained through experiences. Variables including age, gender, social positioning, schooling, and apprenticeship (Salpeteur et al., 2015) play an important role in determining the acquisition of such knowledge within pastoral contexts. With an increase in livelihood diversification and shifts in the aspirations of the youth, this wealth of wisdom is under jeopardy.

- *Pastoral Economy and related studies*

India has one of the largest livestock economies in the world that is gradually expanding to cater to the emerging needs for various livestock products (Ramdas & Ghotge, 2006). Out of the different types of animal husbandry practices, pastoralism remains one of the integral ways of raising livestock for commercial purposes. Despite an involvement of almost 13 million people who contribute to the production of around 53% of India's milk and 74% of its meat, pastoral economic contributions are not officially defined and acknowledged (Kishore & Köhler-Rollefson, 2020). Informal estimations record it be the two-third of the total 4.5 percent of India's GDP that comes from the livestock sector (Mundy, 2021). Despite that, most of the pastoral communities continue to remain impoverished and economically marginalized.

To estimate the viability of any livelihood, it remains important to evaluate its economic contributions at different scales. In case of pastoralism in India, interpreting the economic contributions remains challenging because of disaggregated data or unavailability of it. Few of the studies that delve into economic inquiries include exploration of the household level contributions of pastoral income and its dynamics among the *Maldharis* of Banni grasslands by Manjunatha et al. (2019). In this study, the researchers conclude that pastoral household incomes come from combination of pastoral and allied activities that are influenced by the various factors including ownership of livestock and herd size, market access and demand, charcoal production, embroidery, tourism and trade. In addition to that, an economic assessment of *Raikas* of Rajasthan by Agrawal (1998) shed light on the pastoral economy where revenue is generated through different streams by selling animals, wool, manure. Agarwal interestingly uses the terms like economy of exchange and collective economy in context of *Raikas*. While elaborating on surplus generation, expenses, and

consumption during collective migration of *Raika* herds, Agrawal (1998) eloquently established that pastoralism does not function far from the larger market economy and remains embedded in it. A collection of essays on pastoralism in Western India edited by Köhler-Rollefson (1994), also suggests the same. Pastoral production in popular belief is often misinterpreted to be limited for subsistence only but the studies stated above provide solid contradictory evidence.

Pastoralism, since very conception, has remained a crucial part of the agrarian economy (Cincotta & Pangare, 1994). From providing organic manure to regulate soil fertility, pastoralists contributed in supplying high quality traction animals for agricultural work (Robbins, 1994). However, the dynamics between the agricultural and pastoral sector changed with the onset of industrialisation and mechanisation in agriculture (Köhler-Rollefson, 1994). Only a few studies (Agrawal, 1991, 1993, 1994; Agrawal & Saberwal, 2004; Bhasin, 2013; Bhattacharya, 2019a, 2019b; Deb, 2015; Kavoori, 2005; Köhler-Rollefson, 1994; Maru, 2020; Saberwal, 1996b; V. P. Sharma et al., 2003; R. Singh et al., 2020) touch upon this issue of changing relationships between the two production systems that remain inherently complementary to each other.

In addition to that, pastoral contributions are also identified with respect to the discussions around dairy (Cincotta & Pangare, 1994; George, 1985) and wool (Kapila, 2010; Robbins, 1994; Roy, 2003) economy in India. Migratory Indian pastoralists rear some of the best native breeds of the livestock and produce large quantities of wool that yet remain to be appraised using an economic lens.

- *Pastoralism and Socio-cultural studies*

Indian pastoralism showcases a diversity of ethnicities and practices spread across different geographical areas. Adapted to the biophysical, climatic, and geographical conditions of the area they inhabit, migration remains one of the most common socio-cultural features that characterize the pastoral societies. A considerable amount of literature discusses the migration and mobility in Indian pastoral research (Agrawal, 1993, 1998; Chakraborty, 2017; Chakravarty-Kaul, 1997; Dangwal, 2009; Farooquee & Nautiyal, 1996; Gooch, 1992; Hassan, 2020; Louhaichi et al., 2015; Maru, 2020; Nautiyal et al., 2003; A. Pandey et al., 2017; Robbins, 1998; Tucker, 1986). Apart from being an important ecological adaptive strategy, it is also found to generate multiple socio-cultural consequences for the pastoral living that are mostly analysed in opposition to the settled and sedentary lifestyle.

Categorising the migration patterns as nomadic or transhumant, mobility is identified as a vital prerequisite for pastoral practices in India (Chakravarty-Kaul, 1997). Mobility remains a way to arrange natural resources for the livestock, access economies of scale and implicates indigenous form of agency (Agrawal, 1993; Robbins, 1998; Bergmann et al., 2011). At the same time, it is the mobile nature of pastoral practices that remain responsible for lack of education and information regarding development schemes and market prices among the pastoralists leading to one or another form of marginalisation (Agrawal & Saberwal, 2004).

A recent study by Maru (2020) remains a fresh turn in understanding pastoral mobility where she discards the dichotomy of settled and migratory that has long been used to justify modernity and backwardness. In her opinion, a relational view of pastoral mobility and immobility and the various continuums in between provide a

better way of understanding the rationality behind multiple pastoral movements that we observe contemporarily. These movement patterns emerge not only from resource scarcity but have intersecting social, economic, and cultural reasonings. Archaeological study by Raczek (2011) establishes the historic existence of long-term mobility patterns followed in the Bagor area of Rajasthan and also supports the idea that pastoral migration remains essential for establishing larger networks of exchange among dispersed communities and for defining social identities. A few studies underline the relevance of pastoral mobility in developing inter community relationships, especially between the pastoralists and agriculturalists (Agrawal, 1993; Misra, 1986; M. Sharma, 2013; Tucker, 1986; D. H. Turner, 1992).

Going beyond the typical understanding of pastoralism as a livelihood strategy, Ghai (2021) in his work on Muslim pastoralists tries to explore its various dimensions as a way of life. His idea of looking at pastoralism as a justification for 'shared cultural metaphors of the lived popular culture' (Ghai, 2021) in the region remains useful for the current work. It is not only the need for fodder that determines the pastoralists dependence and interaction with the grazing spaces but also the other crucial aspects including their own food related needs, other natural resources that they learn about and eventually incorporate in their cultural milieu, poetic and aesthetic aspects of landscapes around which they construct their worldviews. Ghai's work also sheds lights on how livestock in pastoral settings are treated as extended families that are at times even subject to the similar social taboos as that of the community members. Other important aspects that he touches upon are of social organisations, marriage alliances, division of labour, gendered relations that all integrally shape the composition of pastoral contexts while remaining of great importance for making them functional. Stressing on exploring the rich cultural

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traditions based in pluralism, he also concludes that pastoralism provides important lessons on substantive meanings of frugality, abundance, and ecological sustainability (Ghai, 2021) that remains important for managing the desirable transitions.

A similar effort to understand the material culture in terms of embroidery among the *Rabaris* was made by Frater (1999, 2002). While Srivastava (1993) took up the case of *Raikas*- the camel herders of Rajasthan, to understand the practices of renunciation and religion in their cultural context.

- *Pastoralism, Politics and Development*

In Indian pastoral studies, many scholars have contributed towards understanding the political nature of pastoral relationships within their own communities, with other communities and with the state. Pivoting the discussions on the resource-based contestations and political ecology, pastoral politics remains at the cusp of formal and informal institutional entanglements.

Agrawal (1993, 1994) in his study on the *Raikas* describes the internal politics within the migrating camps to reflect on how the day-to-day decision-making authority is regulated and distributed within customary institutional boundaries. While Saberwal (1996a, 1996b) in his work on the *Gaddi* pastoralists expands the sphere by introducing the interactions and negotiations between pastoralists and bureaucracy. According to his study, pastoralists tackle the exclusionary restrictive policies that hamper their resource access by leveraging the political influence as a major vote bank. In addition, Axelby (2007, 2016) provides details on the informal everyday politics that plays out among various stakeholders in order to secure the access to the pasturage. His study, which also revolves around the informal institutional dynamics,

remain integral to highlight the 'grey zone' between authority and power where most of the pastoralists operate.

Apart from that, few of the studies provide significant insights on the interactions and relationships between the pastoralists and the state. Kavoori (2005) proposes to understand the pastoral-state relationships by categorising them into three phases- colonial, developmental and environmental. Historical studies explaining the impacts of the colonial state on pastoral affairs include the works by Bhattacharya, 2019a, 2019b; Chakravarty-Kaul, 1998; T. Roy, 2003; M. Sharma, 2013, 2013 and C. Singh, 2009. Providing a base line for comparison and an integral view into the past of Indian pastoral scenario, these studies based on the archives and historical records, remain important to understand the multilinear development directions that the different pastoral communities have embraced.

Few of the studies also have explored the relationships of pastoralists with the post-colonial state and the various state-led development interventions that directly or indirectly affect the pastoral practices. Bergmann et al. (2011, 2012) explains the conjunction of local performances, ritual practices, cultural logics and external development policies in negotiating the access to the pastures in case of *Bhotiyas* of Kumaon Hills. While Mukherji (2015) and Mukherji et al. (2016) underlines the lack of conducive policy environment for the Rajasthan's pastoralists that obstructs the appropriate pastoral development despite having all the potential. Similar concerns are raised by George (1985) over the development related issues of the nomadic cattle herders who remain out of the purview of the dairy policy in India. Paquet (2018) in his thesis discuss the state-pastoral relationships in the context of evolving forest policies and forest management regimes to coin a term 'Jungle governments'. In his

opinion, pastoralists as forest dwellers have played an important role in transforming the policies and practices around forest governance in India.

Another set of contemporary studies discuss pastoralism and development keeping the environmental debates at the centre. These studies demonstrate the everyday negotiations between pastoralists and state that further fuel the uncertainties regarding their livelihoods. John & Badoni (2013) document it in case of the *Gaddis* whose pastoral livelihoods stand at the crossroads with the development interventions introduced by the state government. Out of many, hydel power projects that are pitched for the larger good are found to be drastically impacting the pastoral resources and landscapes. Similarly, Ghai (2021) in his study on the pastoral traditions in the north-west region of Rajasthan, discusses the alterations brought in by the construction of Indira Gandhi Canal Project. (Gooch, 2009) presents a similar story of unprecedented consequences and livelihood marginalization for the Van Gujjars of Uttarakhand post the establishment of Rajaji National Park. While Ramprasad et al. (2020) in their study, critique the afforestation drives carried out by the state forest department on the wastelands in Himachal Pradesh. Although these plantation drives remain an effort towards mitigating the climate change and expanding forest cover, they threaten the pastoral activities by introducing invasive species, disrupting their migratory routes, limiting the access and availability of fodder species. These instances collectively reflect on the larger political economy of resources where the state led development interventions side-line the pastoral interests, sabotage their dependencies and dislocate their livelihoods without any dialogue.

Extending the discussions further, exclusion of pastoralists remains another important political dimension highlighted in the literature. Chettri (2015) provides an interesting case study on the grazing ban in Sikkim where pastoral livelihoods were

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jeopardized by the state interventions to promote conservation and eco-tourism while excluding pastoralists from their customary resources. Nusrat (2011) also discusses the same for the Muslim Van Gujjars of Uttarakhand who bear the double whammy of religious and resource marginalisation. Another form of exclusion is brought to the fore by Dangwal (2009), Dyer & Choksi (1997) and A. Sharma (2011), as they discuss the ignorance of educational needs of the children from pastoral households on policy levels.

In addition, research works of Kapila (2008) and Kavoori (2007) underline the nuanced issues regarding scheduling, reservations, affirmative action and role of cultural politics in defining pastoral identities. These studies argue that pastoralism and associated identities remain highly important for the communities to gain political representation as well as legitimacy. Therefore, hinting at the strong cultural affiliation of pastoralism with the communal sense of being.

- *Pastoralism and Gender related issues*

Within the limited literature on Indian pastoralism, gender has remained a least discussed issue. Only a handful of studies take up gender as an important variable while analysing the pastoral practices. General descriptive accounts on the status of women in pastoral communities discuss their traditional roles, socio-economic conditions and division of labour (Bhasin, 1991, 2011; Mehra, 1992; K. Pandey, 2011). Although these writeups remain important to understand the traditional social organisation of pastoral communities, they do not provide critical insights into the gender dynamics and its influence on changing pastoral practices.

Recent studies by Köhler-Rollefson (2018) Ramdas & Ghotge (2007), Venkatasubramanian & Ramnarain (2018) and R. Verma & Khadka (2016) borrow from the  expanding feminist social research traditions to discuss the range of issues including overarching patriarchy, knowledge domain, rights and access over resources, impacts of climate change and role of women in sustainable pastoral livelihoods. These studies remain critical in reorienting the research focus on pastoral issues using a theoretical lens of ecofeminism, feminist political ecology and economy as well as human geography and feminist sciences.

- *Pastoralism and transitions*

Most of the academic literature published in the recent times hint towards the transitions in pastoral practices. Apart from the above-mentioned areas, some of the crucial transitions are observed in the way pastoral practices are carried out. For instance, changing nature of migration, rise in sedenterisation and impacts of climate change on the everyday pastoral practices among the pastoralists (Goodall, 2004, 2007; Venkatasubramanian & Ramnarain, 2018). These changes eventually increase the livelihood vulnerability of the pastoralists and are a reason for rising uncertainty regarding the future of pastoralism

Amidst all the changes that Indian pastoralism is undergoing, a significant question of interest remains the future of these practices. Some of the recent studies (Köhler-Rollefson & Rathore, 2017; A. Pandey et al., 2017; Rahimzadeh, 2016; R. Singh et al., 2021) debate this question to only end up being non-conclusive. Although, the decline in pastoral practices remains inevitable, a reorientation in the research focus that could learn from the continuity and change is desirable.

**2.6) *Gaddis* of Himachal Pradesh**

*Gaddis* of Himachal Pradesh, who traditionally practice a combination of commercial herding and subsistence cultivation form a well-known tribal community in the western Himalayan region (Saberwal, 1996; Wagner, 2013). Their pastoral practices involve a seasonal movement of livestock across different ecological zones and attitudes aligning them in a vertical pattern of mobility often termed as vertical transhumance (Bhasin, 2008, 2013). Pastoralism in the Himalayas generally is based on the movement from lowlands to highlands and vice versa to take advantage of seasonally available pastures at different elevations (Bhasin, 1988; Saberwal, 1996, Sharma et al 2003). The migratory routes for *Gaddis* are fixed as they move semi anually between the alpine meadows of Himalaya in the summer and scrub forests of the Siwaliks, the Himalyan foothills, in winters with their goat and sheep herds (Saberwal, 1996; Sharma et al 2003; Axelby, 2016). In summers they can be located at the upper reaches of Chamba and Lahaul valley while in winters they come down to the areas of Kangra, Bilaspur, Mandi and Kullu districts while some groups even go further to cross the state boundaries into Punjab and Uttarakhand (John & Badoni, 2013; Wagner, 2013).

Over the years, *Gaddis* and their pastoral practices have drawn considerable academic attention specially from the anthropological, sociological, geographical, ecological, and developmental perspective. The community is situated at the intersection of such complexity which offers a dynamic space of interaction and contestation for the multiple disciplinary ideas and theories. Taking a cue from this, in this chapter, we review the available literature on the *Gaddis* in a chronological manner to understand how their pastoral practices have been perceived, analysed, and documented in the academic writings so far. We aim to provide an overview of the

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*Gaddi* pastoralism in the following sections by combining the variable disciplinary and theoretical understandings. All these studies discussed below form the part of a larger puzzle in context to pastoralism with a few missing components that are highlighted in the end of this chapter. These missing parts in addition to the research gaps stated above address the objectives of the current study.

The main focus of this review remains to understand the interdisciplinarity of the transitions within the *Gaddi* pastoralism studied by different scholars at different time intervals. Irrespective of their theoretical orientation, these studies offer crucial insights into how pastoralism remains a complex system that needs to be evaluated in a holistic manner to understand the various socio-ecological axes that remains entangled within. Thus, the major questions that this section of the review attempts to answer are as following-

o   How is the *Gaddi* pastoralism generally perceived and represented across literature?

o   How are the transitions in the *Gaddi* pastoralism documented and what are the major areas of concern?

o   How the existing studies deal with pastoralism's past, present and future?

o   What are the gaps that needs to be fulfilled to understand these transitions?

### 2.6.1) *Gaddi* Pastoralism and transitions- A chronological review

The *Gaddi* community of Himachal Pradesh remains widely acknowledged for its traditional agro-pastoral occupation that has continued since generations and has been documented vividly in the available literature. They are often called as the 'pastoralists of the snowy ranges' with their practices remaining 'as old as the hills'

(Chakravarty-Kaul, 1996, 1997). One of the earliest academic works by Malhotra (1935), calls the community to be semi-nomadic while identifying the patterns of their mobility as an adaptive response to the difficult geographical and environmental conditions. With extremely volatile weather conditions and unsuitable terrain to practice large scale agriculture, rearing the flocks of sheep and goat in a migratory system was assumed as a 'natural solution' to ecological limitations by (Malhotra, 1935, p. 17). However, pastoralism wasn't a uniform livelihood choice for all among the community. Many of them practiced subsistence agriculture in their native hill villages during the summer months and migrated to the plains to take up odd jobs or assist the practicing pastoralists to make a living during the winters (Newell, 1955). Therefore, the migratory pattern followed by the *Gaddis*, in the initial studies, is perceived to emerge out of geographical and environmental limitations irrespective of their livelihood choices (Malhotra, 1935; Newell, 1955).

On contrary, in one of the initial records compiled after the national independence and formation of Himachal Pradesh as a full state in 1971, pastoralism was identified as an essential and principal economic pursuit of the whole of the *Gaddi* tribal population (T. S. Negi, 1976). Such economic interests and variability of natural resources required to rear the large flocks, therefore, was highlighted as a primary reason for their historically continuing semi nomadic lifestyle. Apart from that, an observation on declining pastoralism and increasing inclination to settle at more hospitable locations was also made (T. S. Negi, 1976). Such early transitions corresponded with the unthoughtful policy recommendations made in some of the works during that period. (Shashi, 1979) who extensively documented the nomads of the Himalayas and provided a descriptive account of the *Gaddi* pastoralism remains one of such work. In his words, the *Gaddi* community remains semi nomadic, semi-

agricultural and semi pastoral (Shashi, 1979). While outlining the scarcity of food and fodder during the extreme winter months as a major reason for this lifestyle (Shashi, 1979) called for discarding this way of life that made the people 'slaves of the nature'. He concluded with certain development related interventions that could help the community move away from this backward occupation, which included promotion of public distribution system, allotment of land to the landless, banning of animal sacrifice and introduction of newer sedentary livestock breeds. His account on pastoral practices as well as the suggested remedies follow the typical developmental model prevalent during the period which lacked public engagement and dialogue and was based on superficial biased understanding.

Later on, Phillimore's (1982) thesis on the *Gaddis* of Kangra specifically dealing with the economy of transhumant pastoralism in relation to the social organisation of the community came as an important academic breakthrough. While reiterating the livelihood heterogeneity and decline in pastoral practices, (Phillimore, 1982) states that the *Gaddi* pastoralism provides a distinctive cultural character to the community that also remained a matter of pride for many. His study remains one of the first detailed accounts of the *Gaddi* pastoralism that sheds lights on its relationship with agricultural practices, labour and production dynamics and empirically answers how the pastoral and agricultural social relations remain not so analytically different. Phillimore's ideas remain in tune with what (Scoones, 2020) proposes in his recent article on theoretical similarities between agriculture and pastoralism.

Towards the end of 1900's, many studies that discussed the *Gaddi* pastoralism from historical point of view, especially mentioning the impacts and influence of colonial government on their practices, emerged (Chakravarty-Kaul, 1996; M. Sharma, 2013; C. Singh, 2009; Tucker, 1986). A superficial gaze at the literature hints

that, it is during this time the *Gaddi* pastoralism became a centre of academic attention. Many researchers probed into different dimension of it to conclude that these practices not only remain complex in themselves to understand but their interaction with other social, cultural, economic, political and ecological components produce equally complex and chaotic attributes.

Tucker (1986) highlighted the market-oriented nature of the *Gaddi* pastoralism, and discussed the land settlements, formalization of migration routes and grazing tracts, levying of grazing fee and establishment of stringent forest management rules during the British period in the country. Apart from the efforts of bringing an order to the migratory animal husbandry practices, colonial government remained instrumental in propagating the false narratives of ecological degradations and backwardness attached to the mobile pastoral lifestyle. Mobility didn't suit well the state's revenue generation agenda, which thus favoured settled agriculture over migratory pastoralism (Chakravarty-Kaul, 1996). Despite all the limiting actions of the administration, pastoralism in the hills flourished during the war period of 1939-1945 as the demand for wool and meat went up (Tucker, 1986). It led to a well-recognised pastoral economy among the *Gaddis*.

However, transformations within these practices remained persistent. (Mukherjee, 1994) studied the agro-pastoral economy of the *Gaddis* in Bharmour and documented the shifts from rearing sheep to goats and from subsistence agriculture towards commercial production. Stating the profitable economic but devastating ecological impacts of these changes, Mukherjee (1994) advocated for exploring livelihood alternatives for the community to prevent eco-degradation in the region. Another set of studies by Chakravarty-Kaul (1996, 1997, 1998) that relied on

historical materials, projected the changes in pastoral practices to be an outcome of weekend communal institutions.

The long legacy of colonial mindset and governance regime that shaped the forest management in India hampered the way pastoral resources were accessed and the regulatory customary institution that governed them. Chakravarty-Kaul (1997) explains the customary institution of transhumance in detail and sheds light on its importance in intricately bridging the social and ecological uncertainties and facilitating pastoral activities. Opposing the Hardinian argument of 'Tragedy of common's', Kaul's work established that the *Gaddis* who rely on mosaics of private and primunal[7] resources, followed a well-established system of regulating them. Colonial powers and continuation of similar regime afterwards that led into creation new formal institutions against the customary ones, disturbed and disrupted the *Gaddi* pastoral practices. She also underlined the embedded reciprocity and complex economic and social networks in the region between the cultivators and pastoralists that were managed using the transhumance institution (Chakravarty-Kaul, 1997, 1998).

Extending the question of resource use and probing the ecological impact of pastoral practices, Saberwal (1996a, 1996b, 2003) attempted to analyse the *Gaddi* pastoralism using a lens of political ecology. In his work, he argues that pastoralists rarely impact the richness of biodiversity in the region as their resource dependence remains spread across different seasons, places and ecozones. While questioning the efficacy of restrictive policies implemented by the state to curtail pastoral activities, Saberwal (1996b) reflects on how these norms are negotiated every now and then

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[7] Primunal resources are privately managed for some part of the year and remain communal for rest of the time (Chakravarty-Kaul, 1997)

using informal political means. His analysis disclose how the Gaddi pastoralists navigate the hostile bureaucratic environment to secure their resource access.

Furthermore, Kapila's (2003) doctoral thesis emphasized on the inequal, and hierarchal social relations as opposed to earlier views of egalitarianism among the pastoral communities. Her brief focus on the pastoral practices of the Kangra *Gaddis* provides crucial information on how this traditional occupation became the basis for obtaining the status of scheduled tribe for the Gaddis in Himachal Pradesh. It is by reinforcing the pastoral identity and territorial affiliation with the *Gaddi* mainland i.e., Bharmour, Kangra *Gaddis* could justify their case to receive the benefits of constitutional reservation (Kapila, 2008). She calls "pastoralism to be a key organising principle in the *Gaddi* cosmology" (Kapila, 2003, p. 34) that is increasingly becoming a part of cultural politics even if in practice it observes a decline. Her work, indicating a transition in the practice as well as significance of pastoralism for the community, essentially lays a ground for the current study.

Extending the research on historical and ecological importance of common pool resources in the *Gaddi* pastoralism, Axelby's (2007, 2016) work discusses the complexity of resource arrangements within which the *Gaddis* operate to secure seasonal pasturage. According to him, the concept of institutional bricolage[8] effectively explains the flexibility in pasture use and management as adopted by the *Gaddi* pastoralists. They opportunistically borrow from and depend on both formal and informal institutions varying upon their contingent needs and situations. Challenging the conventional common pool resource theories that consider the user's groups as a homogenised section with similar goals (in this case pastoralists) and traditional institutions as the ultimate solution to regulate commons, Axelby (2007)

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[8] *Institutional Bricolage* is a theoretical concept proposed by *Francis Cleaver* where she suggests that people are able to assemble and adapt norms, values and arrangements from various backgrounds and identities in order to achieve new goals (Axelby, 2007, p. 64)

empirically elucidates that actors, practices as well as institutions remain suspended in an on-going process of evolution. In case of the *Gaddis*, ensuring a secure access to resource base is an outcome of a similar process where different institutions, stakeholders vis-à-vis different goals and norms interact, adapt, and remain subject to negotiation. C. Singh (2009) calls this flexibility and evolution of institutions within pastoralism as its induction into modernity. Drawing from the historical sources, Singh also opines that the changes in the *Gaddi* pastoralism since colonial times need to be understood as a part and parcel of global processes that had social, economic, cultural and political implications. However, in policy perspectives uneven stress is laid on its economic aspects leaving a whole lot of crucial details aside. Such a skewed understanding of pastoralism presents an unattended research gap.

Even the most recent works on the *Gaddi* pastoralism continue to follow the bias as observed in the work of M. Sharma's (2013) who provides a historical view of their pastoral economy. In his analysis, he mentions that the *Gaddi* pastoralism has always remained a standalone economy, which catered the agricultural as well as colonial interests in terms of material goods as well as revenue. Having a separate niche for its functioning, *Gaddi* pastoralism has evaded colonial pressures using its dynamic transhumance strategy that creates an interactive social system within which pastoralists operate (M. Sharma, 2013). While transformation remains an underlying theme of this study, it is limitedly explored to develop only the economic understanding of it.

Similarly, the recent ethnography by Wagner (2013) titled as '*The Gaddi beyond pastoralism*' discards the centrality of pastoral occupation in Gaddi's socio-ecology. She describes the everyday interactions between the community people and their environment to understand the processes of place-making. In her work, Wagner

intends to move away from pastoral practices of the *Gaddis* that according to her have long been used as an analytical lens to understand human-environment relation either as an adaptation or as an ideology. Her work rejects these two trends to shift a gaze towards how the relations with the environment and landscapes are established through practice. Adopting the theoretical framework of symmetric anthropology, Wagner explains how nature or what she refers to as environment, is not merely a bio-physical entity that just exists on its own, but it is created and reproduced through the means of practice. Regardless of her claim to go beyond pastoralism to determine the *Gaddis*' interaction or relation with the environment, her work recurrently establishes the need to do so. Another important research gap that she highlights in her study is regarding the inadequate attention paid to the socio-cultural dimensions of human-environmental relationships in the existing ecological research on pastoralism in south Asia. At the same time, social science's research remains ignorant towards the ecological factors (Wagner, 2013, p. 23). She rightly points out the need to bring the two perspectives together to develop a better understanding of pastoralism as a whole. Her study although makes an appropriate effort to advance the discursive and combined interpretation of human-environment relationships and how they are enacted in case of *Gaddis*, but it ignores the evolving dynamics that regulates them.

Bringing back the focus on changes in *Gaddi* pastoralism Ramprasad et al., (2020) and A. Sharma et al. (2022) in their latest studies document a steep decline in these practices. According to Ramprasad et al. (2020), it is the flawed afforestation policies that are intensifying the vulnerability of the *Gaddi* pastoral practices and are also fuelling a livelihood change among them. While A. Sharma et al. (2022) suggest the increase in incidents of livestock thefts, human-wildlife conflicts and scarcity of fodder resources to be the key factors triggering a decline in *Gaddi*'s transhumance.

According to both these studies, it is the existing forest policies that challenge the continuity of *Gaddi* pastoral practices.

Apart from the above-mentioned studies, scholars have also written about Gaddi's material culture and houses (Pandey, 2015), livelihood strategies and changing socio-economic conditions (Hänninen, 2014), confrontation with various development interventions (John & Badoni, 2013) and the issues of tribe-caste continuum (Johnson, 2018, 2020). A limited description of gender dynamics that includes status of women and their roles are also documented by Bhasin (1991, 1991), Mehra (1992) and Pandey (2011). These accounts, although outdated, are useful to compare the changing norms of division of labour, social status and gender dynamics among the *Gaddis.*


## 2.7) Research Gaps

Academic research on pastoralism in India remains scattered and sporadic. Review of literature suggests a general lack of interdisciplinarity that could present a holistic and dynamic picture of pastoralism in transition. In addition, not many studies present the socio-ecological understanding of diverse pastoral systems that.are are as much rooted in culture as they are in their ecological terrain. The usage of social in SES either remains limited to measurable changes in socio-economic conditions (R. Singh et al., 2015) or to the conventional ideas that determine the institutions as the normative core of socio-ecological systems (Agrawal, 1991; A. Pandey et al., 2017). In such studies, the socio-cultural dimensions of SES are relegated to have a passive than an active role in shaping the interactions, action situations as well as the outcomes in pastoral systems.

As a whole, the major focus of pastoral research in India seems to be oriented towards understanding the institutional dynamics of pastoral functioning, impacts of state and various development interventions on pastoral practices, mobility and related impediments, economic contributions, and ecological influence of these practices. Such a focus ignores the spectrum of socio-cultural dimensions that the pastoral diversity presents along with the implication of changes in pastoralism on them.

It is very often that pastoralism is defined as a socio-cultural system and a way of life, but it rarely is probed using a cultural lens. Most of the recent literature focusing on the contemporary pastoral challenges continues to perceive the cultural aspects of pastoral communities as something static or frozen in time. It ignores the on-going cultural changes among them that may have a strong bearing on ecological, economic, social, and political factors regulating their pastoral practices. At the same time, how changes in pastoral practices impacts the communities on socio-cultural level remains undertheorized.

As per the literature, Indian pastoralism, since a long time, has remained under pressure with multiple external forces acting on it. The same is true for the *Gaddi* pastoralists of the Western Himalayas, who are observing a decline in their pastoral practices. Such a scenario leads up to two major queries-

- First, the emic perspective on pastoralism within the community of practice i.e., how pastoralism and the on-going transitions in it are perceived and experienced by the people remain unknown. Existing studies scantily discuss the changing significance of these practices and the new meanings and forms they acquire within the larger conceptual framework of SES. Therefore,

questioning and understanding the insider's outlook on vitality and viability of pastoralism remains integral.

- Second, the issues of socio-ecological challenges that arise with changes in pastoral practises are understudied. It is not well understood how the declining pastoralism relates to other discrete changes in cultural domains of everyday life such as food practises, social structure, gender, intercommunity relationships, and labour dynamics. The question of how the community despite distancing from pastoral practices remains highly associated and entangled within its socio-ecological extensions, remains worth examining.

The proposed thesis thus, is essentially an attempt to answer these queries and take the debate forward to widen the research spectrum on pastoralism among *Gaddis* in particular and India, in general.

# CHAPTER 3

# METHODOLOGY

## 3.1) Introduction

Understanding the complexity of socio-ecological systems (SES) requires an interdisciplinary approach that borrows heavily from a wide range of disciplines including anthropology, ecology, development studies and sociology, among others (Biggs, Vos, et al., 2021). This evolving field of SES continues to experiment with a different set of theoretical orientations and methodologies depending on the research agenda and the specific questions one seeks to address. For the current study, we adopted an ethnographic qualitative research design to develop an in-depth understanding of socio-ecological transitions concerning the traditional pastoral livelihoods of the *Gaddis*. To generate a descriptive account of how people, experience these transitions and make sense of them in their daily lives, an ethnographic approach for data collection was appropriate. It facilitated looking beyond the cause-effect relationships and acknowledging the complexity and interconnectedness in the socio-ecological systems within which the *Gaddi* pastoral livelihoods, their community identity, and the changing nature of resources are embedded. All the primary data for this research is collected through careful implementation of ethnographic methodologies following a flexible and recursive fieldwork strategy. A combination of qualitative methods including participant observations, in-depth and semi-structured interviews, focus group discussions and digital methodologies were used simultaneously for data collection during this study.

After conducting a comprehensive literature review, qualitative research design seemed to be the most desirable option that could provide the answers to the

research questions stated in chapter 1. These questions could possibly be answered through numerous methodological pathways of enquiry, however, in the current case, the qualitative narratives seemed to offer the necessary depth required to understand the larger socio-ecological transitions as discussed in theoretical and analytical framework given in chapter 1. Perceiving any change and related nuances can only be pursued satisfactorily by descriptively exploring how it is lived in situ. Therefore, qualitative ethnographic methods that help articulate the change following local narratives, vocabulary, and perceptions, were used to gather the data presented in the later chapters of this thesis.

In the further sections of this chapter, complete details of methods and tools used for data collection are laid out. We also highlight the functional unpredictability of selected research methods and the practical challenges faced during their execution. Relying on fieldwork as a primary method for generating valuable insights, we cautiously employed the qualitative data collection tools while remaining aware of the subjective biases. Following the bracketing approach[9], we continually worked on recognising any and all personal biases to balance out the subjective interpretations, and to minimise the distortion in data. However, we acknowledge that within the fieldwork tradition, knowledge is co-constructed by the researcher and the participants through various mediums and types of interactions (Palmer et al., 2014). Within this process, multiple subjectivities intersect, overlap and conflict. Therefore, to establish the veracity and reliability of the data, this chapter provides a rigorous description of all the methodological procedures used for data collection and analysis.

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[9] Bracketing refers to the suspension of personal judgements and preconceived notions during the data collection process (Tufford & Newman, 2012)

**3.2) Research Context- Population and Location**

For this study, which aims at examining the transitions in traditional pastoral practices and their socio-ecological implications, we focused on the *Gaddi* population of Himachal Pradesh in India. According to the state's Tribal Development Department, *Gaddi* forms the largest and the most dominant tribe catalogued in the state Scheduled Tribe list of Himachal Pradesh. It is a well-acknowledged community, especially for its traditional agro-pastoral practices that have been continuing for generations. In addition to their distinct occupation, which entangles with collective identity, constitutional status, geographical location, and the local socio-ecology also remain the major guiding factors for the selection of the community for this study.

Geographically, *Gaddis* are dispersed across two districts of Himachal Pradesh, including Kangra and Chamba. They are also known as *Pahari Bahrmauris* (V. P. Sharma et al., 2003) as the scattered population trace their native links to the villages of Bharmour sub-tehsil in Chamba district. Irrespective of the current residential locations, most *Gaddis* have a profound territorial affiliation with Bharmour (Kaushal, 2001; Wagner, 2013). '*Gaddi*' as a generic term is used for the union of castes including Brahmins, Rajputs, Khatris, Ranas and Thakurs (K. Pandey, 2015; V. P. Sharma et al., 2003) who majorly follow the Hindu traditions besides their tribal affiliation. Despite their long-term livelihood diversification, the traditional pastoral practices continue to acquire a considerable reputation and socio-cultural significance among the dispersed *Gaddi* population.

The fieldwork for the current study was conducted at the Bharmour sub-tehsil of Chamba District, which is considered as the ancestral land of the *Gaddi* origin (as shown in Map 3). Bharmour also houses a mini secretariat with all the important

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public offices, including Additional District Magistrate, revenue, forest, and tribal welfare. It is also one of the five ITDP[10] areas falling under the Tribal Sub Plan in Himachal Pradesh.



*Map 3 Research location (created using QGIS)*
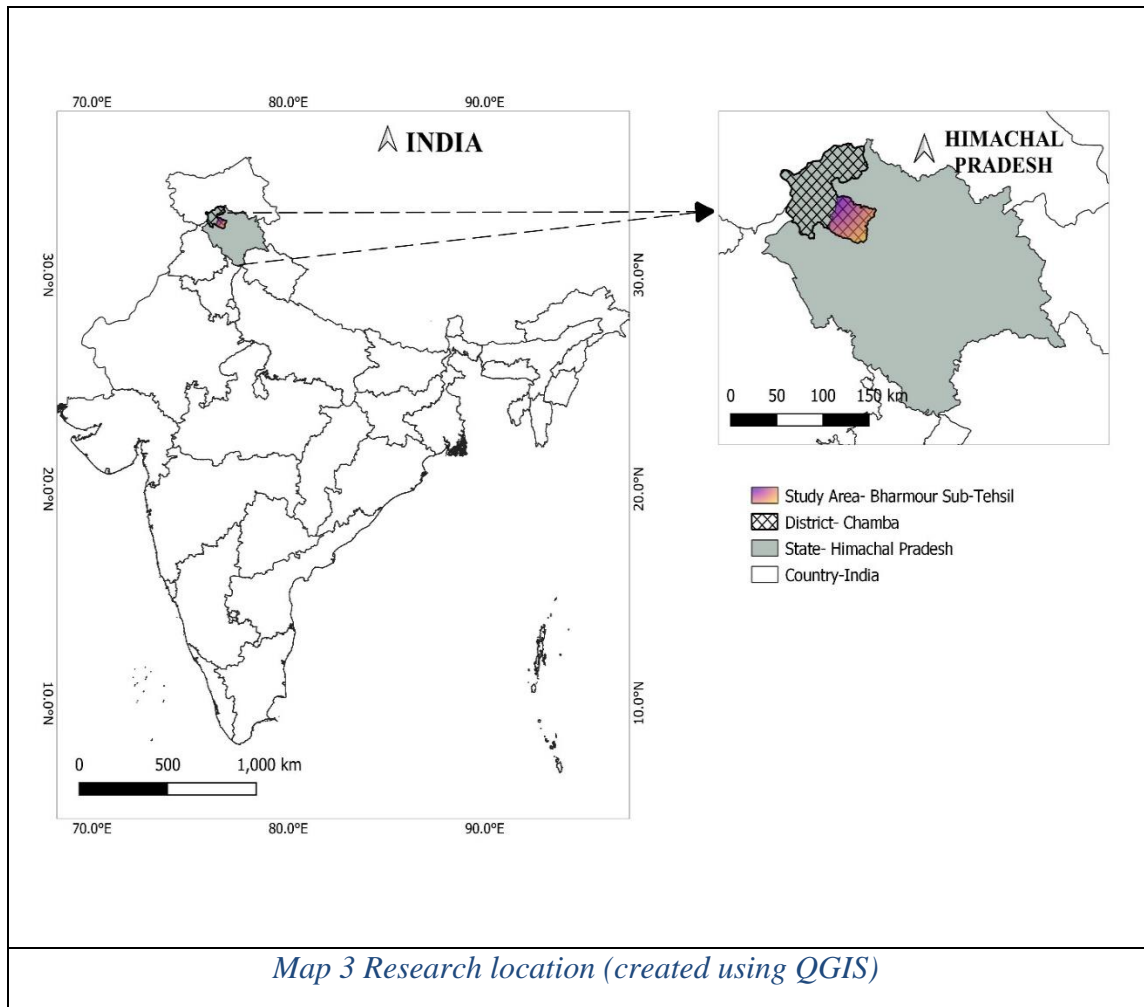
Out of a long list of scattered villages and small hamlets, those villages with a historical prevalence and dominance of traditional agro-pastoral livelihood, as reported by the local residents as well as the staff of the forest department, were chosen for fieldwork. It included *Bharmour, Sachuin, Malkhauta, Panjsei, Grima, Chobia, Jhikli Kugti* and *Uparli Kugti* (Map 4). Despite a decline in pastoralism, all these villages have a significant number of households that continue to practice it in a

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[10] Details of ITDP's in the state is attached in Annexure VII

form or another. However, no official data accounting for the exact number of pastoralists from these villages exist. The record of permits issued by the forest department documents a total of 115 permits issued to the *Gaddi* graziers for the year 2018 in the Bharmour Forest Division. This is the only statistical information available on the number of practicing pastoralists in the region. However, this figure doesn't account for the informal arrangements through which permits are shared among several family members, relatives, community members or are used by absentee owners to continue the pastoral practices using hired labour (explained in Chapter 7). At the same time, it also fails to tell if the issued permits are still in use or are just being renewed to maintain the customary rights of access over forest resources. Therefore, for the current study we relied on the abstract estimation provided by the community members for each village.



*Map 4 Villages at Bharmour Sub-Tehsil visited during the fieldwork
(Created in Google Earth)*
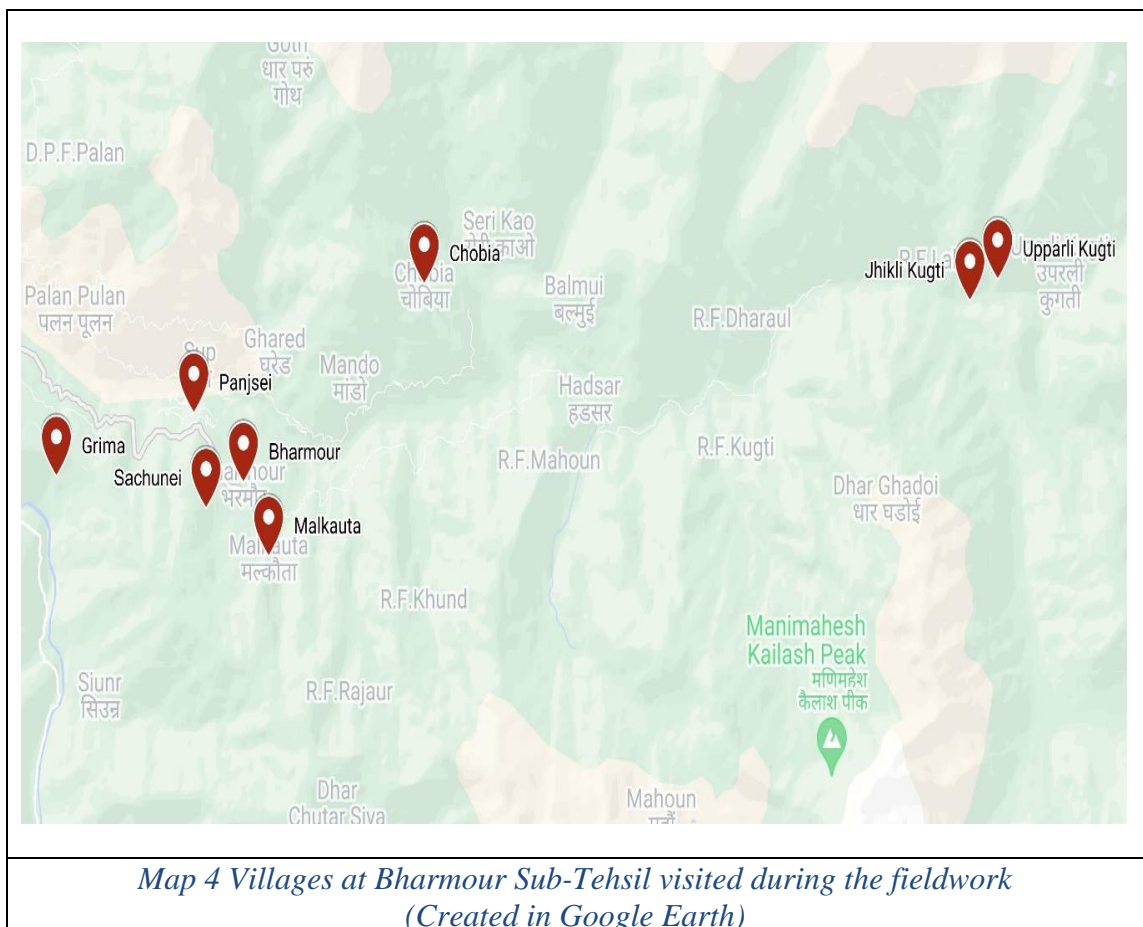
Apart from these areas that were physically visited during various rounds of fieldwork, *Gaddi* population staying across the state were also approached by us through different means such as word of mouth as well as through social media networks. *Gaddis* have several interactive community pages on Facebook and Instagram with a large number of active members. Access to these closed community groups was made possible initially by providing the details of this PhD project through direct messages and later through the help of some acquaintances that we met during the fieldwork. These social media pages remained an important source of information, especially during the Covid lockdown period during 2020 and 2021when physical presence in the field was not feasible. Out of all the information shared on these community pages, details of important events, migrating pastoralists and their everyday challenges, various discussions on local culture, pastoral affiliations, photographs, and videos of cultural proceedings were of great relevance. Although, the primary data used in this research was majorly collected through in-person fieldwork, constant interactions through digital medium also provided enriching insights. Most importantly, it helped in grasping the new meanings of pastoralism reconstructed away from its actual practice in this emergent virtual social space (elaborated in section 3.7.5).

For the purpose of methodological clarity, delimiting the geographical location of fieldwork is essential, but it should not be confused for lack of mobility and migration of both research participants and the researcher. Especially in this case of *Gaddis*, who follow vertical transhumance for their pastoral practices and also migrate seasonally between their dual residences at Bharmour and Kangra. *Gaddi* pastoralists move with their herds throughout the year in search fodder for their livestock whereas their non-pastoral counterparts, and families migrate up and down across Kangra and

Chamba valley following the seasonal cycle. Majority of the *Gaddi* population from Bharmour now owns a second house across different locations in Kangra, that are seasonally used to escape the harsh winter months in Bharmour or as per other contingent needs of the family members. Many *Gaddi* families even own small proportions of agricultural land in and around their winter houses, which they cultivate and harvest in tune with their migration cycle. The well-co-ordinated migratory routine of the *Gaddis* emanate from their traditional pastoral practices that follow a specific spatio-temporal rhythm. This routine continues to exist despite the several changes in their pastoral practices and is further facilitated by the expansion of road network and public transportation services. Unlike the older times, Bharmour is now well connected with the nearby towns and cities that gives the local *Gaddi* people an option to flexibly move in and out as per their need. Therefore, their mobility in current times is not only restricted to seasonal windows of opportunity or for pastoral purposes but is motivated by several factors. All these aspects collectively present a delicate socio-ecological configuration that the community has aligned to over the years but is gradually transitioning both in terms of its meaning and praxis. Considering such seasonal mobilities, migratory pastoral practices, and increasing use of social media among the community members, digital methodologies were also considered in combination with the in-person fieldwork to augment the understanding of ongoing transitions in *Gaddi* pastoralism.

For this study, thus the field wasn't limited to a specific site but was constructed based on the community affiliations both in physical as well as virtual spaces. Online interactions and offline modes of data collection were navigated back and forth for the continuous immersion in *Gaddi* cultural context.

**3.3) Ethnographic Method and Its Adaptation**

Ethnographic research acquires many different forms and is not particularly restricted to any standard definition (Stewart, 1998). As a method, it is evolving and expanding across disciplinary boundaries by adapting to newer criteria and novel applications. Within this growing space that is reconfiguring to consider the dynamics of lived reality, conventional anthropological idea suggesting longer uninterrupted fieldwork is repeatedly challenged. In this study, where constant mobility, uncertainties, remote locations, and migration characterise the researched population, methodological adaptations remained vital. Away from the exoticism of traditional anthropological ethnographies, the current study considers a problem-based enquiry that has its own time-based dimension and demands faster and accommodative data collection approaches. Thus, the alternative ways that allow for temporal flexibility and adaptation to everyday disruptions that shapes our lives collectively, in and outside the field, were utilised. Various emergent approaches, including short term ethnography (Pink & Morgan, 2013), pop-up ethnography (Maxwell et al., 2013), patchwork ethnography (Günel et al., 2020) and mobile ethnography (Hine, 2015), directed the course of this research.

The current study, thus, presents a blend of these novel approaches merging the ideas of temporal flexibility, mobility, uncertainty of social situations and fragmented nature of everyday reality. We carefully borrowed these ideas that confront the traditional use of ethnography to devise a suitable research plan that could deliver appropriate information concerning the research questions and objectives of this study. Keeping the institutional obligations, personal life events, and the *Gaddi* community's mobile life in mind, a flexible ethnographic plan that didn't restrict the data collection based on temporal issues or fixed locations was devised.

Rounds of short-term fieldwork were conducted in a phased manner that considered the 'interstitial pop-up spaces and events' (Maxwell et al., 2013). It involved tracing the unanticipated situations that popped up in the field without much prior information and provided major insights on the transitions in *Gaddi* pastoralism. This approach often proved much more helpful than merely documenting the verbal data as it offered ample scope for participation and embodied experiences.

In ethnographic research, a set of presumptive methods does not always translate in a similar manner during the fieldwork as planned while developing the research layout. The nature of the data we aspire to collect through these methods demands a flexible approach and a constant triangulation to verify the accuracy of the information and validate it in its own context. Therefore, the methodological approach constantly kept evolving with the unfolding of contingencies and unexpected situations in the field. The lives of the people being researched in their natural surroundings are way different from an experiment where variables could be controlled and regulated. It has its own flow and course of action that could only be understood with time by immersing in the local context. Such gradual progression makes the ethnographic fieldwork more naturalistic (Miles & Huberman, 1994; Reimer, 2012) where ordinary events, routines and in general, the *'imponderabilia of everyday life'* (Malinowski, 1922) direct the data collection process and provide crucial insights for the research objectives. The continuous process of implementation, evaluation, and adaptation of various methods in the field made the qualitative ethnographic approach extremely meticulous. It operated in a manner where continuous feedback loops were generated that further helped in advancing the strength of the methodological base and enhancing the quality of the information received.

**3.4) Fieldwork- Spatial and Temporal Aspects**

The data presented in this study were collected over 2018-2020 by using short-term ethnographic research design. Phases of the physical fieldwork were conducted through 2018-19, while in 2020, digital methodologies were used to stay connected. The duration of the recurrent field visits ranged from a week to a month depending on the conditions of the connecting roads, climatic fluctuations, migration timings of the *Gaddi* pastoralists, monsoons, landslides, official commitments, and formal assignments. Moreover, the dual residence of *Gaddi* community members (summers in Bharmour and winters in Kangra) also influenced the timings of the field visits and overall stay at Bharmour. Fieldwork was efficiently planned according to the inputs received from the local administration and residents along with the in-person short preliminary visits to Bharmour. Major part of the fieldwork was conducted during the summer months as the logistic and weather conditions also remained relatively conducive during this time frame. Migration cycle followed by *Gaddi* pastoralists was also duly considered while planning the field stay. As they move up from Kangra to Chamba and further to Lahaul-Spiti in the summer months (April-May) and descend back following the same routes in winters (September-October), phases of fieldwork were conducted during these specific months to witness the migration first-hand and collect the community members' responses when the pastoral phenomenon was taking place.

Following the ethnographic research design and methodology, a field is conceptualised as a place where a researcher undergoes a rite of passage to become a part of the community. This is one of the forms of scholarly enquiries where developing interpersonal relationships and close ties with respondents facilitate the research process than obstructing it (Vered, 2000). These relationships often even

continue after the departure from the field site. Therefore, clearly defining the entry and exit from the field remains challenging because of the constant interactions that continue even during the physical absence from there. Similarly, mobility, in and out of the field, in current times doesn't remain a linear process anymore that can be fixed within the temporal and geographical bounds. The onset of technology and its wider reach facilitates the researcher's communication with the field and the respondents. Apart from the physical presence, mediated modes of interaction through various social media platforms helped in up keeping connections with the key respondents. After the rounds of in-person fieldwork, WhatsApp, Facebook and Instagram became the channels of constant communication and ethnographic engagement from where data was drawn in from of textual conversations, audio-visual content and running commentaries on the socio media posts. The virtual space of the Internet facilitated multi-sited ethnography as it allowed a simultaneous presence at different places, with different people and interactions on various topics. As the primary focus of this thesis is to produce an account of evolving significance of traditional pastoralism and its implications for wider socio-ecology within the community of practice, both the online and offline modes of interactions were highly useful in understanding the shifts in meaning-making processes. Although, primary data was majorly collected using the in-person field visits.

## 3.5) Establishing Rapport and Building Trust

Rapport building is an essential but time-consuming aspect of conducting qualitative ethnographic research that involves interpersonal interactions and continuous exchange. To get to a point where the respondents were comfortable and willing to

have a free-flowing conversation, several rounds of informal interactions were carried out. These informal conversations helped not only in increasing social visibility in and around the village but also helped in developing familiarity with people who later agreed to participate in this research. It also helped building a mutual relationship of trust, which involves two-way flow of information and communication. During my stay within the community, I was probed to share details on my social, economic background, interests and perceptions and other personal and political aspects, which served as a basis for developing rapport. At times, these probing served as platforms for searching for common worldviews as well as for initiating a few fictive kin relationships between me and the community members that effectively reduced the otherness and gave me an opportunity to closely participate in community's daily life as a part of their extended family.

Immersion and integration in the daily lives of respondents was helpful in getting acquainted with the larger field setting and community members, who later became the key respondents throughout the study. In addition to the in-person interactions, social media content shared on the community's forums was also beneficial for rapport establishment. These closed forums that discuss routine issues concerning community and people became accessible after sharing the personal details and purpose of my engagement with the forum's creators. Although, I only participated as a passive observer in these forums, the online-offline continuum provided an added opportunity to investigate the emerging digital lives of the people. It was also useful in observing the changing means and practices of pastoralism which included sharing of information on thefts of livestock or informing the pastoralists regarding upcoming veterinary camps or medical drives. These online spaces were

helpful in transcending the limitations of in-person fieldwork where many places, people or information goes unnoticed or at times, remains inaccessible.

Personal attributes of a researcher matter a lot during the ethnographic fieldwork as they determine the limits of participation and learning (Van Maanen, 2011). For instance, during the fieldwork, gender emerged as an important variable that influenced the rapport building process and access to the everyday household lives. Being a female, I was welcomed to the inner chambers of the house, i.e., the kitchen, where I gradually socialised into the women's circles. This even enabled a greater reach to the other family members who otherwise would have been difficult to approach. Participating in the ordinary household activities, accompanying the women to their fields or relatives houses and attending the village gatherings helped in developing a sense of intimacy that made the environment conducive for conversations. In addition to these efforts, my native affiliation to state of Himachal Pradesh along with the ability to understand and communicate in local *Gaddiyali* dialect also accelerated the rapport establishment process.

## 3.6) Introspecting Self- Reflections on Subjectivity and Reflexivity

Within ethnographic fieldwork, the researcher is a primary tool for data collection (LeCompte & Schensul, 2010) and acquires multiple roles within the situated context. The proximity between the researcher and the researched increases the levels of complexity as the researcher's own beliefs, biases and assumptions influence the interaction to a great extent.  Therefore, claiming a full objective standpoint in such studies is not possible and not even desirable. Reflexivity in ethnographic studies is highly crucial as it influences the research process and quality starting from the

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conception of topic and research objectives until it becomes a written product (C. A. Davies, 2002).

For the current study, a reflexive approach and rigorous methodological outline was laid out to address and manage subjectivities. We followed a continual process of self-referencing and examination starting from the conceptualization of research topic till the final stages of data analysis. Such an approach helped to transcend the theoretical dichotomies of social sciences' positivist understanding and the interpretative perspective of ethnographic tradition (C. A. Davies, 2002). The aim was to find a balance where the subjective judgement neither impedes the flow of everyday events in the field nor the analysis of them. Although, it is challenging to achieve that balance, which requires two rules including constant suspension of active judgement and emotional detachment (Bernard, 2017). But, with conscious practice we adopted these rules that helped in controlling the bias that certain situations or conversations can invoke. The running notes written during the data collection in the fieldwork diary were helpful in checking and eliminating the differences between personal opinions and participant's beliefs.

Among many dimensions of the self that influence the field research experience, gender essentially remained the most predominant aspect that affected the data collection process for this study. In varying social situations, gender is constructed and perceived differently that influences access to places, knowledge and information, events, and social situations (Bernard, 2017). During the fieldwork, I was also subjected to the prevalent gender norms socially accepted within the *Gaddi* community, even if there were no verbal impositions of the same. For example, during a community meeting seating arrangements were usually gender segregated without any explicit announcement of it. I followed such local norms without

necessarily challenging them to assimilate within the research context and become a part of everyday sociality. It positively impacted the data collection process and enabled an appreciation for an insider's perspective.

As the research site included dispersed hamlets and villages, gender became an obstructing variable in my decision-making process regarding travel and stay. Keeping safety and security in mind as a lone female researcher, I had to carefully negotiate the choice of stay, time of interactions, and travel schedules. As the mobile *Gaddi* herds halt adjacent to the highways or in the distant open fields with no residential options available in the vicinity, it was not feasible to stay and move with them. Their mobile camps majorly comprise a few men as women rarely migrate with the herds. However, they often visit the halting sites to help their male counterparts in chores like cooking or cleaning, especially when the herds reach close to their home villages. Multiple such sites where the *Gaddi* pastoralists rested in the daytime or halted for shorter durations were chosen for a visit during the field stay. The research topic focuses explicitly on *Gaddi* pastoralism, but it does not limit only to document the experiences of the pastoralists. In this study, we also consider the broader meaning of pastoralism and transitions in it as recognised by the *Gaddi* community as a whole. In order to maximise on the validity and quality of the data collected, we consciously chose to conduct a multi-sited ethnography within pastoral and non-pastoral settings of the *Gaddi* community.

Constant juggling between the camping sites, village settlements and migration routes meant reintroducing myself to people time and again. During the data collection, I carefully remained conscious of my own identity by reflecting on the ways of communication in terms of language and accent, connection based on affiliation to the same region and the commonality in terms of cultural norms and

rituals. Most of the interactions were carried out in Hindi, but at times *Gaddiyali* was also spoken commonly by the people, especially the women. My partial understanding of the local dialect along with the continued socialization with the *Gaddi* people helped in comprehending the essence of the conversations in *Gaddiyali* reasonably well. This also facilitated the process of immersion within the local landscape and reduced the 'otherness' to prevent clouding of research data with social desirability bias. In such instances, "trained subjectivity" (Bernard, 2017) , which helps in producing better insights without value judgement, becomes the most critical methodological tool to understand the array of conditions and causalities.

### 3.7) Methods

Data presented in this thesis results from a thorough enquiry conducted using multiple qualitative methods drawn from the ethnographic tradition. These methods were utilised in a manner that they often overlapped and were at use simultaneously. Combining methods allow for methodological triangulation that lowers the chances of misinterpretation and increases the strength of insights addressing the research objectives (Vos, Maciejewski, et al., 2021). The multiple methods used in the current study as described below were not employed in any particular chronology but were contextually determined depending upon the emergent contingencies in the field. Guided by logistical, definitional, and conceptual criteria (LeCompte & Schensul, 2010), this study focused on the *Gaddi* population of Bharmour, considering their past and present association with pastoral livelihoods.

*Gaddi* is an increasingly heterogeneous community where occupation no more remains a binding force in practice, but the socio-cultural, political, and ecological

sentiments attached to the traditional pastoralism still persist (John & Badoni, 2013). Therefore, for the purpose of conceptual clarity the sample of the population considered included both pastoral and non-pastoral opinions. Research participants were mainly identified using non-probability- purposive and snowball sampling methods. Number of the participants was not fixated following any specific formula but was theoretically decided based on the saturation in the information collected through various research methods. The people who participated in this research includes practising *Gaddi* pastoralists, ex-pastoralists, members of their families, elders, women and youth of the community, and government officials from forest and revenue departments and the general administration of Bharmour. Apart from that, other researchers working in the region and a few local authors who write on cultural and historical specificities were also approached. One primary underlying criterion for *bounding* the population (LeCompte & Schensul, 2010) both in the physical as well as virtual space was their direct or indirect association with the *Gaddi* pastoralism. It helped increase the scope of receiving maximum variations within the data to provide a well-rounded understanding of transitions in pastoralism.

Ethical considerations were keenly followed during the data collection process. All the research participants were informed about the purpose of this study and the type of information to be collected for the same. They were presented with a written consent form translated in Hindi that they either signed or in some cases, verbally approved. Considering the impersonal nature of the questions, there was hardly any instance of resistance; however, participation was essentially influenced by the availability of time and individual will. The names used in this thesis are substituted for pseudonyms to maintain the privacy of the research participants, but the other necessary details, including their occupational status, age, and gender are

presented without any change. Ethical guidelines as suggested by the institute's research board for the social sciences research were pursued fully.

Having laid the ground for field work, in the next section, the details of the methods used for data collection are discussed.

### 3.7.1) Participant Observation

According to Vos et al. (2021), participant observations is a vital method to identify the linkages between the components of socio-ecological systems, ongoing transitions and the causes behind them. For the current ethnographic study, participant observations played a primary role in the process of data collection. Starting from the initial rounds of field visits when I was getting acquainted with the people and the place, preliminary observations helped finalise the study site, location for stay, sample population and a general layout of the field strategy. Observational data on the physical settings, landscape, land use, specific rituals, occasions, material objects, and everyday routine life was later collected through active participation. As a method, participant observation is a benchmark of ethnographic studies where immersion in the cultural context is used as a technique to collect the required information (Stewart, 1998).

Participant observations were recorded in the form of running notes or were documented in audio-visual format by paying careful attention to the details of both tangible and intangible aspects of the situations. During the interviews or group discussions, verbal responses often do not provide the nitty-gritty that could be directly observed in the actions. This information embedded in the respondents'

routinized social practices, which they do not consider as relevant information to be passed on to the researcher, can be well recorded through participant observation. As ethnography in itself is a situated enquiry (Stewart, 1998), participant observation made in such a manner are also highly contextual and informative.

During my tenure in the field, I was an active participant in the everyday life of the *Gaddi* community and their culture. With each consecutive interaction and conversation, a new layer of familiarity was added that opened up a passage of closer proximity to the local people. It significantly reduced the differences between the researcher and the researched to a bare minimum (Vos, Preiser, et al., 2021). Participant observations were used as a method to collect the thick description of the events, objects, perceptions, and outlooks through embodied experiences. Observations generated through such first-hand involvement were factually documented and later verified with the respondents to draw definite conclusions and avoid misinterpretations.

For instance, during the initial days of the field visit, I was invited to participate in a *Nuala-* a *Gaddi* ritual performed on any auspicious occasion, organised in the village where I was staying. The event marked the retirement of a family member from his tenured government job; however, it was profoundly linked to the pastoral culture where material objects derived from the traditional livestock practices were of immense significance. This occasion had a completely different meaning and sentiments for the organisers and the attendees; it also demonstrated a subtle connection with the pastoral practices that remain culturally embedded even in the non-pastoral households of the community. Such active participation in the rituals and observations made during the event, when later scrutinised for pastoral relevance, produced valuable insights for the research questions. This information that could be

documented through in-person involvement and observations otherwise had a rare chance to come up in decontextualised conversations.

During the fieldwork, I got an opportunity to participate in many social events and was part of everyday situations that were so mundane for the people that their verbal descriptions often lacked in-depth information about these events. It needed extra efforts and constant probing to gain knowledge on many such topics. However, by being a part of that setting and participating in the proceedings, linkages within the local socio-ecological system covering the various dimensions of land use, food practices, material culture, natural resources, division of labour, gendered categories, rituals, and symbols in relation with the overall transitions in *Gaddi* pastoral culture within the ordinary circumstances of everyday life could be comprehended.

Participation in the virtual community spaces on social media platforms was also useful for engaging with the topical conversations, audio-visual content and the live interactive sessions that were regularly conducted by the *Gaddi* community members. People often shared their opinions, suggestions, news articles, pictures of cultural artifacts or general community concerns on these platforms that resulted in many prolonged discussions and debates. Participating in these online forums provided unrestricted access to the views of community members residing outside Bharmour and helped in verifying certain information circulated in the informal domains. These online spaces acted as the digital storehouse of information that also captured some dimensions of transitions in pastoral livelihoods and the offshoots.

Apart from yielding essential insights on the research topic, participant observation was helpful in data triangulation. It aided in corroborating the documented responses with visible actions that allowed to scrutinize the social

desirability bias in the collected data. The initial observational evidence from the field was the basis for refining research questions, checklists and guides used for interviews and other methods of data collection.

### 3.7.2) Transect Walks and Drives

For understanding the physical landscape and the contextual meanings that people attribute to those spaces, transect walks is a commonly used tool for investigation. In the case of the current study, walking across the migratory routes, halting destinations, pastures and fields in the villages and other locations of importance within the expansive geographical boundaries of the research site was not so feasible. Therefore, conventional walks were replaced with transect drives wherever required. In addition to walking with the community members to get to know their surroundings, vehicular transportation was used to reach and explore the places of significance. Given the fact that *Gaddi* pastoralists continuously move up and down the hilly terrain, combination of walks and drives depending on the site's distance proved beneficial in locating them.

Transect drives were mainly valuable for understanding the distribution of hamlets and villages in the larger sub-tehsil of Bharmour, following the routes that the *Gaddi* pastoralists undertake with their herds, and conducting a multi sited ethnography. Through these drives at different intervals, an abstract map of the universe of the study was outlined to locate important sites including cultivation fields, village commons, migratory routes, local offices, the residence of community members who acted as gatekeepers. For instance, **Error! Reference source not found.** reflects the transect drives carried out to meet *Gaddi* pastoralists at their halting

sites during their summer migration. This method that facilitated the ease of mobility in and around the central location of Bharmour, also helped in assembling the resources, sites, and people into interconnected networks. As a participatory method, it was used to understand how the *Gaddis* navigate their socio-ecological landscape and relate it with their changing pastoral practices.
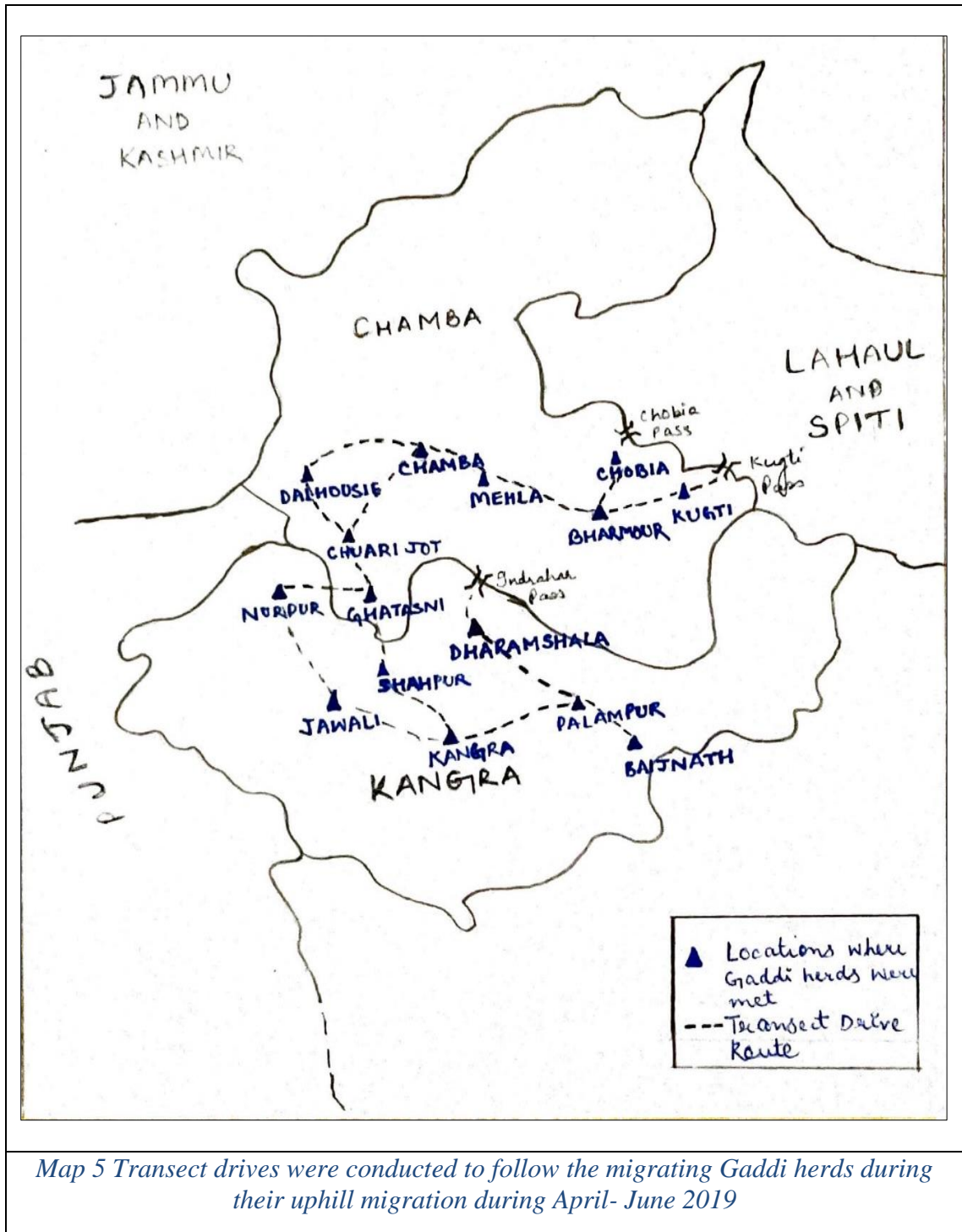


*Map 5 Transect drives were conducted to follow the migrating Gaddi herds during their uphill migration during April- June 2019*

### 3.7.3) Focus group Discussions

There is a common perception that focus group discussions contradict ethnographic methodologies in a sense that they create artificial settings for interactions and discussions that have high chances of getting biased or socially desirable responses. Nonetheless, they are an essential research method to gather collective perceptions and triangulate the already gathered insights. This method was used in multiple ways to build rapport, discuss the topics of common relevance where collective views matter more than the individual perceptions and bring up the nuanced issues on which the community members have wide-ranging views. Through such group settings, I got acquainted with specific ideas that are either collectively accepted within the community without any contestation or remain exclusively conflicting with divided opinions. Primarily, this method was used to understand the broader cultural perception of transitioning pastoral livelihoods and how these transitions affect the community as a whole.

For a qualitative ethnographic study, focus groups are regulated in terms of their structure, size, compositions, homo and heterogeneity based on the research objectives and focus (Reimer, 2012). In the field setting, it remained highly challenging to maintain the decorum of the meetings, restrict the participation of people in focus groups, give everyone an equal chance to speak and keep the discussion from straying away onto an entirely different plane. These challenges were part of the process as discussions were conducted in the in the natural settings. Instead of holding onto the tight boundaries of a topic, at times the free flow of discussion generated important insights and made the group discussions more acceptable within the local settings.

It took some time to grasp that the social settings of the public meeting arenas where I was conducting my focus group discussions and interviews within the village had some unsaid cultural normative patterns. Categories including age, gender, class, occupation and even ancestry mattered a lot in shaping the interactions in these shared spaces. Generally accepted social sanctions governed the levels of people's participation and the submissions they made. I decided not to defy these undeclared conventions by arranging the groups in a particular manner but noted how the intersectionality played out even within the assumed homogenous group of people. Creating such vibrant space for deliberations within the existing socio-cultural surroundings makes ethnographic focus group discussions unique and eloquent (Reimer, 2012).

At times, while conducting the focused group discussions, participants came up with more questions than answers that further shaped the course of discussion. In a way, such progression helped in refining the thematic focus of the discussions and also reflected the differing opinions and individual meaning-making processes that people employ in their daily lives. For instance, during the discussion on *Gaddi* pastoral livelihoods and political support, many conflicting views emerged on the role of local political leaders in shifting conditions of traditional pastoral practices. The opinions expressed also varied across the villages where the FGDs were conducted. A total of nine focused group discussions were conducted with different groups of participants at different time intervals and locations. Participants included the practising and non-practising pastoralists, women, elderly and young *Gaddi* community members, along with the officials from the various government departments. Most of these discussions took place at the public meeting spaces, including the common village ground called '*beeni*', the premise of *Chaurasi* temple, a

village tea stall, or the government office. Apart from these topical discussions, multiple informal conversations also provided valuable information. However, informality of these conversations makes them ineligible for consideration under the focus group discussions.

### 3.7.4) Interviews- In-depth and Semi-structured

To gather the information on how the transitions in pastoral livelihood are perceived and what meanings these transitions carry for community members, face-to-face individual interview method was adopted. A comprehensive checklist of topics concerning the objectives of the study guided the semi-structured and open-ended interviews. Out of the total 35 interviews, six were conducted in an extended manner where the conversations stretched over days as one seating couldn't cover all the enlisted topics. My stay at the field enabled such repeated rounds of interviews as meeting the key respondents regularly was viable. It helped in improving the quality of response that can often get compromised in a single prolonged interview session where the participants either lose their attention span or interest in answering the questions. Short interview rounds were more beneficial as they also allowed an opportunity to reflect on the collected data and fill the gaps in sessions that followed. In the evolving methodological process while conducting fieldwork, these brief pauses were crucial in directing the research questions and refining them in pertinent manner.

Interviews were conducted in the natural settings of the respondents after their due consent. To not disrupt their everyday activities, a suitable time slot fitting their routines was either decided based on the participant observations or were directly

negotiated. Many of the interviews were conducted while walking around the village, on a routine visit to the temple or during the short tea/meal breaks. Continuous engagement and prolonged stay in the field enabled such short rounds of interview sessions spanning across days in Bharmour and the adjoining villages. However, in the case of interviews with the *Gaddi* pastoralists who were constantly on the move or the people from other villages where visiting time and again was not feasible, the interviews were conducted at once within the available time frame.

In ethnographic data collection, multiple methods remain at work simultaneously. It demands a researcher to engage in the tasks of observing, talking, questioning, and writing at the same time. Therefore, for ease of documentation, a voice recorder was used while conducting the interviews. It reduced the manual work of taking notes and gave a chance to comprehensively engage with the respondent. Recording interviews were particularly useful while conversing with the migrating pastoralists who halt at the rough terrains and stay on their feet to manage their herds.

As mentioned in the fieldwork strategy earlier, I couldn't stay with the migratory groups due to their constant movement but approached them in and out, following their migration routes at different points. It didn't impact the research data negatively as the objective of this study had community perceptions and transitions in overall pastoral occupation as a focus. However, an extended stay with the *Gaddi* pastoralists on their journeys can prove beneficial in producing a separate detailed ethnography of pastoralism focusing on the everyday aspects of their migratory life.

**3.7.5) Digital methodologies- Collecting Data from the online sources**

Since the conception of this study, the Internet served as an essential medium for data collection. It was used to get acquainted with the field site using google maps and to connect with the community members in the study area through various social media platforms including Facebook, Instagram and WhatsApp. These platforms serve as an alternative of an interactive data source that help in capturing public perceptions around SES and also facilitate their thematic assessment (Rocha & Daume, 2021). The virtual spaces created by the members of the *Gaddi* community were initially used to build contacts and seek community-related information that could enable access to the field site. However, later they turned into a vital data source with most updated information on events happening in and around the field site. Community members actively the live recordings of the events, pictures or textual information that helped in scheduling the fieldwork itinerary.

   *Gaddi* community has an active virtual presence on social media platforms with several community groups that discuss local concerns. For the benefit of this study, these collective spaces were used to extract the supplementary information in addition to the data collected through the fieldwork. To do so, we adapted the photovoice method in which thematic pictures clicked by the research participants are interpreted for their relevance based on their individual understanding. However, for its application in the virtual space, this method was improvised for this study. The pictures posted by the members of the community were interpreted based on the captions, comments and geotags. Aboulkacem et al. (2021) call this method Photovoice 2.0, for the rapid innovation and adaptations it is undergoing. Under this method, social media content serves as an essential source of information. This user-generated content in the form of pictures has immense potential for supplementing the

interpretation of the socio-ecological landscapes and cultural representations (Oteros-Rozas et al., 2018). Such use of photovoice that comes closer to the visual participatory method reduces the chances of invoking stereotypes. Amidst the increased usage of visual means and social media as an extension of lived reality, this method was executed mainly to identify the recurring patterns of how *Gaddi* community members (especially the younger generation) relate with their traditional pastoral practices and the other socio-ecological elements that remain associated with it.

Moreover, these social media networks along with WhatsApp, helped in maintaining unobstructed contact with the research participants who often exchanged their everyday information in form of pictures, videos, or voice notes. Such information helped in staying up to date with the regular affairs in the field and even during the times of physical absence and covid lockdowns. It also bridged the temporal gaps created by the phased progression of the fieldwork carried out for this study.

Internet served both as a medium and a method in this study as we used a combination of online and offline methodology to observe, explore, and understand the *Gaddi* pastoral context in-depth. It supplemented the ethnographic endeavours by allowing the access to the emerging virtual social space and cultural phenomena. This hybrid approach also proved crucial in triangulating the data by enabling simultaneous verification.

## 3.8) Data Triangulation

Following the qualitative-ethnographic orientation, the process of data collection in this study was iterative in nature. It provided much more freedom to redefine the objectives and specific questions depending upon the responses received in different phases of the process. We followed a flexible and multi method approach to understand the dynamic and complex nature of socio-ecological transitions. Yet, each method has its own limitations. Therefore, to verify and validate the findings of this study, we relied on methodological triangulation (Miles et al., 2014), where multiple qualitative methods were used in synchronisation. Such a practice was inbuilt in the chosen methodological design that allowed asking similar questions using different sets of methods from the same set of research participants at different time intervals.

Corroboration of data is vital for establishing trust in collected information and elimination of inconsistencies (Miles & Huberman, 1994). Apart from the in-person use of multiple methods during the fieldwork as described above, online data sources, including the social media networks, also helped in triangulation. The hybrid form of data collection that utilised both online and offline sources proved beneficial for triangulating the information and reducing the chances of misinterpretation.

## 3.9) Data Analysis

For the current study, the data collection process was designed in such a manner that it involved a simultaneous analysis perpetually refining the research questions instead of simplistically documenting the field events. Following an adaptive and iterative research design, analytical procedures were executed as per the emergent

needs during and after the fieldwork. The ethnographic orientation of this study helped achieve the topical focus by allowing a flexible course of action that addressed both the processes of data collection and analysis (Miles & Huberman, 1994; Stewart, 1998). As stated in the Ethnographer's method by Alex Stewart (1998, p. 54), our aim in this thesis is also 'to produce a coherent and focused analysis of an aspect of social life out of the larger conceptual sprawl.' Thus, ultimate analytical focus is to generate an account of the evolving significance of pastoralism and its praxis for the *Gaddi* community by considering the various dimensions of transition embedded in socio-ecology.

We followed a six-step approach for data analysis as suggested by Creswell (2012) that included 1) organising and preparing the data, 2) systematic reading and rounds of coding, 3) extracting code for thematic groupings, 4) compiling the major findings, 5) interpreting them following the theoretical framework and 6) validating their accuracy. These steps were not strictly followed in a linear manner and often overlapped as the analysis was an ongoing process during the data collection phase. Although the final coding was done after the whole data was translated and sorted, but a fair idea of themes was conceived during the fieldwork. Such preliminary analysis guided the theoretical as well as methodological alignment of this research project.

### 3.9.1) Making the data ready for analysis

The data collected through various qualitative methods as described above existed in the tangible form of field notes, memos, descriptive written accounts, and audio-visual formats. Such raw data needs treatment before it becomes accessible for analysis (Miles & Huberman, 1994). To bring order to it, procedures of reduction,

reorganisation, and representation (Roulston, 2014) were performed. As the data was in a combination of languages, including Hindi, English, and local dialects of *Gaddiyali* and *Mandyali*, it was translated into standardised English as verbatim. Many colloquial words and phrases were retained to avoid losing out on their local meanings and underlying connotations. The initial steps towards data analysis therefore, comprised manual transcription and translation of the audio recordings with the help of Audacity software. This software provides an easy accessibility to rewind, stop, slow down, and amplify the basic quality of audio-visual files and also help in reducing the background noises to a minimum. Images and visual data were also transcribed following a similar process. This step was extremely helpful in capturing the vocal nuances, visual representations and specific vernacular categories that sometimes are pronounced or presented differently according to the contexts or individual subjectivities.

For example, the word '*puhal*', '*paal*' and '*puaal*', pronounced differently by different people, is collectively used as a term of reference for a junior shepherd or even a hired labour. Similarly, the chequered blankets also called as '*pattus*' were commonly captured in the video clippings from various settings like migrating camps, marriage events or at the village common ground. Transcription and translation process was useful in deciphering the contextual differences in usage of such terms and articles with the help of community members. A careful transcription process in coordination with the field notes and constant clarifications sought from the key respondents during the fieldwork and even after it, served a great deal in avoiding the issues of misinterpretation that could impede the analysis process.

Exhaustive task of transcription followed by translation made the collected data suitable for analytical purposes. The local empirical categories that were retained

during process of translation were later used to guide the analysis as well conceptual arrangement of chapters in this thesis. The unit of analysis ranged from a single word to a larger chunk of data in the form of paragraphs (Chenail, 2012). For the purpose of appropriate thematic representation, initial transcripts and translated files were simultaneously referred to verify the overall context of the information.

### 3.9.2) Systematic Analytical procedures

In this study, the qualitative data collected through ethnographic methods was analysed thematically using open and axial coding procedures. The socio-ecological framework by Ostrom, guided the inferential coding labels while provisional abstract categories were created following the inductive process of reading the data. A two-level coding schema was followed- one with the abstract categories borrowed from the local and generalised understanding and the second with the conceptually driven labels that include several first-level abstract codes. These coding procedures were reiterative and cyclical as they required reading and rereading to finally produce a coherent set of findings that could address the research objectives. These codes present a larger conceptual web (Miles & Huberman, 1994, p. 63) that represents the inter-relationships between theoretical categories and empirical illustrations. Open coding procedure was applied on the translated transcripts to generate the first level codes that were later axially coded to consolidate the recurring patterns and emergent themes.

Microsoft word was used to code the transcripts by using the comment function available under the review option. An exhaustive list of codes emerged after the rounds of open coding following both induction and deduction as part of the reactive

process. Codes were assigned manually by reading the translated transcripts line by line. A sizeable chunk of data- either in the form of a quote or sentence that formed a meaningful unit for potential qualitative analysis was coded under one heading (Chenail, 2012). However, some portions of data were coded with multiple headings as its relevance ran across the themes and provided overlapping information regarding the questions asked in this study. For instance, the information coded for transitions in land use also reflected a change in food-related habits or compositions of families. Therefore, it was tagged with multiple codes and was later segregated following the theoretical reasoning.

Codes were generated separately for each transcript and were later extracted to another document by running the macros. Using the macros function in MS Word helped move all the comments from a transcript into a new document along with the marked text and its location within the document with the specific page and line numbers. These comments, upon extraction, are automatically presented in a tabular format making the task of sorting and axial coding easier. Following the initial rounds of coding, data arranged in tabular format was further regrouped into higher thematic categories to consolidate the ideas presented in the following chapters of this thesis. These elaborate procedures, including manual coding, arranging the codes and the quoted information, and creating the file paths to locate the transcripts in the existing data pool, helped in thorough familiarisation and retrieval of data as per need.

Qualitative data can get voluminous and hence, overwhelming to manage. Therefore, it remains essential to organise it systematically for analysis. For easy access and compact structuring, a database comprising raw data, translated transcripts, comments from individual transcripts, and thematically arranged comments was created. Such organisation was useful for coding purposes to get the words, meanings,

and associated sentiments appropriately. According to Chenail (2012), reading and listening together while coding tremendously helps refine the meaning of the data and trace out the sizeable units for analysis.

Along with the thematic analysis of primary data, a thorough review of available literature, including published and unpublished scholarly works, reports by various government and non-government bodies and think tanks, was considered. It helped enhance and filter the ideas while identifying the similarities and contrasts across the research context. Apart from the above-mentioned research objectives that have theoretical underpinnings, this study implicitly focused on sensitising the *Gaddi* community about the transitions in their pastoral livelihoods impacting their culture, lifestyle, and socio-ecological landscape. To accomplish these goals, a participatory and immersive methodology was of immense significance.

The details and descriptions of the step-by-step methodological procedure as followed in this thesis are essential to establish the veracity and confirmability of the qualitative information and make the data as well as the methods usable and reliable for others (Miles & Huberman, 1994).

Further chapters present the thematically organised findings of this research.

A glimpese from a  transect walk within the village



Focus group discussion with the young Gaddi community members at village Pansei



Particpating in a Nuala ceremony organised by a Gaddi family at Sachuin village



Focus grorup discussion with elderly Gaddi men at Chaurasi Temple, Bharmour



A small flock returning from their local grazing ground, met during a transect drive



One of the Gaddi community's online pages on Facebook

*Figure 7 Fieldwork and Data Collection*

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# CHAPTER 4

# APPLE FIELDS AND FAIR PRICE SHOPS:

## Understanding Trade-offs and Transitions in the *Gaddi* Pastoralism through Changing Food Practices

**4.1) Introduction**

The spiralling food insecurity and unsustainability of production systems continue to remain an unsolved conundrum (FAO, 2014, 2021). In the light of dwindling capacity of industrial agriculture to produce sufficient food for the growing population along with the added concerns of climate change and resource crisis, a quest to find alternative solution is emerging. As a potential solution, international bodies are turning towards pastoralism in which high-quality food is produced from the marginal resources using sustainable production methodologies (Bensada, 2017; FAO, 2021; Krätli et al., 2013). Through the nature-based approach, pastoralism offers a suitable alternative to meet the rising global demand for protein rich food (Mundy, 2021). It not only demonstrates the 'farming with nature' concept but also remains capable of addressing multiple sustainable development goals, especially in the dry arid and mountainous regions where cultivation practices are limited by the ecological constraints (Bhasin, 2013; Köhler-Rollefson, 2016). With negligible dependence on external inputs like fossil fuels or fertilizers, pastoralism is as an innovative food production system that remains integral for ensuring future food security and sustainability (FAO, 2021; Krätli et al., 2013; McGahey & Davies, 2014).

This late realisation regarding the importance of pastoralism remains at odds with the observations emerging from the pastoral contexts on the ground. Across the world, pastoralism remains in a state of constant transition with a tremendous decline noted in its practice (Galvin, 2009; Manzano et al., 2021). Similar trends are observed in India, where traditional pastoral communities are abandoning these practices to diversify under the influence of multiple external stressors (Dangwal, 2009; Dolker, 2021; A. Pandey et al., 2017; R. Singh et al., 2021). So far, the motivation and

implications of such diversification out of pastoralism have been limitedly understood in terms of economic choices or the consequences of unprecedented ecological challenges. Whereas the associated socio-cultural aspects that emerge out of such practices and in turn, influence them have not been paid adequate attention (Benti et al., 2022; Choudhary & Garkoti, 2021). Food practices of the pastoral communities remain one such aspect that has rarely been analysed for its relationship with their pastoral practices.

Latest research remains occupied with the agenda to understand pastoralists' resource dynamics and production logics for ensuring global food security (FAO, 2020, 2021). At the same time, the accumulating scientific evidence positions them on a centre stage among the global debates on food, economy and environment (McGahey & Davies, 2014; Scoones, 2020). However, the ways in which pastoral communities manage and strategize their own food practices on the local levels, that often go beyond the limited use of pastoral by-products, remain poorly understood. Recent studies from different parts of the world highlight a widespread food insecurity prevalent among the pastoral communities (Gebremichael & Asfaw, 2019; Mayanja et al., 2015; Muhammad et al., 2019; Namgay et al., 2021). With increasing challenges in pursuing pastoral livelihoods, the food choices among the pastoral communities are also getting constricted, translating in several detrimental socio-cultural implications (Choudhary & Garkoti, 2021; Gebremichael & Asfaw, 2019). Such parallel developments present a paradoxical situation where on one hand, a building consensus on significance of pastoralism as a sustainable food production system to address the global food insecurity is emerging, while on the other hand, increasing insecurity and vulnerability among the pastoralists regarding their own food related needs remain evident.

There exists a gap in understanding on how the food practices of the pastoral communities relate with their livelihood choices and if they have any role to play in the transitions observed in them. To bridge this gap and understand the interplay between the food practices and pastoral livelihoods, in this chapter we focus on the shifting food production, consumption, distribution, and procurement processes among the *Gaddis*. By 'thinking through food' (Phillips, 2006), we aim to reconceptualize the pastoral transitions by highlighting the altering nature of resources, actors as well as the interactions between the two. It helps in understanding how the local food practices of pastoral communities might play an important role in steering the changes in their pastoral practices and vice-versa. Therefore, in this chapter, we explore the interconnections between the pastoral ways of living and local food practices prevalent among the *Gaddis* within the bounds of socio-ecological framework. This analysis may help in drawing important lessons on transitions and feedbacks in pastoral socio-ecology as well as for sustainability and food security within the pastoral communities.

Using the data gathered over in-depth interviews, group discussions, and participant observations, we analyse the on-going changes in the food practices of the *Gaddis* through shifts in agro-pastoral practices, land use patterns, family and social organisation and public distribution system. Before that, we discuss the interlinkages between pastoralism and food practices across different contexts in section two, followed by a brief overview of the traditional food practices of the *Gaddi* in relation with their pastoral activities in section three. In the fourth section, a thematic analysis of the transitions as recorded in the ethnographic data is presented. It is followed by a discussion section where the findings of the current study are discussed in the light of prior literature. In the end, a brief conclusion sums up the relevance of exploring

changes in food practices vis-à-vis the pastoral practices to understand the larger socio-ecological transitions.

## 4.2) Pastoral Food practices- An overview

Food and its related aspects hold an immense cultural significance within the larger socio-ecological system and are determined by the multiple interactions between the social and ecological components (Poe et al., 2014). For pastoralists, food- both for the livestock as well as for humans, remain a central concern around which they manoeuvre their livelihood strategies (IFAD, 2018). In addition to what they produce, pastoralists also depend largely on the external sources for their own food provisioning. Their food practices remain rooted in the local cultural milieus and are significantly shaped by the extensive knowledge on available resources assembled by the virtue of their mobility and pastoral lifestyle (Kala, 2021). The networks of exchange developed over the migration cycles also play an important role in shaping their traditional food practices as goods and commodities are often procured through barter relationships (Kapila, 2003; P. Sharma, 2017). Similarly, in the agro-pastoral arrangements where subsistence agriculture is practiced to supplement the household needs (Ayantunde et al., 2011; Bhasin, 2013; Namgay et al., 2014). The crop-livestock integration not only provides diversified livelihood opportunities but also help in maintaining household food and nutritional requirements (Tiwari et al., 2020). Within such systems, migration patterns go hand in hand with the seasonal cultivation cycles that influence the prevalent food practices of the community.

There are only a handful of studies that discuss the food related issues among the pastoralists. Lack of scholarly assessments and critical analysis of relation

between pastoralism and food practices of these communities hamper our understanding of transitions in them. Mainly, people from the pastoral communities, depending upon the types of pastoralism they practice and mobility patterns they follow, either rely on subsistence agriculture, relationships of exchange with agricultural communities or on the market sources for obtaining other food products to meet their daily requirements (Chettri, 2015; Jans et al., 2016). A few of the recent studies capture the growing food insecurity among migratory pastoral populations or the unfulfilled nutritional needs that is paving a way for multiple health related challenges among them (Ameso, 2018; Benti et al., 2022; Gebremichael & Asfaw, 2019; Kala, 2021; Mayanja et al., 2015; Uddin & Kebreab, 2020).

Another stream of academic literature documents the specialised food practices that often involve unique preservation techniques and traditional methods of preparation utilized by the pastoralists during their migration cycles (Jans et al., 2016; Kala, 2021). According to these studies, food related cultural practices provide important lessons regarding adaptation and survival strategies in the difficult geographical conditions confronted by the pastoralists during their migrations. The long term journeys they undertake across the variable ecological terrains, make them gain extensive ethnobotanical knowledge on the available wild edible plants that form integral parts of their food cultures (Kala, 2021; D. Thakur et al., 2017).

Historically, pastoralism has been perceived as a subsistence-oriented food production system that significantly provided the food and animal by-products for the household consumption (Dyson-Hudson & Dyson-Hudson, 1980; Fratkin, 1997; D. H. Turner, 1992). However, many scholars have refuted this assumption to conclude that pastoralists have always integrally produced for the market and have remained embedded in the larger agrarian economies (Kavoori, 2005; Köhler-Rollefson, 1994).

Commercial production in pastoralism remains indispensable for it to thrive as a livelihood, especially in the current times (Benti et al., 2022). Pastoralists no more depend on their own agro-pastoral harvest for subsistence, which anyhow does not suffice all their food related needs.

In India, a diversity of pastoral cultures as well as associated food practices are observed across the geography (Kala, 2021). On contrary to the popular belief, most of the pastoral communities produce for the commercial purposes and do not alone depend on pastoral products for their own food choices (Jans et al., 2016; Kala, 2021). Food patterns among the pastoralists are also culturally and seasonally regulated and are not restricted only to the milk and meat that they produce (Jans et al., 2016). It is also observed that often the communities involved in animal husbandry practices even refrain from using the by-products for self-consumption (Köhler-Rollefson, 1994). Except this sporadic information, not much is known about the food practices of Indian pastoralists, that might further be altering in the wake of transition in pastoralism and related socio-ecological conditions (Chakraborty, 2017).

## 4.3) Charting the *Gaddis'* food related practices

In the case of *Gaddis*, combination of seasonal subsistence agriculture and transhumant pastoralism essentially shaped the household food practices and staple dietary patterns of the people (Bhasin, 2013). Despite the limited agricultural pursuits carried amidst the unsuitable geophysical conditions and weather-related constraints, diverse food crops following the seasonal calendric cycle were traditionally grown. Crop rotation and intercropping patterns were carefully followed to make the efficient use of scattered terraced fields (Bhasin, 1990). Many of the *Gaddi* households, who

owned the land at both summer and winter locations of their residence, practiced seasonal agricultural activities to get the desired harvest in synchronisation with their migration cycles. Such production system exemplify the ecologically adjusted pattern of cultivation that relied on mixed variety of crops including maize, wheat, barley and other native type of millets in addition to the occasional pastoral by-products (Bhasin, 1990).

The agricultural practices of *Gaddi* at Bharmour mainly serve the subsistence purpose while their pastoral practices have always been commercial, and market based. The seasonal mobility and remoteness of the pasture resources do not allow for regular supply of pastoral products including milk and meat for the household consumption. However, these products typically form the daily dietary patterns of the pastoralists that accompany the herds. *Gaddis* rarely slaughter their own livestock for self-consumption and if it is done, the meat is distributed among kith and kin under the social obligatory arrangements (Bhasin, 2013). Nonetheless, animal sacrifice remains common during the religious rituals or occasional ceremonies like *Nualas*[11] (Wagner, 2013) that involve a community feast. It can be vividly noted that the food practices among the *Gaddis* are bound by tradition and are highly community oriented (S. Kaur, 2019).

Literature suggests the limited agricultural capacity of the land and laborious nature of cultivation work as the major motivations for the *Gaddis*' pastoral inclination (Malhotra, 1935; Mukherjee, 1994; Tucker, 1986). Their commercial production and market-oriented pastoralism (M. Sharma, 2013; Tucker, 1986) provides for a steady inflow of cash to purchase the food related commodities that

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[11] *Nuala* is a religious Gaddi ritual organised to worship Lord Shiva during any auspicious occasion. Wagner (2013) in her book on the 'Gaddi beyond pastoralism' has explained it with utmost detail.

they themselves couldn't produce. Pastoral practices also help in maintaining the fertility of the soil and ensuring good harvests in spite of small land holdings (Chakravarty-Kaul, 1996; John & Badoni, 2013; Pattanaik & Singh, 2005; Tucker, 1986). Additionally, the wild edible plants and herbs collected over the migration through pristine alpine meadows and forest areas also shape the food practices among the *Gaddis* (A. Thakur et al., 2020).

The barter relationships with the agricultural communities established through pastoral practices also help the pastoralists meet the household food demands. During the winter grazing in the foothills of Kangra and Punjab, penning of livestock on agriculturalists fields is a common practice for which the *Gaddi* pastoralists often receive the ample amount of food grains in exchange of manure. Such customary reciprocal relationships have traditionally played an important role in meeting the daily needs- including both food and fodder for the *Gaddis* and their herds (Chakravarty-Kaul, 1997; John & Badoni, 2013; Tucker, 1986).

## 4.4) Transitions in *Gaddi* Food Practices

Under the influence of multiple development interventions and socio-ecological changes, food practices of the *Gaddis* in Bharmour are observed to be undergoing a gradual shift. For the current work, we trace the timeline for this change since the establishment of Integrated Tribal Development Project (ITDP) under the Tribal Sub Plan scheme of fifth five-year development plan introduced in 1974 (D. B. Negi, 1998; B. R. Thakur & Sharma, 2012). ITDPs were established in the scheduled areas of the state with dominant tribal population that was perceived to be in need of

external development interventions that could alleviate their socio-economic conditions. In Himachal Pradesh (H.P.), Bharmour is one of the five ITDPs including Pangi, Kinnaur, Lahual and Spiti that remains home to most of the tribal population in the in the state. With the conception of ITDP, a nucleus budget scheme and single line administration were also introduced in the region for a faster dissemination of relevant development policies (Negi, 1998). These measures not only diverted the increased administrative attention towards this tribal area that once was governed just peripherally because of its geographical remoteness but also consequently resulted in a faster pace of change among the inhabiting *Gaddi* community.

One of the major transitions that occupies the local narratives within the *Gaddi* population and is considered to be an inadvertent consequence of such development interventions in the region is in terms of food practices of the community. This slow but steady transition, which has acquired an almost inevitable nature over time, provides an unconventional position to analyse the larger transitions affecting the pastoral socio-ecological system of the *Gaddis*.

### 4.4.1) Food Production and Traditional Agro-pastoralism

*Gaddi*'s agro-pastoral arrangement exemplifies self-subsistent food system where seasonal use of resources and complementarity between agricultural and pastoral activities have ensured food security for generations. Balance of this dual enterprise with the changing weather conditions and variable resource dependence managed by the means of transhumance have sustained the *Gaddi* community and their pastoral practices for a long time. As an integral adaptive strategy embraced by many other Himalayan pastoral communities, agropastoralism helps in taking advantage of the

resources that are characterized by low productivity and irregular spatial distribution (Bhasin, 2013). This specializes the pastoralists in deriving value from an already thin natural resource base in the hilly regions as that of Bharmour where cultivation has always remained labour intensive and majorly for subsistence purposes.

For majority of the *Gaddi* households in Bharmour, pastoralism has remained a foremost economic pursuit (S. N. Thakur & Kahlon, 2015). As per the village survey sheets filled in with the help of research participants, an estimation can be made that most of the villages visited during the fieldwork had more than 50 percent households involved in pastoral activities untill the two decades back. However, no official data exists to substantiate the claim. In a general opinion, the restricted possibilities for agricultural accomplishments are attributed as a major reason for the community to rely on pastoralism, which also allowed them to move out of their local territory and escape the seasonal adversities (N. Kumar, 1983). Associated mobility not only gave them the access to forage resources but also significantly shaped the food practices of the *Gaddis*.

In last few decades, *Gaddis* have managed to make larger leaps across subsistent agro-pastoralism to remunerative agriculture and now to the prevailing horticulture practices, surpassing the limitations of their own local ecology. There is hardly any land left for grazing in the villages now days as most of it is under commercial apple cultivation (Thakur & Kahlon, 2015). One of an elderly *Gaddi* respondent, Karam Chand, expressed his concerns regarding the proliferating horticulture in the region as-

> *"Currently, it's all apple cultivations everywhere. Although,*
>
> *the apple crop suits our land [sic] that does not support extensive*

*agriculture otherwise, it deprives us of the staple food articles. It may provide us a pocket full of money, but at critical times of need, it would not give us food to eat. Bringing all the land under horticulture has left no scope for growing food these days. If in case some extreme natural calamity takes place and government supplies do not reach our region, we would be left with nothing to eat. As it will be just apples and the money". (Source: In-Depth interview, Bharmour, 2019)*

The shifts in crop patterns and the large-scale economic diversification that is taking place in the region is resulting in land conversions at an accelerated pace. As conveyed by many inhabitants, Bharmour has seen a tremendous change in terms of infrastructure as well as spatiality in the recent decade. The village houses that used to be concentrated either near the temples or the communal meeting spaces have now expanded outwardly with the construction of new roads that makes even the distant areas in the village accessible. In the quest to mimic the modern living spaces found in the cities, people are abandoning their old wooden houses that are located within the core of the village. New multistorey buildings can be seen under construction across the villages in Bharmour, especially adjacent to the roads that allow vehicular access. One of the reasons for burgeoning construction work in the area is the booming tourism, especially during the famous *Manimahesh Yatra-* an annual pilgrimage observed during the summer months.

The additional deputy magistrate of Bharmour informed that the footfall during the pilgrimage season is continually rising every year, increasing the need for accommodation and other services. Utilising the opportunity in their favour, many

people in the surrounding villages are now constructing hotels on their agriculture land. According to him, "*this compressed window of time lasting for almost two months allows some people to even earn the amount that lasts them a year*". Increasing demands for short stay accommodations during the pilgrimage, which has now come to be referred as a '*season*' by the local people, which drives them to divert their cultivable land into residential structures. It is also not uncommon for the families who own houses adjacent to the roads, to transform their homes into homestays during these time periods. Many families constrict to using one or two rooms in their houses and rent the rest of the space to the pilgrims on need basis. With an ever-increasing influx of tourists during this particular season, demand of new constructions in the region is rapidly rising.

> *"[sic] ...people who come so far are ready to pay any amount to get some space to sleep over for a night. They don't negotiate much as the options available are far less than the demand for it. Considering this, people who own land near the roadsides-that is accessible for the tourists, are building houses that could be utilized as home stays to make additional income. It has impacted how are villages used to look before. People are preferring to move out of confines of joint family houses to separate houses for economic and various other reasons" (Source- Tula Ram, an elderly Gaddi male from Sachuin Village,)*

Rising scope of tourism, disinterest in practicing agropastoralism and opportunities for service sector in the region is resulting in increased livelihood diversification in the region. Maximum of the middle-aged population is now engaged in the private

businesses or salaried jobs that consequently affects the meaning of resources like land and livestock for them.

Young and educated members of the *Gaddi* community find themselves to be distant from the agriculture or the traditional pastoral occupation. Internalising the socially stigmatized view of agropastoralism, they look down upon the cultivation work in the fields or migratory herding activities. Characterising it as dirty and unhygienic occupation, they often express the need to discard it in order to progress towards 'modern' lives. Incompatibility of these traditional occupations with their modern education also shape their radical viewpoint towards it. As Pradeep, a young college going *Gaddi* said, "*no engineer or graduate would want to run after sheep or goats after dedicating so much of their time for studies*". After obtaining their higher education and professional degrees, *Gaddi* youth is moving out of the region in search of jobs leaving behind a labour void that is essential for both agro-pastoral activities.

Seeking jobs in the cities leaving their homeland and traditions behind doesn't not go well with the community elders who continue to hold onto their agro-pastoral past. Most of the elderly respondents consider these 'city jobs' to be low paid and temporary in nature.

> *"These jobs do not pay well and there always remain a dangling sword on your head that you would be thrown out today or tomorrow. If you are a pastoralist, you are your own boss. You have your fields to feed you and livestock to fulfil any urgent monetary need. [sic] What do these youngsters of today have? Even if they are earning in the cities, they ask for money from home to fulfil their*

These discrete and non-directed changes observed in the economic choices have multiple effects on the food practices of the *Gaddis* as they structurally affect their production system and also influence the attitudes of community members towards their traditional practices. Such shifts, that are gradually becoming attuned to the socio-ecological landscape of the region have invisible undercurrents affecting both the social as well ecological landscape in a substantial manner. As an outcome, the traditionally cultivation practices that contributed towards household food choices and security are waning.

## 4.4.2.) Changes in land use practices

With the declining traditional agro-pastoral livelihoods, *Gaddis* are inclined towards capitalizing on their land assets. Almost every *Gaddi* household in Bharmour region possess separate lands for residence and for agriculture purposes in varying proportions. Himalayan terrain and ecology restrain extensive agriculture as the cultivable land is scattered in small parcels and is mostly terraced, which does not allow for much technological experimentations as possible in the plains. As a result, most of the *Gaddi* agriculture practice have remained limited to produce for household consumption only. In several cases, the land holdings remain fragmented and distant from the inhabited areas. It isn't unusual for one person to own several small land holdings spread across the whole village. Such dispersed distribution of land makes it unfavourable for carrying out the large-scale agricultural activities.

However, with the shifting subsistence strategies majority of the cultivable land in the region observes a decreasing acreage under agriculture while the horticulture (mainly apple cultivation) is proliferating day-by-day. This shift towards remunerative cultivation has changed the way food crops were grown in the region. It also affects the land distribution and inheritance, which is now influenced by the economic rationale and commercial potential.

Table 1 below shows the large-scale transition in land use highlighting the changes in horticulture practices as observed in Bharmour. The growing popularity of horticulture is indicative of the shifting priorities of the *Gaddi* households in the recent years as opposed to their traditional cropping pattern.

*Table 1*

*Statistical changes in land use pattern at Bharmour*

| Categories | Area during 1978-79 | Area during 2016-17 |
|:---:|:---:|:---:|
| Net area sown | 4106 | 4319 |
| Horticulture | 10 | 4769 |

*Note-* Area in Hectares [Source- Mukherjee (1994) and Tribal Development Department (2017-18)]

Despite the limited agricultural endeavours over time, the staple food patterns of *Gaddis* observed a major diversity in food crops grown variably over *Rabi* and *Kharif* season. It mainly comprised of Maize (Zea Mays), Wheat (Triticum aestivum), Barley (Hordeum vulgare), *Bhrase* (Buckwheat or Fagopyrum esculentum), *Chinae* (Hill millet or Pancium miliaceum), *Phullan* (millets), *Sieul* (Amaranthus amaranthoides),

*Kodra* (Paspalum scrobiculatum) *Urad* (Phaseolus radiates) and *Kulth* (Dolichos biflorus) (Verma, 1996; Thakur & Kahlon, 2015). Along with the native food crops, the locally grown fruit produce also formed an important part of the *Gaddi* food system. The fruits including apricots *(cheedh)* and walnuts *(akhrot)* were enjoyed seasonally and the seeds obtained from them were dried to extract the oil for cooking and other purposes. Additionally, *Gaddi*'s staple diet also included a significant portion of meat that came from the abundant livestock raised within the community. However, because of the decline in pastoral enterprise and the subsequent sharp increase in meat costs, meat consumption has now become a costly affair. In some instances, a shift towards a vegetarian diet could also be observed. The reasons and motivations behind such inclination may vary but it subtly suggested the growing reluctance towards pastoral occupation. At the same time, the variety of locally grown and seasonally procured food crops added the nutritional diversity to the *Gaddis*' diets.

With the enormous changes in land use pattern, majority of agricultural land available in the region has given a way to booming horticulture at present. Apple cultivation has become a prime focus for majority of the *Gaddi* dwellers who own considerable parcels of land. As informed by the local residents, horticulture activities do not leave any scope for mixed farming as no crop can be grown under the matured fruit trees. Therefore, the fields dedicatedly are seen to be under a monocrop throughout the year and the cultivation of native food crops has taken a backseat. During my stay there, only a few households were growing the staple crops for self-consumption. A similar situation is observed among the Kolli Hills Malyalis where the cash crops has replaced the cultivation of local millets (Finnis, 2007). Such transitions are resulting in the conundrums, where local food grains and other millets

are emerging as 'super foods' in the dominant food culture but are gradually disappearing from the fields of their native growers. In case of *Gaddis*, contemporarily the food production has come down to fewer cash crops including *Rajmah* (Phasseolus vulgaris), Potatoes and few other lentils varieties that have a commercial value. Rest of the food grains required for consumption are purchased from the market sources.

In addition to the changes in agriculture practices and land use pattern, the social structure of *Gaddi* community is also undergoing a transformation that influences their pastoral practices vis-à-vis the food culture. Historically, *Gaddis* followed a joint family system, which allowed for collective possession of land held in the family name. This system ensured ample availability of agriculture labour and community cohesion. The agricultural produce from the jointly owned fields was also shared within the *shareek (*extended family) or even with the other people from the village. However, with the generational changes and increasing social distance within the families, land is getting divided into individually owned smaller fragments. Changes in family structure is further leading to an increased infrastructural demand where new houses and buildings are being constructed to accommodate nuclear families. The proximity to the roadside for ease of accessibility is also becoming a reason for many people to invest in new constructions. Owning two houses, one within the vicinity of the village and one at the road head, which often lies outside the perceived social geography of the village, is becoming a common sight in the villages of Bharmour. According to Tilak Raj, an *elderly male Gaddi from the Sachuin village,* "*...such a change in residence has resulted in disruption of social relationships within the village. It has not only impacted the land assets held within a family but also the way this land is put to use.*" Even Tilak Raj has constructed a new house outside the

periphery of the village near the main road connecting Chamba to Bharmour but he continues to live in the old family house that is located on one extreme top of the hilly village. He fears that once he leaves the old house he will get separated from the village's social sphere. Moreover, this would also weaken his ties with his kin circle who would not appreciate him moving out of his ancestral house. In his opinion, such new constructions that are gradually increasing in the region are becoming a reason for altering social relationships and village cohesion while also resulting in diversion of agricultural land for housing purposes. The nuclear families do not have sufficient workforce to carry out the traditional agricultural activities, neither the divided land holdings permit it in an effective manner. This on-going process of fragmentation of already limited and terraced land further limits the agricultural capacity. Such splinter in the social fabric has implicitly affected the food production and distribution process within the *Gaddi* community in a substantial manner over the past few decades. In Tilak Raj's words-

> *"Nobody wants to cultivate now, but erect tall buildings instead. The increasing demand for homestays is deriving such a change in our villages. During the pilgrimage season, roadside homestays do a good business by lending the space for stay on daily basis. With increasing crowd every year, it isn't always that the rooms are rented, people even pay for a single mattress to spend a night. This has become a means of earning a living for many who have constructed new houses near the roadsides"*

Along with the changing infrastructure and rising social distance, ecological concerns are also emerging. While new buildings and concrete constructions remain

incompatible with the climatic conditions of the region, their burgeoning numbers concern some people for adding burden to the ecological fragile landscape. Simultaneously, a rise in the usage of chemical fertilizers and pesticides to boost the apple yields is considered to be wreaking havoc on soil fertility. To save the apple crop from various diseases and pests, chemical sprays have become a necessity. Small handheld sprinklers which can be carried on the back to reach the terraced fields remain a common sight in the region. Many people complained of how such indiscriminate spraying is becoming hazardous for the health of the people as well as the surrounding environment. During a conversation with Khushi Ram, an old man from Sachuin village, we could observe a person spraying the apple trees in his field. Seeing that, Khushi Ram was quick to point out the disadvantages of using chemicals, which he considers to be the tricks of the people from plains who only strive for economic benefits. He added-

> *"The chemicals sprayed on the trees are indirectly reaching us through air and even through the fruits we consume. It is destroying our soil. What have we done to our fields that now require such toxic substance to produce food and fruits? Earlier 'mail' [livestock droppings] was enough to yield a good crop".*

The increasing use of industry-produced synthetic supplements in the fields where on one hand has become an undeniable need, on the other, it is also related to the decreasing availability of livestock population in the *Gaddi* villages. In traditional agro-pastoral settings, cultivation activities in the *Gaddi* villages were planned in such a manner that their livestock herds on reaching the home villages could feed on the harvested or fallow lands and fertilize it with rich organic manure at the same time.

"We would pen the livestock on fields in rotation so that their 'mail' could ensure the soil fertility across all our fields. 'Mail' is the rich organic manure that everyone in the cities talk about now. Even the government is suggesting its use and promoting organic cultivation. But when livestock won't be there, where will the dung come from" said Khushi Ram.

Such non-availability of manure for their fields along with the changed nature of cultivation practices and availability of public subsidies on the chemical fertilizers is tugging away the local landholders from their otherwise environmentally responsive undertakings. In the face of lack of availability of organic manure people are compelled to use the government supplied chemical fertilizers that promise higher returns in terms of crop yield in much shortened durations.

The calculated factors of higher profits, lesser duration and topographic vulnerabilities have led people to make a shift in their land use patterns. Despite having the cursory knowledge about the detrimental outcomes of such shifts, economic goals supersede the ecological impacts, as observed in case of the *Gaddis*. With the changes in agro-pastoral practices, which were majorly based on need fulfilment and not on exploitative attitudes (Bhasin, 2013), a transition in the mindset of the people regarding the available resources can also be observed.

The overlapping alterations in livelihood and land use therefore are crucial in declining availability of traditional food crops. Table 2 compiles the changes in *Gaddi* traditional food practices and the processes involved in them.

*Table 2*

| Variable processes in the Food system | Traditional practices | Changes Observed |
|---|---|---|
| **Food Production** | -Subsistence Agriculture<br><br>(*Crops including makki, phoolan, bhares, chinae, sieul, jau etc were grown.*)<br><br>-Meat and milk from livestock rearing | -Horticulture<br><br>(Fruit production mainly of apple)<br><br>- Remunerative agriculture (*rajmah,makki, aaloo*)<br><br>- Declining livestock rearing and increasing meat prices |
| **Food Distribution or procurement** | -Self-sufficiency<br><br>-Reciprocal exchanges within the community or with peasant community of lower foothills | - Dependency on government run ration depots<br><br>- Purchased from the market |
| **Food Consumption** | Staple diets consisting of natively grown food crops and meat | -Processed and packaged food articles.<br><br>-Food grains mainly rice, wheat and lentils procured from ration shops |

## 4.4.3.) State interventions and Public Distribution System

Traditional pastoral occupation and subsistence agricultural activities are on a decline in Bharmour, while the horticulture advances as an outcome of Government aided development strategies. In the midst of such changes, there arises a major question that if the food is not being produced locally as it was earlier, where are the *Gaddis* sourcing their food from? The response to this question is simpler but also multifaceted in nature. Contemporarily, *Gaddi* community has come a long way in

terms of its increasing external dependencies that are instilling changes among their socio-ecology. At present, the altered land use pattern and evolving aspirations of the people are resulting in declining agricultural practices and inadequate household labour. Consequently, a direct dependency on the market for food procurement has ensued over past few years.

The government measures of food security introduced by the Targeted Public Distribution System (TPDS) has become a foremost or for some, the only source of food procurement. Although, PDS is undoubtedly a supportive initiative that works towards alleviation of hunger and ensures a continuous food supply to the poor, it largely ignores the socio-ecological significance of the native food practices. The PDS system working in the Bharmour region mainly supplies the residents with cereal grains including rice and wheat, lentils, and cooking oil that overshadows their staple food patterns and the related agricultural practices. All the food articles that these subsidised ration shops provide were alien to their traditional staple diets of the Gaddis. Edison & Devi (2019), Finnis (2007) and Goodall (2004) also talk about the similar issues among the Adivasis of Attappady in Kerela, the Hill Kolli Malyalis of Tamil Nadu and Chang pa nomads of Ladakh respectively. Their studies reflect how the PDS system and government policies are aiding the transition from traditional to new staple food patterns while resulting in several repercussions that affects the health, land use and agricultural practices of local populations. In addition to this, the government programs promoting the cultivation of cash crops, subsidies on chemical fertilizers and on construction of houses in the tribal regions are also fuelling the process of cultural change among the tribal communities that affects their traditional food practices.

Combining all these changes together, we observe that the loss of traditional food patterns among *Gaddis* go hand in hand with the decline in their agro-pastoral practices. The following figure below (Figure 8) briefly suggests the linkages between the livelihoods, land use patterns, government schemes and food practices among the *Gaddis*.



*Figure 8 Changing socio-ecological landscape of Bharmour*
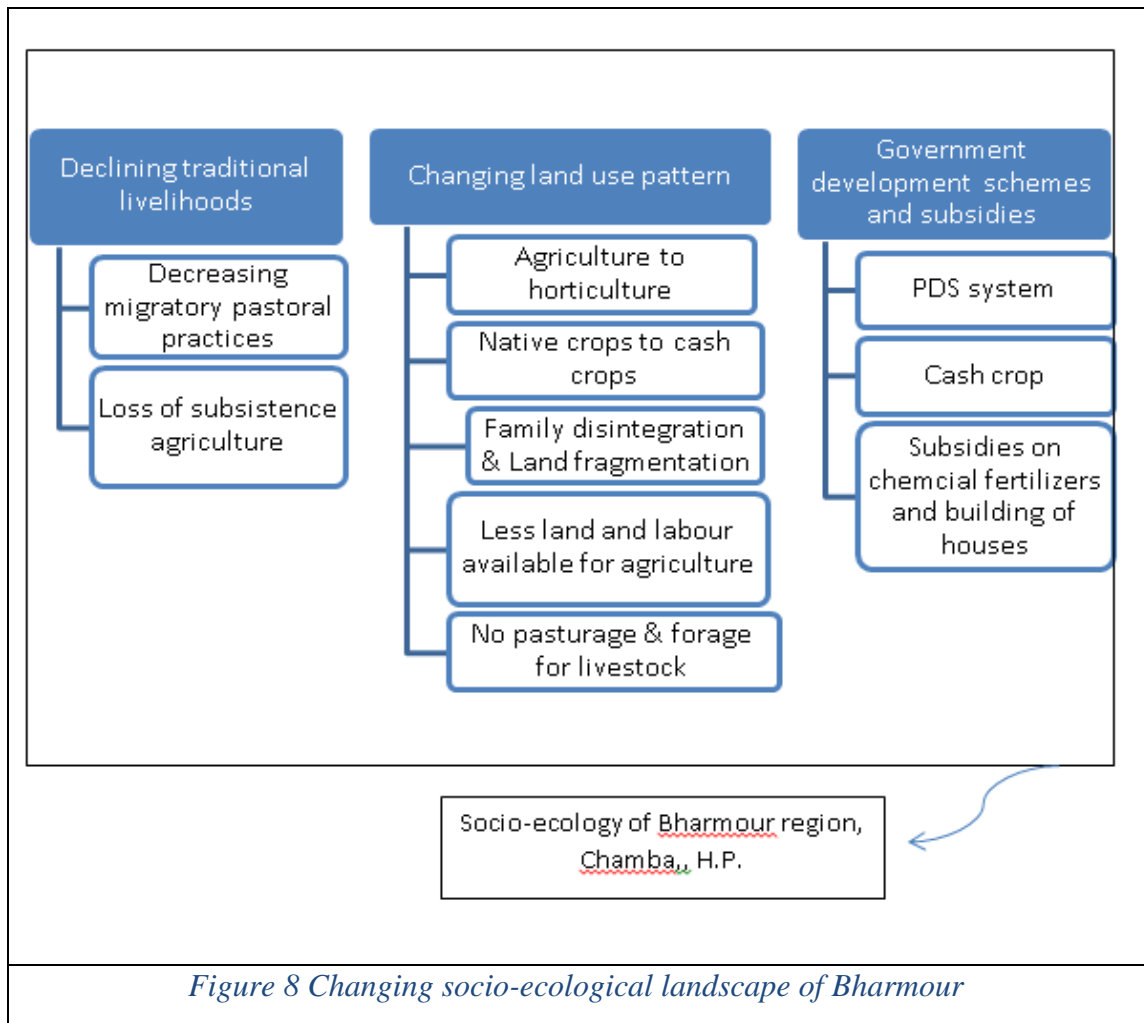
**4.5) Discussion**

Socio-cultural factors play an important role in influencing the food practices of the communities (Das & Priya, 2022). These practices that are highly contextual, depend on the continued socio-ecological interactions shaped by variable processes including food production, consumption, distribution and procurement. Based on the findings discussed above, it is evident that the *Gaddis* are rapidly transitioning to the diets of their surrounding dominant cultures without realising the long-term impacts of these changes on the quality of their life as well as their local socio-ecology. The traditionally grown food crops that included many climatically resilient varieties of millets and the foraged wild edible plants are fast disappearing from their local food regimes. The same food crops are now paradoxically emerging as 'superfoods' in the dominant food cultures of urban India (Ghosh-Jerath et al., 2021). *Gaddi* community has started losing out on its traditional food culture and its agro-biodiversity only recently- but the steep transition curve that has come to stay in its place is indicating a trend observed throughout the global south. This trend points towards the irreversible loss of biological and ecological complexity at the regional level that adversely impacts the symbiotic relationship of communities (like the *Gaddi*) with their native habitats. Such a transition not only creates an imbalance, but also alienates the indigenous communities from their traditional habitats and practices.

In the case of *Gaddis*, findings suggest a close association between the transitioning food practices and agro-pastoral livelihoods. The changes in their traditional food patterns are mainly a result of multiple non-directed and unplanned measures emerging out of alterations in social, economic, ecological, and political order (Kuhnlein & Receveur, 1996). These changes are an assemblage of several processes that include shifting livelihoods, land use patterns, social organisation and

government led development programmes. As a result, they influence the pastoral socio-ecological system as well as the cultural fabric of the community in more than one way.

Similar transitions are discussed by Bose (2020) in her recent study on the forest dependent 'Particularly Vulnerable Tribal Groups' (PVTGs) in India. She concludes that the processes of cultural mainstreaming and livelihood transitions result in declining food, nutritional and bio-diversity among the tribal communities. According to her, such changes emerging from institutional pluralism and inconsistent development policies drastically impact the sustainable cultivation and foraging practices, knowledge systems as well as community cohesion as also observed among the *Gaddis*.

Data suggest an agro-ecological change in terms of shifting crop patterns in the agricultural fields at Bharmour as also observed by other scholars working in the region (Jaglan & Thakur, 2006). These tremendous shift in the cultivation patterns from traditional food grains to cash crops are proving highly beneficial for supporting the better socio-economic conditions among the *Gaddis*', but it immensely shrinks their dietary choices. At the same time, it alters the nature of resources that once supported the pastoral practices in the Bharmour region. A study by Singh et al. (2015) documents the similar transitions in the Spiti Valley of Himachal Pradesh where commercial pea and apple cultivation has taken over other food crops. It has resulted in reduced agricultural residue that could be used as fodder for the livestock and has also imposed restrictions on free browsing activities of the livestock as they prove detrimental for the tree plantation.

In Bharmour, horticulture is also gaining prominence for its significant socio-economic returns that strengthens the *Gaddi* households (Jaglan & Thakur, 2006). This shift remains consistent with the vision of the state government that aims at making Himachal Pradesh, a leading apple economy in the country (Wani & Songara, 2018). According to the latest state economic survey report, area under apple cultivation in the state has increased from 400 Hectares in 1950-51 to 1,14,144 Hectares in 2019-20 (Government of Himachal Pradesh, 2020). These figures corroborate the qualitative findings of this study suggesting a rapid transformation in the land use as well as cultivation practices not just in Bharmour but across other hilly areas in the state. Such an alteration in the land use pattern, despite its noteworthy economic benefits for the community as well as the state, has several unfavourable outcomes for the pastoral occupation. With tree plantations substituting the climatically resilient and seasonally diverse food crops, seasonal resource base of the *Gaddi* pastoralists is also shrinking. Apart from the impact on the pastoral practices, these transitions are also fuelling the individualization of land ownership, disintegration of joint families into separate households and splitting up of agricultural fields into smaller fragments. They may also have long-term socio-ecological implications in terms of biodiversity loss, growth of invasive species and reduced environmental services that are intrinsic to the cultural practices of the *Gaddis* (Saberwal, 1996b; R. Singh et al., 2015)

The introduction of government run fair price shops also has an integral role to play in the changing food practices among the *Gaddis*. Availability of subsidized food grains has made the diversion of agricultural land for non-agricultural purposes possible. It also promotes the changes in traditional diets that now has become limited to a few varieties of food grains procured under the targeted public distribution

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scheme (TPDS) run by the state government in the tribal areas. Primarily formulated to alleviate poverty and hunger under the hood of National Food Security Act (2013), TPDS in the tribal areas as that of Bharmour, eliminate the need to practice subsistence agriculture. Moreover, the special provision by the state's Department of Civil Supplies in the snowbound tribal areas like Bharmour, allows the people to stock up the essential commodities all at once for a complete season. This readily available food supply during the extreme weather conditions in winters, which essentially was regarded as a reason for the *Gaddi* mobility as well as pastoral practices, also eradicates the need for them to seasonally migrate downhill to the plainer areas.

PDS is an integral initiative to fulfil the food related demands of the population falling in lower socio-economic strata, but it has been rightly critiqued for its flaws in discounting the nutritional needs and cultural appropriateness (Ghosh & Qadeer, 2021; Shankar, 2004; Vaggar et al., 2017). Choudhary & Garkoti (2021), Gupta (2017) and Rahimzadeh, (2016) highlight the unanticipated socio-ecological consequences of PDS system for the other pastoral communities in India while Mukhopadhyay (2011) rightly points out the general lack of research on its socio-cultural consequences. Under the PDS focus remains on the distribution of carbohydrate-rich cereals that are deficit in micronutrients and has resulted in cases of malnutrition and lifestyle disorders in the rural populations (Ghosh-Jerath et al., 2021). Such food aid schemes according to Chettri (2015), act as a sedenterizing mechanism of the state that discourages the migratory lifestyles. It exemplifies one of those unsupportive government policies that serve as a catalyst in the falling number of practicing pastoralists (Bhattacharya, 2019a; Chakravarty-Kaul, 1998; Ramprasad et al., 2020). Similar remains true in the case of the *Gaddis* where easy food

availability has become a reason for many to abandon labour intensive practices of cultivating land and rearing livestock.

The current policies and programs that promote the underlying idea of modernization continue to push towards transformation of pastorals systems by accommodating what Krätli et al. (2013) calls as 'ready-made problem-solution sets'. In case of *Gaddis*, we observe that a systematic change in the nature of resources and their interaction with the actors is pushing towards a development out of pastoralism and not within it. Such changes support the idea of modernization that propagates the agenda of abandoning pastoralism (Krätli et al., 2013). The fundamental changes in lifestyle and food culture spearheaded by the state, also tend to become politically burdensome for the government itself in the long run and at the same time also disturb the local social ecology to a level that rewinding no longer remains an available option. Tribal development under the ITDP and tribal sub plan in the country was set out to empower the tribal populations in terms of socio-economic status. Paradoxically, what we notice in case of the *Gaddis* is that it inadvertently is crippling their cultural landscape including their self-reliant food practices through the increased dependence on the government food aids. In addition to that, the changes in the *Gaddi* food system reflects how the narrow visions to boost economic growth are exacerbating the vulnerability of the fragile Himalayan ecosystems as well as the communities dwelling in these regions.

Although with time, changes among the traditional societies are unavoidable because of the externally imposed development regimes, their distinct cultural values that are being compromised need to be recognized and addressed appropriately through timely interventions. Food practices form an integral part of the pastoral cultures and are a window to the cultural organisation of practicing communities.

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They also serve as a close connection between the environment and the people that depend on it. A decline in these food practices is reflective of the diminishing socio-ecological balance and cultural stability. In addition, it also accelerates the process of cultural erosion and homogenization by delocalizing and commercialising the food supply (Handa, 2005; McGahey & Davies, 2014) that impacts the pastoral SES. In the case of *Gaddis*, the development model works towards the mainstreaming of their lifestyle by eroding the age-old practices of self -sufficiency by increasing their dependency on the state and market for food procurement.

Analysing the food related practices in the case of the *Gaddis* provide us an unconventional outlook to understand the transitions in their pastoral socio-ecological system. As the mountainous region of Bharmour undergoes several agro-ecological adjustments (Hänninen, 2014; John & Badoni, 2013; S. N. Thakur & Kahlon, 2015), agro-pastoralism for the inhabiting *Gaddi* population no more remains a means of adaptation to the geo-physical constraints. With changing cultivation practices in the region, seasonal availability of the grazing resources in terms of fallows fields reduces. As grazing and cultivation in the hills go hand in hand (Chakravarty-Kaul, 1998), changes in one practice can be observed to have a spill over effect on the other.

The changes in food and pastoral practices of the *Gaddis* are manifesting through discrete but connected domains of land, livelihood and social structure (For reference see Figure 8).

**4.6) Conclusion**

By grounding the discussion in food related processes, in this chapter we mapped the complex web of interactions between resources and actors in the *Gaddi* community to understand the on-going transitions in their pastoral socio-ecological system. Analysis of such consequences of change in pastoral vis-à-vis the food practices among the *Gaddis* provide useful insights to conceptualize the socio-ecological transitions afresh by realizing that it is shaped both by people and nature combined

It was observed that food practices of the *Gaddi* community are shifting because of livelihood diversification, changed land use pattern and cultivation practices, labour shortages, changes in family and social organisation as well as the increasing dependency on market sources and government run fair price shops. All these changes generate negative feedback for pastoral practices by altering the nature of resources and possible interactions with them. At the same time, it reflects the corrosion of local knowledge on biodiversity, nutritional diversity and cultural affiliation to the resources, in specific and environment, in general. Such trade-offs show how the short-term development with immediate socio-economic benefits is traded for the later and larger socio-ecological costs (FAO, 2014).

As the continuation of pastoral practices become difficult amidst such changes, alterations in their significance for the community can also be concluded. No longer the agro-pastoral practices of the *Gaddis* serve as an integral adaption to the challenging ecological conditions, as perceived by most of the prior studies. The transitioning nature of resources and their utilization by the actors impact the composition as well as functioning of pastoral SES. In this chapter, we articulated the

transitions in pastoral SES from a detailed perspective of shifting food practices and concurrent cultural changes by highlighting the different pathways and feedback that remain responsible for it. As the pastoral practices of the *Gaddis* strive to remain relevant for the landscape and the people, we conclude that the changes in the local food related practices play a significant role in determining the dimensions of sustainability as well as the overall future of these practices.

# CHAPTER 5

## PASTORAL-AGRICULTURAL RECIPROCITIES:

## Transitioning Relationships of Exchange

## 5.1) Introduction

In this chapter, we take cognition of shifts in *Gaddi* pastoral activities and their relationships with the settled agricultural community across their migration routes and at the locations of their seasonal pastures. The age-old practices of agriculture and pastoralism in India have traditionally remained entwined in a manner that their dependencies often surpassed the production needs. The relationships between these production systems were culturally mediated and passed down over generations often resulting in the institutionalisation of exchange practices (Bhattacharya, 2019a). Continued annually over seasons, pastoral-agricultural relationships have always remained crucial for the functioning of the pastoral system as it regulates resource dependencies, networks of exchange and actors involved in the system (Bukari et al., 2018).

Across India, especially in the northern region where transhumant pastoralism is practised in sync with the annual fluctuations in weather patterns, a wide variety of resources across climatic zones are utilized by the pastoralists to meet the needs of their herds. Adapting to the ecological constraints, they adopt suitable patterns of seasonal migration that allow them to cope with resource scarcity and weather-related limitations. For instance, most of the Himalayan pastoral groups including *Gaddis*, Van Gujjars and the like, practice vertical transhumance across the altitudes to escape the snowy winters of the high mountains and dry hot summers of the plains (Bhasin, 2013; Gooch, 2004), whereas *Raikas* of Rajasthan and other pastoral communities from the plains follow horizontal movements as they move in tune with the monsoons (Köhler-Rollefson, 1994). Such mobility patterns result in dynamic farmer-pastoral networks of exchange and represent the co-existence of agricultural-pastoral economy (Bhattacharya, 2019b, 2019a; Raczek, 2011; C. Singh, 2012).

The relationship between agricultural and pastoral communities exemplifies crucial social and economic networks that have historically remained complementary and symbiotic in nature (de Haan et al., 1990). Their interdependency mirrors closed production cycles where by-products and services generated in one system are utilized as inputs in the other (Breu et al., 2015). For instance, pastoral herds feeding on post-harvest agricultural residue deposit the organic manure on the fields that help in restoring soil fertility making the field ready for next crop cycle. Additionally, these relationships also act as safety nets for the pastoralists, especially during the times of crisis that involves draughts and sever resource scarcity.

With multiple changes taking place in both agriculture and pastoralism, relationships between the communities of practice are also transitioning. Unequal attention to these production systems and their intertwined functioning is resulting in adverse consequences that jeopardize the livelihood security as well as socio-ecological functioning of pastoral system. It comes at the time when severe consequences of Anthropocene in the form of wildfire incidents, extreme air pollution and soil degradation from stubble burning, and crop failures are also mounting. Evidence indicates pastoralism's essential contribution toward controlling and managing such tragedies (Sa Rego et al., 2022) as it can provide alternate sustainable solutions rooted in traditional reciprocities. However, major questions remain on its continuity amidst the changing nature of relationship with the agricultural counterparts. In this chapter, we thus probe the on-going farmer-pastoral interactions and relationships in the cases of *Gaddis* to understand their role in transitioning conditions of pastoral socio-ecological system. Before that, we lay out the general understanding of such relationships as documented in the available literature in the next section.

**5.2) Panning across Pastoral-agricultural relationship**

Agriculture in India remains a dominant livelihood strategy that majorly characterizes the primary sector of the country both in the popular imagination as well as the policy circles. For decades, it has been carried out in integration with animal husbandry practices that demonstrate the principles of agro-ecology. Seasonal dependencies and utilization of agricultural resources by the pastoral herds is also one example of such integration. However, with expanding commercial cultivation taking over the available agricultural land these integrated practices are diminishing. At the same time, land related conflicts and instances of land grabs are becoming common (Duncan & Agarwal, 2017).

Existing pastoral studies in India and elsewhere that take into consideration the agro-pastoral relationships, widely document that crop residue and fallow agricultural lands play an important role as seasonal resources for the pastoralists (Louhaichi et al., 2015). Several studies confirm the importance of farmer-pastoral links that are established through various forms of exchange and entrustments (Agrawal, 1993; Bates, 1971; Bukari et al., 2018; de Haan et al., 1990). They highlight the role of pastoralists' flexible and adaptive mobility patterns that synchronise with the agricultural calendars in co-ordinating the relationships between farmers and pastoralists.

According to Raczek (2011), the farmer-pastoral networks illustrate the ties that bring distant sites and communities together by the exchange of news, messages, goods and services. Such connections, on one hand, consolidates the of social and political identities and on the other, strengthen the cultural exchange between the involved communities. In context of India, these communities represent the

specialised ethnic groups that distinctly vary in their livelihood and production strategies (Kishore & Köhler-Rollefson, 2020; Köhler-Rollefson, 1994). Based on their distinctiveness and co-presence, Bukari et al. (2018) calls pastoralists and farmers as 'cultural neighbours' who co-exist, cooperate and also have conflicts.

Pastoralists, for generations, have remained central to the wider agricultural economy because of their exchange relations (Robbins, 2004; Scoones, 2020). Their long-standing reciprocities with farmers highlight a character of moral economy with strong sense of interdependency and co-operation (Reuter, 2019). The sharing arrangements (through reciprocal friendship, exchanges, gifts and marriage alliances) developed over time particularly help the pastoralists to spread the risk in the face of environmental uncertainty (Scoones, 2020). The social networks and reciprocities with the farmer groups also help the pastoralists diversify economically and create a market for their pastoral products including manure, meat, milk and hide (Maru, 2020; Scoones, 2020).

The mutual dependency on similar resources also remains a reason for the instances of competition and conflict among the farmers and pastoralists (Blench, 2001; de Haan et al., 1990). Farmers with their well-recognised land tenures and political clout acquire an upper hand through which they influence the pastoralists' access to the integral resources. A considerable amount of literature on farmer-pastoral relationships published from the African contexts documents a rise in such conflicts with increasing polarization among farmers and pastoralists (Brottem, 2020; Bukari et al., 2018, 2018). However, not much is known about these dependencies and changes in them in South Asian and Indian context.

**5.3)** *Gaddi* **pastoralism and relations of exchange**

The literature capturing farmer-pastoral relationships in the case of *Gaddi* pastoralism is not just scarce but also obsolete. Although, their dependency on the agricultural communities settled across the migration routes or at winter halting location is widely acknowledged in the exisitng studies (Bhasin, 2013; John & Badoni, 2013; M. Sharma, 2013; Wagner, 2013), not much attention is paid to how these relationships are affecting the transitions in *Gaddi* pastoralism.

Historically, *Gaddi* pastoralism has remained well embedded in the state economy of Himachal Pradesh following direct and indirect relationships with the settled communities and pre- and post-colonial state (M. Sharma, 2013). These relationships were not only ecologically relevant but also carried socio-cultural and political significance. According to Sharma (2013), shepherding in the mountains has been a part of the larger dynamic system that in turn sets condition for its functioning. Farmer-pastoral relationships that cater to the mutual dependencies remain central to the functioning of *Gaddi* pastoralism and has been observed to have major socio-economic and ecological benefits. Seasonal penning in fallow and newly harvested fields, which was identified as the 'economy of waste' (M. Sharma, 2013) by the colonial government suitably represents the socio-ecological benefits of such relationships. In addition, the potential to utilize '*wastelands*[12]' for generation of essential by-products and bringing rare forest articles to the local markets also dictated the relevance of pastoralists in and around the urban areas of Kangra where they seasonally graze their livestock during winter months.

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[12] *Wastelands* are described as degraded or unproductive land masses. However, their definition and classification remains highly debatable (https://www.thethirdpole.net/en/nature/as-india-maps-wasteland-environmentalists-debate-definition/)

The spatial and temporal complementarity of agriculture and pastoral cycles in the region was useful for resource sharing and management (Axelby, 2007; Chakravarty-Kaul, 1998; John & Badoni, 2013). Migratory livestock provided the organic manure to the farmers just in time before the next cropping cycle while receiving the shelter and forage in return. They also shared the village's common grazing grounds with the sedentary livestock keepers. The routinized transhumance patterns of movement and institutionalized relationships of exchange between *Gaddi* pastoralists and local agricultural communities crucially brought the spaces, production practices, resources, people, and cultures together.

## 5.4) Shifting pastoral-agricultural relationships

Winter grazing for the *Gaddi* herds is becoming extremely challenging. Following their transhumant pattern of migration, *Gaddi* pastoralists descend down to the foothills of Dhauladhar range and to the nearby villages in Kangra to escape the snowy winters of alpine pastures and mountainous villages where arranging fodder for their large herds in not feasible. Some of the pastoralists even travel across the boundaries to the adjoining state of Punjab to access the forage available in the state-owned common spaces often referred as *jungles* or to the privately managed agricultural fields that lie fallow post harvesting. During these migration cycles, interaction with the settled agricultural and non-agricultural communities is an inevitable part of their journey. From a socio-ecological viewpoint, such interactions play an essential role in the pastoral system of the *Gaddis* that comprise variable resources and actors apart from the practicing pastoralists.

*Gaddis*, during their migration cycles, depend on the agricultural households for fodder, food, shelter, as well as security. In return, they offer the pastoral by-products to them. In words of Sahab Singh, an elderly ex-pastoralist, "*Humne unke khet pe baithna, unka jungle chugana or unko mail dena*", meaning 'We would pen our livestock on the farmers' fields or graze them in the nearby open spaces and village forests (referred as *jungles*) and offer them the livestock's droppings'. This age-old tradition of exchange holds an immense ecological value not only for maintaining the soil fertility or agricultural production but for the larger ecology of the region. It is consensually believed that the organic manure obtained in form of livestock droppings is the best way to naturally restore soil fertility and maintain it for one complete agricultural season. Unlike the chemical fertilizers that provide short-lived results and are increasingly found to be damaging the quality of the soil, penning of livestock yields better results. According to Sahab Singh, rearing migratory livestock is not only beneficial for the *Gaddis* who earn their livelihood from it, but it has immense importance for our land, crops, and overall environment.

In addition to that, farmer-pastoral reciprocal relationships were also of immense significance for material and cultural exchange. Deva Devi, an old *Gaddi* women narrated her childhood experience of accompanying the family herds during the winter migration, when doing so was customary practice. She said,

> "When we were young, we used to go to Kangra with our family and
> herds during the winter months. As herds would pass through many
> small hamlets and villages, we would get in contact with many
> families there. Out of them, some spoke Punjabi and a different
> dialect of Pahari in a different accent. From those encounters, we

*picked up many words that gradually became a part of our lexicon.*
*Now when people come to Bharmour from the plain areas like*
*Punjab, they find similarities in the way we talk. It gives us a sense of*
*familiarity with them even if our Bharmour is located quite far*
*away".*

Interactions with the settled communities have been an immersive cultural experience for the *Gaddis*. Through their migratory lifestyle they were exposed to the 'culture of the plains' that is perceived to be distinct from that of the mountains. Influence of such interactions is not only limited to their language but can be observed across other domains of their everyday lives like rituals, attires, and diets.

It has been a common practice for the agricultural communities to compensate the *Gaddi* pastoralists for their valuable contribution in their farm activities. In exchange of manure and labour, often they offered them the food grains that were locally grown. Such an exchange was crucial to maintain the relationship of exchange and it also influenced the food practices of the *Gaddi* (as stated in chapter 4).

*"In the earlier times, when rice was not grown in our home villages*
*and buying from the market was not a feasible option, the farmers*
*from the plains on whose fields we would pen our herd would present*
*us with good amount of it. Those ration bags were carried back to the*
*villages where the foodgrain was then relished in communal feasts.*
*Relationships in those days had their foundation in such exchanges*
*that lasted long and were continued in good faith." (Sahab Singh, an*
*elderly Gaddi male from Chobia village)*

Farmer-pastoral relationships in case of the *Gaddis* also often mimic the fictive kinship bonds that are valued beyond the resource exchange. These extra-familial bonds were crucial in securing seasonal access to the forage and extend social networks beyond their own villages. However, such bonds are becoming rare in the current times amidst increasing conflicts. A young *Gaddi* pastoralist from the Kugti village informed us that,

*"Many of those [farmers] who used to invite us to their fields would become our extended relatives. Some relations have been continuing over since our fathers' generations. We not only address them as family but participate in their good and bad times just as family members. Such relationships cannot be imagined now when everybody is looking out to make profits and no shared responsibility or reciprocity exists. People in the cities do not see any good in pastoralism now. Earlier they used to invite us to the fields and fight over it, now they fight with us to stay away from them."*

With agricultural expansion in the plains, pastoralists seasonal movements are increasingly perceived as a nuisance. The large-scale agrarian change sidelines the pastoralists' needs and is largely responsible for the deterring farmer-pastoral relationships as described by Prakash Chand, a practicing pastoralist from Bharmour.

*"Before we reach the plains in winters these days, people set fire to their post-harvest residue to sow the next crop. Cropping cycles have changed drastically over years as everybody wants to extract more and more from their lands. Fallow lands are hardly available. At the*

*same time, the proportion of unused land, which earlier used to be*

*available for free grazing in the villages, now either have buildings*

*on it or remain covered with food crop, fruit trees or plantation done*

*by forest department".*

Rapid urbanisation and expanding cultivation in the villages of Kangra that are usually frequented by the *Gaddi* pastoralists during their winter migration observe shrinking pastoral spaces. In the case of *Gaddis*, agricultural fields in the plains have served as a vital resource for the functioning of their whole system. Ranging from the transhumance cycle to the herd composition, *Gaddi* pastoralism operates in synchronisation with the seasonal agricultural calendar typically followed in the region. With the changes in crop cycles, disintegration of dependencies that strain the pastoral practices of the *Gaddis* remain evident.

Another prominent factor that influences the farmer pastoral relationships is the increased tree plantation in the region that remains incompatible with livestock grazing, especially the browsing behaviour of the goats that is considered destructive for the tree growth. These plantations, both on the private and state-owned land, reconfigures the *Gaddis*' access to the resources (Ramprasad et al., 2020). In addition, inhospitable attitude of the settled communities towards the *Gaddis*' herds further makes it challenging to pursue pastoralism in the current times.

*"As we worship lord Shiva, we follow his teachings that demand us*

*to be kind and humble and do not get into unnecessary arguments.*

*Our profession is such that our sheep and goat might at times cause*

*destruction to other's property and we are very much aware of it. So,*

*in order to avoid conflicts, we refrain from getting into heated*

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*arguments. However, at times people take our silence and innocence for granted. Many a times, a Gaddi is mocked to be illiterate and rustic who doesn't know anything, but they don't know that we have explored enough of the world to know and identify people's deceit. Many people in the plains try to take advantage of our kindness by cheating us. There was a time when people respected us, appreciated our stay on their fields and welcomed us to their homes. Now the times have changed." (Hukam Chand, resident of Kugti Village during a Focus group discussion, 2019)*

Most of the *Gaddi* pastoralists informed that the prejudiced binaries between settled and migratory or modern and backward increasingly inform their interactions with the people outside their villages and in the urban areas. Because of the prevalent social stigmas attached to the migratory lifestyle and animal husbandry practices, *Gaddi* pastoralists are often looked down upon, deceived and socially excluded. Amidst that, the rising transactional cost incurred by them to secure the pastoral resources comes as push to search for alternative livelihoods. A practicing pastoralist from the Kugti village explained these changes as-

*"...now the jungles and the khet where we seasonally take our livestock to graze in the winter months, are also auctioned for specific prices that vary each year. For instance, this year I paid Rs.1000 for grazing on someone's land, there are chances he might increase the price to Rs. 3000 next year. If I am not able to pay the asked price, I would lose access to the land where I stayed on in the previous year. Based on such negotiations grazing sites vary each*

*season depending upon what the landowner demands. Earlier people used to invite Gaddis to their lands. But now we have to beg them and on top of it, also pay hefty amounts so they allow us to pitch the tents on their fallow lands. Penning the animals in the plains was never this difficult as it has become"*

With declining appreciation for the pastoral contribution towards the agrarian livelihoods and and increasing hostility towards the *Gaddi* herds, a question of security also comes to the fore. As informed by many *Gaddis*, it was an unsaid responsibility of the farmers to safeguard the pastoralists and their herds while they were penning on their fields. Many farmers even used to volunteer for night vigilance to relive the pastoralists from their hefty workloads and guard the livestock from wandering into the cultivated fields. Apart from providing the everyday essentials, they also contributed to safety and security of the pastoralists and their herds. During a conversation with Tilak Raj, we were informed that,

*"The people on whose land we use to pen our livestock, used to act as our safety cover. When you are camping within agricultural fields, incidents of thefts are much lesser as you have a network of people to rely on. But now camping on fields is becoming difficult and we have to halt in the open spaces where our safety and our livestock's security goes out for a toss. Government directs the police department to patrol and look out for us, but they are rarely available. In recent times, incidents of livestock thefts have gone up tremendously. At times, puhals are looted at the threat of the gun point. Such situations are dire and difficult than confronting the*

*brown bears or other wildlife in the forests. You can fight and chase*

*the bear through different tactics but escaping a group of goons who*

*threaten your life isn't easy. Rarely do the people from the plains*

*help a pastoralist now. They find our herds a nuisance and thus, they*

*leave us on our own to suffer".*

Such diminishing reciprocities and collapsing dependencies between the pastoralists and their agricultural counterparts in the plain areas make the continuity of *Gaddi* pastoralism extremely challenging. However, the instances that reveal the emergence of new forms of exchange reflect otherwise. A young *Gaddi* pastoralist from the Panjsei village of Bharmour told us about the rising demand of goat milk in the urban areas. Although, goat milk is an important pastoral by-product, *Gaddi* pastoralists are unable to market it amidst the lack of transportation, packaging, and marketing facilities. Due to their constant migration and remote locations of their pastures, selling out milk from their herds remains impractical. According to him,

*"Goats milk is used to treat various ailments. Our young children do*

*not realise its importance and make a face if they are made to have it.*

*But our ancestors and puhals have lived on goat milk. That is a*

*reason they have lived healthy and long life. In the urban areas,*

*people are gradually recognising its value, which is deriving its*

*demand, especially during the winters when we are grazing our herds*

*in and around those areas. Sometimes, we fetch good prices for the*

*goat milk when people looking for alternate solutions to their chronic*

*ailments approach us".*

In addition to the rising demand for milk, *Gaddi* pastoralists are also able to earn substantially well from the meat sales during their winter migrations. As the demand for the meat is gradually increasing across the urban areas (Mundy, 2021), pastoralists are able to yield good returns. However, this economic advantage is intricately linked with the socio-ecological challenges as explained by Prakash Chand,

> *"The shrinking grazing resources, rise of poisonous grass [Lantana]*
> *in the open wild spaces, lack of field residue and enclosed jungles*
> *have become a reason of distress among all Gaddi pastoralists. This*
> *makes us sell more of our livestock during the winter months. But*
> *fortunately, we get good prices in the plains. There the meat demand*
> *goes up in winters and so does the prices"*

We were also informed that some of the *Gaddi* pastoralists also earn an extra income by selling off the *Gaddi* dogs. This peculiar breed of sheep dogs carries immense value and are purchased by the farmers to help them manage their farms and keep the stray animals away. In the recent past, *Gaddi* dogs have also become quite popular as a choice for household domestication and selling them fetch a good price for the pastoralists.

## 5.5) Reconfiguration of Reciprocities-What does it mean for Pastoralism?

Findings from the *Gaddi* context highlight the significance of farmer-pastoral relationships for the functioning of their pastoral SES. These two contrasting ways of life (de Haan et al., 1990), have operated in a sync for a long time with symmetrical dependencies that allowed for co-existence. Mutual benefits and exchange of eco-

cultural goods and services cemented these dependencies and enabled prolonged relationships that at times developed into fictive kinship bonds. The traditional reciprocity observed between the agricultural and migratory pastoral systems carried immense economic, ecological, socio-cultural, and material value. However, the changes observed in the past few years hint at the breakdown of complementarity between them.

The farmer-pastoral relationships as observed in the case of *Gaddis* suggest an increase in competition and conflicts between them. This can be interpreted as a 'silo syndrome' (FAO, 2014) where decoupling of the integrated practices remain visible. Various factors including competition for limited land resources, changed crop cycles, declining appreciation for pastoral products along with increasing stigma that discriminates against pastoral lifestyle remain responsible for such a change. In the case of Indian pastoralism, it is also understood as a long-term consequence of territorial change that started with the introduction of the green revolution (Nori, 2019a; N. J. Singh et al., 2013).

Expansion of agriculture on previously uncultivated tracts, afforestation programs carried out by the forest department on the '*wastelands*' and its diversion for housing purposes reflect the subtle forms of land grab that leave pastoralists with no choice but to abandon pastoralism. Cases of *Raikas* of Rajasthan and *Rebaris* of Gujarat as discussed by Kavoori, (2007) and Maru (2021) also highlight the similar plight of the pastoralists in the western region of India. Such 'agricultural encroachment' (Blench, 2001) denies the pastoralists' the access to the integral resources and erodes their chances for manoeuvring during the lean seasons. It eventually alters the socio-ecological landscapes and progresses towards the decline in pastoral practices.

It has been argued in literature that the sustainability of the livestock sector in India depends on the sustainability of farming practices (Vigne et al., 2022). Similar remains true for the pastoral production that largely depends on the agricultural resources to meet their seasonal forage demands. However, pastoralism has historically remained out of the purview of agrarian development (Kavoori, 2005). With changes in agricultural sector, pastoral livelihoods are getting sidelined as the competition for resources complicates the mutual sharing arrangements. It pushes the pastoralists like that of *Gaddis* out to the peripheries where looming resource crunch makes their livelihoods vulnerable without having much impact on the agricultural practices. Such changes emerge from the skewed power dynamics that inclines towards the resource-owning agricultural communities (Maru, 2020; Nori, 2021). Asymmetries in power and hence, the resource access leads into lopsided consequences for pastoralists and simultaneously, validates the land-use mutualism and symbiotic exchange to be increasingly a function of a balance of power (Bates, 1971).

*Gaddis'* experiences also suggest an 'erosion of livelihood dependency' between farming and pastoral practices (Brottem, 2020). It highlights the widening disjuncture between these joint communities that once formed the network of exchange and moral economy (Scoones, 2020).

## 5.6) Conclusion

As agricultural practices in the region proliferate and expand outwardly to bring more land under cultivation, room for continuing pastoral endeavours shrink. Based on the findings of this chapter, we conclude that breakdown of pastoral-agricultural

reciprocity and decoupling of agro-pastoral production systems produces asymmetrical challenges for pastoral occupation. It demonstrates the changing interactions between resources and actors in pastoral SES, which influence the change and continuity of pastoral practices of the *Gaddis*.

By highlighting the importance of traditional relationships of exchange for sustainable management of natural resources, this chapter focuses on understanding the transitioning reciprocities between pastoral and agricultural communities and production systems. The main focus remains on understanding the impacts of these changes the pastoral socio-ecological system of the *Gaddis*. The important aspects discussed in the chapter include types of symbiotic reciprocities, how they regulate the socio-ecological system of pastoralism, transitions in them and the impact they generate.

We conclude that there remains a need for appropriate interventions that allow for pastoral-agricultural reintegration. With the quest for alternatives that could promote sustainable production, such reintegration of migratory animal husbandry practices with settled agriculture across a scale presents a viable solution that works on the principles of circular economy. However, reviving these relationships in a manner that they equitably benefit both pastoralists as well as agriculturalists require a change in the way production outcomes are analysed. Instead of overtly worrying over the economic aspects, socio-ecological contributions of such relationships need to be endorsed. Reciprocity of agriculture and migratory pastoralism provides an untapped potential for mitigating the socio-ecological challenges. The prevailing adverse ecological impacts of non-traditional interventions in agriculture could be minimized by promoting sustainable sharing of resources between these two co-dependent communities.

A gaddi flock exisitng the
agricultural field after a halt


Gaddi pastoralists camping at their
winter location  (source-@gadditribe
twitter)


A Gaddi dog commonly reared by
pastoralists for protecting thier
herds


Gaddi flock grazing near the fallow land
in urban areas of Kangra

(source-@gadditribe twitter)


Winter pastures on agriculture fields
(source-@gadditribe twitter)

*Figure 9 Pastoralists and their relationships with agricultural communities*

**Chapter 6**

**WHERE ARE THE *GADDANS*?**

**Gendered Insights on the *Gaddi* Pastoralism and its Transitions**

## 6.1)    Introduction

During a conversation with a group of male members in the *Sachuin* village, who gather every day at the common meeting ground called *binni* in the evening, I raised a generic question about the role of women in the *Gaddi* pastoralism. Nonchalantly, one of the old respondents who spent his younger days herding and migrating across the mountain ranges for around 30 years said, *"...what do they do? They stay home and have a good life. They don't have to face the struggle that a puhal goes through on daily basis."*

This statement, although very superficial, renders the women of the community uninvolved and invisible in the *Gaddi* pastoral practices. Going by this general idea, pastoralism among the *Gaddis* and even across many other communities is largely interpreted from a male vantage point. Based on the nature of the occupation, which involves long-term migration with large flocks and camping in the wild, pastoralism is assumed to be a male-exclusive occupation with women having nominal or no role to play. Mirroring the same perception, most of the available literature on pastoralism also neglects the women's role in its functioning and rarely pays attention to the complex gender relations involved in shaping it. Depictions of men in herding roles that shape the popular imagery of pastoralism establish male dominance and leave the women out of the purview. Terms like graziers, pastoralists, ranchers or shepherds, which majorly signify the position of men, are used to define the pastoral work while women and the gendered dimensions of the social systems remain seldom acknowledged (Rota & Chakrabarti, 2021; Talle, 1988).

Such a disposition results in gender blindness that not only hamper the general understanding of pastoral livelihoods but also limit the scope of identifying how it can

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affect the sustenance of such livelihoods. Thus, to bring the gendered perception of pastoralism to the fore, in this chapter the prevalent gender dynamics within the *Gaddi* community in connection with their pastoral practices are explored. The twofold objective of this chapter is - 1) to outline the role and agency of women in pastoral SES based on the existing gender relations and 2) to understand their influence in promoting the transitions as observed in *Gaddi* pastoralism.

In this chapter, at the outset we discuss the significance of using a gendered lens to look at pastoralism and the on-going transitions in it and then gradually move on to give a general overview of gender relations and role of women documented across the global literature. It is followed by a brief discussion on the relevance of examining gendered agency of actors in socio-ecological systems that help in conceptualising the situated agency of women in pastoralism. Further, the case of *Gaddis* is discussed in detail to shed light on the ongoing changes in pastoral practices and gender relations as observed among the community. These findings are then interpreted in the light of available literature to discuss the nature of changing gender dynamics vis-à-vis the transitions in pastoral livelihoods to draw critical conclusions.

By focusing on how gender relations play out in pastoral contexts, the main objective in this chapter is to reframe and undo the women's invisibility in pastoralism by locating them as key actors within the socio-ecological system. Pronouncing their agency by no means imply that women in pastoral communities do not face any hardships but it only aims at reframing their position in influencing transitions and transformations within the pastoral SES. The conclusions drawn from this discussion remain consistent with the argument that 'women can be both victims as well as actors' in context of their relationship with the resources and the institutions governing them (Agarwal, 1992). Thus, our aim with this analysis is to bring the

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attention on women's situated agency by reflecting on their everyday decisions, actions and choices that has a direct bearing on the community's pastoral livelihood practice.

## 6.2)  Why Gendered lens is important to understand pastoralism?

Gender, just like other intersectional socio-cultural attributes, plays an important role in structuring the pastoral livelihoods (IFAD, 2020; Rota & Chakrabarti, 2021) and also, contributes to the heterogeneity among actors in the socio-ecological systems (Aregu et al., 2012). Across the pastoral communities, multiple gender-based differences are observed in their everyday life (Flintan, 2008). To name a few, the most notable ones exist in terms of division of labour, mobility patterns and rights over resources. Traditionally, pastoralism has remained a household-based occupation that requires involvement of both men and women in variable roles at variable times. In some pastoral communities, both men and women remain responsible for herding practices while in the others, work is segregated based on the type of livestock reared, herd size or the mobility pattern (Köhler-Rollefson, 2018; Ramdas & Ghotge, 2007). In many traditional pastoral communities, women take charge of small stock including goat, sheep, and poultry while the large stock like camels, buffaloes or yaks are managed by the men.

The division of labour is highly variable across the contexts and is largely determined by the cultural factors that also affect the control and ownership of resources within pastoral households (Köhler-Rollefson, 2018). Although, gender-based differences are realised by many scholars working across the geography,

pastoralism continues to be predominantly discussed as a male oriented enterprise. This disproportionate focus on men's positionalities in pastoralism, figuratively push the women to the invisible corners where their agency in maintaining and managing pastoral SES remains discounted. Such a gap in research presents an 'unexplored terrain' (R. Verma & Khadka, 2016) that needs urgent attention if the transitions in pastoral livelihoods are to be clearly understood in-depth.

## 6.3)    Women, Gender relations and pastoralism-A General Overview

Women in pastoralism acquire different roles considering the type of pastoral activities prevalent within the household and their communities (R. Verma & Khadka, 2016). Irrespective of the diversity in contexts, women in-general play a significant role in sustenance and maintenance of pastoral livelihoods (Flintan, 2008; Verma et al., 2016). From being the care takers of the livestock and the family, they often acquire the responsibility of a herder, trader, knowledge bearer, healer as well as a political activist (Ramdas & Ghotge, 2007; Rangnekar, 1994). A variety of factors including the type of pastoralism practised by the community, type of livestock reared, mobility patterns, geographical positioning along with the socio-cultural norms play an important role in deciding the role of women and gender dynamics in pastoral communities (Aregu et al., 2016; Kishore & Köhler-Rollefson, 2020). Following which, the women's role can either be seen in the form of direct involvement with pastoral livelihoods that includes practices like herding, milking, and birthing of livestock or it can be the indirect participation in maintaining pastoral livelihoods by managing subsistence agriculture, processing pastoral by-products, looking after household chores and other daily activities. Apart from the sphere of

their household, women in the pastoral communities often have additional public interactions that emerge out of their livelihood needs. Requirements of mobility, arranging the resources for self and livestock and trading activities often put the women at the forefront of pastoral livelihoods (Köhler-Rollefson, 2018).

A recent compilation on variability in pastoralism by FAO (2021) that calls for its global mainstreaming as a viable livelihood practice, highlights the lack of gender-disaggregated data that limits our understanding on men's and women's contribution towards it. While much is written about the men in pastoralism, role of women in promoting and sustaining pastoral livelihoods remains an under-researched area across the world (R. Verma & Khadka, 2016). Discussions on it remain even sparse in Indian context, where pastoralism itself suffers from a long-standing academic neglect (Agrawal & Saberwal, 2004; Kishore & Köhler-Rollefson, 2020).

Within the gigantic livestock economy of India, women comprise a majority of available workforce especially in the rural and household level enterprises (Ramdas & Ghotge, 2006). Despite that, most of the available scholarship overlooks the gendered underpinnings often leaving the concerns and challenges of women out of its purview. A few scholarly studies that consider the women's role in pastoral contexts descriptively explore the issues of division of labour and resources, workload, ownership rights and access to resources along with the decisions regarding mobility and market among the others (Bhasin, 1991, 2011; Köhler-Rollefson, 2018; Ramdas & Ghotge, 2007; Rangnekar, 1994; Venkatasubramanian & Ramnarain, 2018; R. Verma & Khadka, 2016) These studies, even if numerally limited, indicate the relevance of gender as a crucial analytical lens to understand how pastoral livelihoods are organised. Nonetheless, they fail to account for the importance of understanding gender dynamics in concern with the transitions in pastoralism.

Unlike the gender relations in agrarian context that have received much of attention from scholars across disciplines, gender relations among the pastoral communities have not been thoroughly explored. In the lack of specialised conceptual categories that could precisely explain pastoral contexts, many scholars, development organisations and even government bodies end up indiscriminately applying the western standards or the borrowed conceptualisation of gender (mainly from agricultural settings) to the pastoral contexts, without taking the local level cultural differences into consideration (Köhler-Rollefson, 2018). Pastoralism, despite some shared characteristics with agrarian background, is based on a different rationale that values mobility and operates at the behest of the natural environmental order (Scoones, 2020). Pastoralists' flexible approach and variable dependence on resources has a major role in shaping their production practices, ways of life as well as the gender relations that remain distinct from the agrarian logic. Information deficit on pastoral contexts often results in skewed understanding of gender dynamics within these communities that result in misplaced development priorities (Köhler-Rollefson, 2018). It also ignores the specific needs and challenges of the women by overlooking their role in pastoralism (FAO, 2021; Rota & Chakrabarti, 2021).

Research gaze on the women in pastoral communities has a general tendency to assume their double marginalization because of subjugated social and economic status (Livingstone & Ruhindi, 2012). Most of the available scholarship concerning gender issues in pastoral contexts culminate in using the monotonous phrases describing pastoral women to be 'at loss' (Talle, 1988), doubly bind (Kipuri & Ridgewell, 2008a), doubly marginalized (Eneyew & Mengistu, 2013), unheard (Nusrat, 2015) or subject to gender blindness (Aregu et al., 2016). Such static interpretations of gendered norms and simplified inferences, which often even lack in

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empirical robustness, hastily point at a need to develop interventions that could promote women's empowerment and help them recover from the vulnerability that their pastoral livelihoods produce (IFAD, 2020). However, not always these analyses appropriately grasp the dynamics of gender relations in pastoral communities that remain subjected to multiple conditions of change including livelihood, socio-cultural practices and modern lifestyle as observed by Duncan & Agarwal (2017) and Köhler-Rollefson (2018). Usage of labels like oppressed and voiceless to describe the conditions of women in pastoral settings, often results in inception of skewed interventions that result in more harm than good (Köhler-Rollefson, 2018).

Few studies critique the marginalized perspective to point out how the women in traditional pastoral arrangements enjoy much more equitable positions as they exercise considerable power in influencing pastoral functioning (J. A. B. Duncan & Agarwal, 2017; Flintan, 2011; Köhler-Rollefson, 2018). Operating from within the patriarchal setups, women in pastoral communities are able to bargain and negotiate their agency based on their active contributions in managing households, resources, finances and even market relations. At some places, pastoral women are found to be acquiring better decision-making authorities over pastoral resources than their male counterparts, which is concluded to have significant socio-ecological implications in terms of sustainability (Deshar & Koirala, 2020).

## 6.4)    Gender-pastoral nexus and situated agency of women in Pastoral SES

Recent studies have shown an inclination to incorporate gender related discussion in understanding pastoral livelihoods and related changes across the different parts of the world. These studies while covering various dimensions of pastoral life, highlight the

relevance of using a gendered lens to understand the role men and women play in pastoral communities. In a wider search for literature, it was observed that majority recent of literature on women and pastoralism emerges from the African context. It spans across identifying the impact of *de-pastoralization* and displacement on women and their incomes to recognising the new patterns of gender relations that emerge from such changes (Flintan, 2011; Kipuri & Ridgewell, 2008b; Livingstone & Ruhindi, 2012; Onyima, 2019).

A recent guide on '*How to do- Gender and Pastoralism*' by International Fund for Agricultural Development (2020) suggests that the gender analysis can essentially generate information on social relations, gendered activities, access and control of resources, decision making and gender-based needs in pastoral contexts. All these dimensions remain useful in comprehending the gendered agency of men and women in influencing the transitions in pastoral SES. With the changes in livelihood, land cover and culture, gender relations among the pastoral communities are also found to be reshaping, giving a way to a new social order (Westervelt, 2018). Studies also report a change in gender relations as the pastoral practices of the communities falter in the face of climate change, disasters or livelihood diversifications (Anbacha & Kjosavik, 2019; Venkatasubramanian & Ramnarain, 2018). Amidst these drastic adjustments, role of women is increasingly acknowledged as important innovators and instigators of change than the powerless observers and victims of economic transformations (Livingstone & Ruhindi, 2012).

Therefore, extending this discussion on gender and pastoralism further, in this chapter, a nuanced view on *Gaddi* pastoralism and its transitions in relation with the gender dynamics as observed among the *Gaddi* community is presented. We argue that gender, along with other socio-cultural variables, deserves increased attention

while analysing transitions in socio-ecological systems as it remains one of those attributes that play an important role in structuring the social dynamics (Aregu et al., 2012, 2016). Gender adds a layer of complexity to the functioning of SES by integrally determining the stratification within the heterogenous pool of actors. Gendered roles are responsible for the social diversity and consequent variation in the agency of men and women within the SES (Aregu et al., 2012). These differences further determine their participation, interaction, and influence on the available resources as well as the other components of the system. Therefore, it is imperative to unpack the culturally specific 'manifestation of gender that focus on the less spectacular dimensions of everyday life'(Channa, 2014).

To this end, we shed light on the 'situated agency' of pastoral women as it has a significant bearing on the survival of pastoral practices. Situated agency as a concept has been applied across disciplines in several ways as it provides ample space for multiple interpretations (Gammage et al., 2016; Nandigama, 2020). In this thesis, we perceive it to be more than the decision-making ability that extends to bargaining, negotiation, deception, manipulation, subversion, and resistance, both in individual as well as collective capacity (Naila Kabeer, 1999). Such processes remain situation specific where the aspects of agency including voice or actions could manifest in several ordinary ways.

## 6.5) Gender dynamics and pastoralism in *Gaddi* community

As *Gaddis* have been traditionally practicing a combination of agriculture and pastoralism, their gender dynamics have been such that women looked after the cultivation practices while men were responsible for herding livestock and migration

(Bhasin, 1991). Because of men's visible role in herding practices, *Gaddi* Pastoralism has been documented majorly from a male vantage point ignoring the women's role and contributions towards it. Another plausible reason for the non-consideration of women as key actors in the *Gaddi* pastoral system is the way pastoralism has been approached in the previous study aloof of its interconnections with the everyday life.

A handful of existing studies (Bhasin, 1991; Mehra, 1992; K. Pandey, 2011) that have dealt with the issues concerning *Gaddi* women highlight their active participation in cultivation practices. However, they simultaneously argue that women remain overburdened with responsibilities and are marginalised considering their role (or no actual role) in pastoralism, in addition to their socio-political status as the women from a scheduled tribe. These old accounts that limitedly provide the information on gendered division of labour, migration and socio-economic status produce a static imagery of the *Gaddi* women, which is inadequate in understanding their evolving role in pastoral transitions as well as the impact of such changes on their agency.

Traditionally, *Gaddi* men and women have had distinguished roles and responsibilities that rarely overlapped but remained in a continuum, often making it difficult to draw conclusive inferences on their individual or collective agency regarding their pastoral practices. Women managed the subsistence agriculture, but it wasn't independent of men's control or influence. They were restricted from ploughing as that was considered to be a man's job (Mehra, 1992) while all the other cultivation-related activities ranging from sowing to harvesting were performed by the women. Similarly, in migratory animal husbandry practices, men took the lead in herding, but women also helped seasonally during the birthing cycles or winter migration by lending a helping hand. At the same time, they played a significant role

in looking after the sedentary cattle or the sick livestock that remained unfit for migration, by taking them for grazing in and around the village. Similar overlaps can be deduced in their everyday household decision-making, resulting in complex gender dynamics that need a closer ethnographic understanding.

In the next section, we discuss the everyday instances and gendered narratives associated with the *Gaddi* pastoralism that tell a different story of situated agency and significant role of women in the on-going transitions. It sheds light on the complexities in pastoral systems as experienced by the *Gaddi* women.

## 6.6)    *Gaddans* and their Shifting Pastoral Connections

Pastoralism in case of the *Gaddis* is a male oriented enterprise as they remain majorly responsible for carrying out the herding practices. In general understanding, shepherding across the difficult terrains requires much of the physical strength and living in the wild, that makes it incompatible for the women. Although *Gaddi* men migrate annually with their herds across the vertical altitudes crossing various passes and valleys, women only accompany them occasionally on the downhill journey in the winter months. As enduring the winters in Bharmour has always been a challenging task, seasonal migrations that are well integrated with their pastoral migration cycles has remained common among the *Gaddis*. Traditionally, women and children used to descend with their male counterparts and herds to the Chamba town or the other nearby areas in Kangra before the onset of the winters. During their stay away from home, which lasted for about five to six months, women would work as wage labour, help their husbands to carry out the daily kitchen chores or stay as domestic help in the elite upper-class households, who seasonally accommodated

them, in and around the winter pastures. Such a migration cycle continues even today, however the nature and purpose for it has gradually found a new meaning.

Conversations with the residents of Chamba town as well as the *Gaddi* community members from Bharmour validated the narratives of traditional patterns of mobility among the *Gaddis*. For many, these mobility patterns even marked the change of season when they saw the *Gaddi* herds and families climbing down towards the winter pastures. These recurring journeys in the winter months were a common adaptation to escape the extreme climatic conditions that challenged the survival of both human as well livestock in the higher altitude areas. Infeasibility of agriculture and seasonal search for adequate pasturage for their livestock determined the *Gaddi* pastoralists' movement while the women, children and elderly passively accompanied them to find suitable shelter to spend the season

Narratives collected from the resident of Chamba town shed light on the gendered mobility patterns of the *Gaddis* and the gradual changes that have affected it over years. *Gaddi* women's (also known as *Gaddans*) movement, traditionally was intricately linked with the transhumance pattern followed within the *Gaddi* pastoralism. Despite the patriarchal setup, it allowed them greater authority over decision making and an opportunity to interact with the wider world. As the nature of shepherding in the plains requires constant mobility day in and day out, *Gaddans* often used to seek shelter at the urban centres like Chamba, where the settled households utilised their labour for everyday chores. Their periodic mobility led into long lasting relationships with the families in these city and town area who would welcome them year after year in the winter months. It not only helped them in coping with the weather extremes but also led in foundation of long-term associations with the population groups in urban centres that provided a market for their pastoral by-

products. In a conversation with a mid-aged woman, I came across the narratives on the mobility of *Gaddi* women latently expressed in the excerpts from her own life experiences-

> *"Many of the Gaddans would come and stay here in Chamba when their husbands would move downhill with their herds. They would stay with us till the weather started to get warmer and would leave for Bharmour when their husbands would be migrating back with the herds ...one that used to come to our house, had three kids- two sons and a daughter, who would also accompany her annually. They would have all grown up by now, but I doubt if her sons took up shepherding. She used to help with cleaning, laundry, and other household work during her stay at my house and her children used to play with us. Every year we knew when it was time for them to come, we separated out the clothes, utensils and other household stuff that could be given to them. It was an annual ritual then...as hardly you see the Gaddans coming down to Chamba now"* (Fieldwork Data, 2019)

In the past two decades, pastoral practices of the *Gaddis* as well as their gender relations have altered in multiple ways. No more the *Gaddans* travel down to Chamba for seasonal employment or shelter but only congregate during the prestigious *Sui* fair, for which they are annually invited by the district administration. In local beliefs, *Sui mata*[13], the queen of the Raja Shail Verman of Chamba Wizarat,

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[13] Mata literally means a goddess in Hindi. Sui fair that is held every year in the month of April in Chamba has been historically organised since the times of Verman empire. It is after King Sahil Verman shifted his capital from Bharmour to Chamba, he realised there are no

sacrificed her life over a dream to provide fresh water to the Chamba town during a period of crisis, was a *Gaddan.* Based on her cultural identity as well as the historic connection of the Verman empire with Bharmour[14], *Gaddis* continue to share a profound association with this annual event. *Gaddans* from Bharmour come over to Chamba for this five-to-seven-day affair where they actively participate in the celebrations at the *Sui* temple and locally held processions. *Gaddans* dressed in their traditional attires that distinctly convey their communal affiliation take enormous pride in attending this annual fair. Earlier the event used to mark the yearly upward progression of the *Gaddi* herds on their summer migration towards the higher alpine pastures. *Gaddi* women who used to have taken the abode in the houses at Chamba away from their pastoralist husbands or even those who accompanied them to the plains while returning to their houses in Bharmour participated in this woman only fair. The annual affair was an important marker of pastoral migration, especially for the *Gaddi* women.

In current times, when *Gaddi* pastoralism is observing a tremendous decline, locating women on the migration routes is a rare chance even during the winter cycles. Such an absence of women makes their non-involvement in the herding business apparent and further adds to an assumption that they have nothing to do with the pastoral livelihoods. However, during the field visits, there were a few instances

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sources of water that could fulfil the needs of the growing population. After a long struggle, he was ordained in his dream to sacrifice his life to be able to bring water to the region. His wife, queen Sunaina or Sui instead proposed to sacrifice herself to prevent the empire from going orphan. After her selfless act in which she was buried alive, a water source erupted nearby that till date remains one of the major freshwater sources for the town. In her memory, sui fair became an annual event that is celebrated in Chamba not only to commemorate her but also to reminisce the human-environmental connection on a symbolic plane.

[14] In earlier times, Bharmour used to be the capital of Chamba Wizarat, which later was shifted to the town of Chamba leaving behind a profound connection between Gaddi and the Raja

where the women were found to be migrating with the herds or accompanying them at the halting camp sites located near or around the roadheads.

On further inquiry, it was realised that the nature of *Gaddi* women's migration is changing to take up new meanings. Although, women in *Gaddi* pastoralism never accompanied the herds during the summer migration to the alpine pastures, winter migrations remained common. Nowadays, women of the pastoral households often travel short distances to help in kitchen related chores if their *revads* (flocks) are halting or crossing the home villages. Some of them, even avail the public or private transport to travel downhill instead of accompanying the herd on foot or camping throughout the journey. Some women even travel every day from their houses to the halting sites of the *revad*, if required. Sheela, an old lady in her late 60's, whom I met at one of the halting sites of the *Gaddi* pastoralists on the *Jot* (a mountain top) near Chamba narrated-

> *"I come over to help in cooking and cleaning. Because of my age I can't walk along the revad but whenever needed and wherever possible, I come to help. Tending sheep and goat, especially on these busy roads these days is a difficult job. It utilizes a lot of energy and drains you at the end of the day. And then, you must cook and clean also. Both my husband and son get tired after their daily travel that includes walking across several kilometres. So, to relive them from the task of cooking and cleaning, I ask my nephew, who owns a small traveller, to drop me wherever they are. Sometimes he drops me and then I travel back the next day if the herd if stopping over for a night or sometimes I even take a lift to go back if they plan to move ahead*

*the same day. Managing two chulhas [i.e., hearths, one on the move and one in the village] is not easy but that how life is" (Fieldwork Data, 2019)*

Unlike Sheela, another young *Gaddi* woman- Kavi, was observed to follow a different migration pattern and shared a different affiliation with the herd. Kavi was accompanying her father, husband, and brother with a herd of almost 500 livestock when I met her during their return journey from the winter pastures located at Indora in Kangra. After her lengthy stay with the herds and family, she had to be dropped at home in the home village before the herd was further taken to the pastures in Lahaul by the male members. Kavi, who is 29 years old is married to Sanju who works as a *puhal* for her father. During my visits, Kavi was usually found to be cleaning the large utensils, rolling the dough, fetching drinking water from the nearby source, or tending the lambs in her free time. With a strong physical built and unbeatable fortitude, she walks along with the group seasonally to add an extra helping hand and take care of the chores that are generally gender defined. In a discussion regarding the future of pastoral practices in their family, her father Udham Ram who is in late 60's now stated-

*"There are so many problems for a pastoralist on the road. I have one daughter and a son. Son is young and goes to school, but I take him along in the winters so that he learns. He will re-join his classes as soon as we reach back home. He is still learning and can't be given the responsibility of such a big herd so soon. My daughter's husband is my puhal. He has his share in the livestock too. He mostly*

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*takes care of all the herding as I am also getting old and have begun*

*to count my days" (Fieldwork Data, 2019)*

Udham singh's condition resonate with many other *Gaddi* households as increasing uncertainty looms over the future of their pastoral practices. Pastoralism despite carrying immense cultural value no more remains the desirable choice among the youth. It has led to a major labour issue (discussed in detail in chapter 7) that also relate with the changing gender dynamics within the community. The following quote sheds light on how gender dynamics entangles with the pastoral practices of the *Gaddis*.

*'For those families that do not have sons, it's by default that pastoralism will eventually fade off. Daughters get married and go away…. In earlier times, puhals were sought for marriage alliance by the daughter-only households so that the herds could be passed on. But now, neither people want a puhal for their daughters nor the girls have any interest in taking up shepherd as husbands'. (An in-depth interview with Sahab Singh, an ex-Gaddi pastoralist from Chobhia village, Fieldwork Data, 2019)*

Sahab Singh, who practiced pastoralism for almost 25 years after inheriting the herds from his father, gave it up when he started to age. Having no one in the family to whom he could transfer the responsibility, he was well aware that it holds no future for him. According to Singh, *"[sic]…these days after a child is born, just within a few months he/she is taken to the Chamba town or other nearby cities in the plains by their mother. If they don't own a house at these places, women even rent an*

*accommodation to bring up their children away from their traditional surroundings. They aspire to send their children to the private schools and learn English. They don't even want to show these children their native place, continuing pastoral practices is out of question. Women no more want to live and experience this challenging life."*

Similar sentiments are echoed by many other people across the community. Pushpa, wife of Sahab Singh who married him when he was a practicing pastoralist, in addition articulated-

*"Nowadays all children including boys and girls go to school and rarely have time to tend the cattle. Newly married girls do not even prefer to go with the cattle to the nearby grazing grounds, let alone go on seasonal migration. For most of them animal rearing is inconvenient and unhygienic. They shun pastoralism and look down upon it. This is also becoming a reason that many parents do not want their sons to take it up. They feel that their son might end up not getting a girl to marry if they involve him in this business. Even the girls' families these days enquire everything about the boy's job, house etc. to ensure they are not marrying their daughter into a household where she will be asked to lop the trees, take the cows to the hilly gauchars (grazing grounds) or have to lead a life without seeing her husband for months. Times have changed. All those things that pastoralism provides were desirable at one point in time, now nobody values them. Society is changing and so are the young women, their aspirations, and their needs" (Chobia Village, Fieldwork Data, 2019)*

On the surface, it is difficult to establish the explicit connections between women and *Gaddi* pastoralism as most of the respondents always suggested their non-engagement in this male dominate pastoral enterprise. '*Pastoralism is a game of strength and physical endurance that women do not possess, and their gender roles traditionally expect them to bear the everyday responsibility of household chores that includes cooking, cleaning, child and elderly care practices'*, informed Rajiv, a young *Gaddi* pastoralist. After the demise of his father, he carried forward his pastoral occupation while his brother joined the armed forces. As both of them spend most of the time away from home, it is his mother and sister-in-law who remain in-charge of the household and the cultivable land they own. Traditionally, it the absence of men, *Gaddi* households were generally headed by the women within the bounds of the patriarchal control. Although, they rarely owned the resources (including land or livestock), they exercised substantial authority over the everyday decision-making concerning them.

Another important instance that elucidates relationship between gender and pastoralism comes from the case of Ganga Devi- an aged lady in her 70's. Ganga, lives alone in a traditional wooden house in the *Sachuin* village of *Bharmour,* has a small apple orchard next to her kitchen and owns a herd of around 150 livestock that she manages with the help of *puhals* who belong to her extended kin circle. She inherited the flock from her pastoralist husband who passed away long back. Her son works in a city in Punjab and has settled there permanently with his family. As Ganga resented to move out of her village, she continues to reside alone in her house at Bharmour. A well-built lady with a strong voice and demeanour, she is one among the few in the village who still make use of their wooden handlooms and spinning wheels to weave the woollen garments. She receives the wool and other by-products

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every year from her own herd that is looked after by the hired men. Although, her age and gender do not allow her to physically manage the herd, she continues to exercise her control as proprietor of the flock remotely. After the husband's death, nobody in the family was there to take up the pastoralist's job and she had to rely on the *puhals* (who also had their own flocks) to continue this traditional occupation. She enjoys both monetary and cultural benefits of continuing pastoralism even if her engagement with it remains sparingly low. According to her, having a flock is equivalent to having an own asset that can be liquidated at the time of need. This not only remains a reason for her economic prosperity but also the social status despite being a widow in a traditional patriarchal setup.

*Gaddi* women have traditionally enjoyed a relatively better social status in comparison to the women from other pastoral or tribal communities in India. Their active economic participation on the household level that ensured food security, land management and additional incomes remains a reason for the same (Bhasin, 1991; Mehra, 1992). However, with changes in both agriculture as well as pastoral practices as discussed in the previous two chapters, many shifts can be observed in women's participation and decision making. Combination of changes in livelihood and cultivation practices, family composition as well as land use and food procurement patterns has largely influenced the traditional gender dynamics in the *Gaddi* community.

Till almost two decades back, Bharmour was perceived to be highly unsuitable for expansion of cultivation practices and only subsistence form of agriculture was practiced (Mukherjee, 1994). As the men of the household used to be generally away from the permanent settlement, *Gaddi* women were mainly responsible for the seasonal agricultural activities at their home villages. Even if they were prohibited

from ploughing, all the other allied activities on the field were managed by them, both individually and in collectives that comprised the other women within the joint or extended families or even the nearby households within the village. Through such work allocation schema, not only women used to make significant economic contributions towards their households but also strengthened their social capital by utilizing the agricultural fields as gendered cultural spaces. Their collective agricultural endeavours facilitated them in socializing, communicating, sharing, deliberating, or rejoicing their hours away from home. Such autonomous authority over agricultural work was a major reason for their better socio-economic status within the community, which also influenced determined the resources management processes.

With the incoming and expansion of horticulture activities, the gendered relationships with land and livestock have changed. Apple farming in those fields that were priorly used for subsistence cultivation as well as seasonal grazing of livestock has tremendously changed the way men and women use these spaces. As diversification into horticulture has led many *Gaddi* men to abandon their pastoral practices, it has also restricted women's participation in cultivation. An increased male involvement in agricultural fields remain in-tune with the changes in nature of land resources. Women have a bare minimum role to play in horticulture starting from planting the trees, tending them, collecting the fruit produce, or marketing it. It is largely a male regulated economic activity that displaces the traditional role of the women in agriculture. Additionally, the increased dependency on the market sources and government aid in the form of PDS (as discussed in chapter 4) that suffice for food related household needs also influence the women's participation and agency in controlling and managing land and livestock resources.

In the traditional *Gaddi* agro-pastoral setting, gender relations were organised in such a manner that men and women played complimentary gender roles despite the inequality in ownership of resources. Women rarely owned the land or livestock resources but shared the responsibility of managing them. The information collected from the forest department reveals the gendered nature of resource governance and inheritance patterns of pastoral resources among the *Gaddis*. As the *Gaddi* pastoral practices are regulated by the state forest department, all the practicing pastoralists are issued a permit. These permits that are issued in the name of male head of the family, are the legal documents that define the customary rights of pastoralists over migratory routes and pasture areas. According to state regulations, customary rights can only be inherited within the family and cannot be sold off or transferred to other (further explained in Chapter 7). As per the forest official, *"after the father's death his son by default becomes the permit holder if his name is already recorded on the permit."* However, if there is no specific name mentioned on the permit apart from the head of the family, all the children hold a legal right to inherit it irrespective of gender. As the daughters are not engaged in pastoralism, it is apparent that the son will eventually become the legal heir. This process of inheritance that influences both land access and livestock accumulation, requires all the children including daughters to sign a no objection certificate that allows the male member within the family to inherit the pastoral permit.

In general, no *Gaddi* women object to such an inheritance pattern even if the legal procedures provide them an opportunity to claim rights over pastoral resources. Satya, the wife of an ex-pastoralist residing in the *Malkhauta* village of *Bharmour*, informed how the inheritance disputes remain uncommon in their region as women generally believe in maintaining cordial relationships with their maiden families.

Demanding a share in paternal property after marriage is not considered culturally appropriate and is avoided to not spoil the familial relationships. Moreover, she also clarified the informal sharing of pastoral resources has played a major role in avoiding the unnecessary tussles. Elaborating in detail, she stated, *"During the early days when my husband used to practice pastoralism, it was quite often that he and my brother would pool their livestock together during their migration journeys to share the labour as well as the grazing resources. I did not inherit the permit from my father but mutual understanding with my brother was enough to secure access for our [husband's] herds in the jungles and at dhars"*.

Such arrangements mediated through women reflect crucial form of social capital that help the *Gaddi* pastoralists in spreading the risk and expanding one's resource base to facilitate pastoral ventures. It also redirects towards the significance of marriage alliances to enable the pastoral practices. Especially, among the daughter only households where marriage was a means to arrange for the required helping hands to continue herding and pass down the livestock wealth as well as the customary pastoral resources to the next generations. Though women had a limited role to play in herding, they play an important part in enabling pastoralism through indirect ways.

Paradoxically, women also play an important role in discontinuation and collapse of pastoral practices. In current times, many of the people from the community, especially the younger generation, have started distancing from their pastoral past. In the words of a young woman named Ritu from the *Malkhauta* village in *Bharmour, "...jab hum nayi cheezon se judte hain to purani peeche choot jati hain"* meaning when we get exposed to the new things, the older ones tend to be forgotten. She strongly believes that pastoralism is one such 'thing' that gradually is

giving way to newer occupations and aspirations. In her opinion, continuing with the age-old practice of migratory pastoralism is not feasible in the modern times and formal education has a great role to play in it. *"[sic]... why would an educated young boy want to live with a flock of sheep and goats? He would certainly look for a job that corresponds with his level of education and would raise his standard of living. Why would he roam around with livestock year-round and waste all those years that he invested in studying",* she added.

Although with rising awareness and education level, pastoralism is losing its sheen as a livelihood practice among the *Gaddi* youth, they continue to reinvent their connection with the livestock in newer ways. Goats and sheep in the *Gaddi* households still hold the significant cultural value but might not be reared for making a livelihood. The community profiles social media also account of the similar sentiments where pastoral connections are revered by the community members who no longer associate with its practice. Even Ritu, who seems to have internalised the social stigma related to the backwardness of pastoralism, continue to rear goats and a *Gaddi* dog in her courtyard, which at the outset suggested her family's connection with pastoralism or at least announced their cultural identity in indirect ways. Upon asking about the livestock, Ritu clarified that her father- who works as a priest in the *Bharmani* temple, receives them as offerings from the people who do not want to perform animal sacrifice. He often gets them home to raise them and obtain the by-products like milk and yarn for household consumption. She expressed her love and fondness towards the livestock as an outcome of cultural affinity that births out of pastoral practices. Such subtle but important instances are crucial to understand the continuity of pastoral identity among the younger generation who ideologically discard pastoralism but find novel ways to develop associations with it.

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Ritu, despite her fondness for the livestock, also made clear that the increasing hardships of a shepherd's life and the uncertainties presented by the environmental disasters make pastoral occupations unattractive. According to her estimation, *Gaddi* pastoralism is on the brink of a collapse and in another 3 to 4 years it might just die off. She narrated a recent incident where a *Gaddi* pastoralist lost around 700-800 livestock as a glacier slid off onto him causing severe injuries and economic loss. Her intention to highlight this accident was to validate her previous viewpoint where she stressed on the need to step away from pastoralism considering the increasing challenges it presents. Also, she well expressed the concerns of the young generation that aspires modern living when she said-

> *"A deep social stigma is attached to pastoral work that demands a person to stay out in the wild in not so hygienic conditions. Nowadays people go by the looks, nobody is concerned about how a person otherwise is. This thinking is also resulting in inferiority complex among the young puhals who take up their father's work of herding only to leave it after a few years. Peer pressure and aspirations to live a modern life is deriving the youngsters from continuing pastoralism even if it economically profitable. Nobody would want to marry a puhal who stays out of home for the whole year and visits his family only for 15-20 days"* (Fieldwork data, 2019)

Although women in *Gaddi* pastoralism do not acquire a direct role, they remain an integral part of it. In multiple conversations, many of the *Gaddi* women registered their rising discomfort with pastoral occupation, which has for long remained a reason

for an uncertain life where at times they don't even get to see their partners, sons, or fathers for many months. Fearing the increasing climatic disasters, thefts, and untimely loss of lives, they are becoming antagonistic to the migratory lifestyle. Pushpa, who has seen the pastoral life from a close distance, contended, *"This is a business of blood and sweat as men often put their lives in danger to make a living. It involves risk of falling from the cliff, risk of getting washed away in the river, risk of being killed by the goons and risk of getting buried under the rubble. It is not only the soldiers' wives who need to have an iron heart, we also have to be brave when our male members are out with the herds."*

Increasing intensity of risks often fuelled by the uncertain climatic conditions is also gradually dissuading the women of the community to support pastoralism. They fear the lives of their partners and thus, resist them from choosing pastoral livelihood. In their opinion, "*it would not be a problem if we would earn a little less of what we can get by herding, but at least our men would be safe*". Such an outlook towards pastoral practices has led many people to diversify their livelihood choices even if their work barely makes the ends meet. Enrolling for government run MGNREGA scheme that provides an employment in the vicinity of the village and allows men to come back home by the end of the day has also gained traction. At the backend of it, remains the growing insecurity among the women, who are increasingly resisting the continuity of pastoralism. Their indirect agency in influencing the livelihood decision of the pastoralist men steer a larger change in pastoral socio-ecological system of the *Gaddis*.

## 6.7)    Discussion

Gendered perspective is not an end in itself but a critical tool to open, interrogate and enrich the analyses of pastoralism (Waller, 2000). This actor-level approach integrally helps in recognising the diversity of opinions, interactions, and unequal distribution of agency within the socio-cultural context (Fabinyi et al., 2014) as highlighted through the quotes discussed in the previous section. According to Poe et al. (2014), gender moderates the meaning, values and identity one attaches with the socio-ecological systems. It remains evident in the case of *Gaddis* that men and women perceive and participate in pastoralism differently based on their gendered agencies. As gendered interactions with social and ecological components remain heterogeneous and keep evolving over time and space, it further defines how a person or a community constitutes a way of life, or attributes value to objects, places, practices, and processes (Poe et al., 2014).

The instances from the *Gaddi* context highlight the similar evolving interactions between resources and actors based on the changing gender dynamics. *Gaddi* women, as the key actors in the pastoral system, are increasingly playing the role of a 'lynchpin for the family based pastoral production system' (Köhler-Rollefson, 2018). Through their situated agency, they are either facilitating or resisting the continuity of pastoral practices. Their gendered agency is critical in determining the transitions in their pastoral system.

Contrary to the previous studies that consider gender as a peripheral variable while analysing pastoral systems, we placed it at the centre stage to assess its relationship with the transitions in pastoral practices as experienced by people in their everyday lives. Out of the many aspects that gender relations determine in the pastoral

societies, mobility patterns, social capital and networks, economic roles, decision making and participation, marriage alliances, space, resource inheritance, legal instruments, and future aspirations, remain the major areas of concern that emerged out of the data. All these aspects need to be carefully understood by keeping the transhumance, dual enterprise of agro-pastoralism and distinct pastoral cultural identity of the *Gaddis* in the backdrop.

The data is suggestive of continual change in roles, relations and responsibilities of men and women in the *Gaddi* community as they move away from pastoral practices. At the same time, these alterations in their pastoral practices can be interpreted as a consequence of changing gender dynamics. Thus, it won't be wrong to equate the pastoral transitions with gendered transitions in case of *Gaddis* where they co-produce each other through continuous feedbacks. Changes in pastoralism are introducing the gender-based inequalities in *Gaddi* households that were earlier unknown to them while the new gender relations set forth the conditions that have variable influence over pastoral practices. For instance, with the declining agro-pastoral occupation and expanding horticulture activities, *Gaddi* women's agricultural roles and decision-making authority over resources are weakening. Livelihood diversification out of pastoralism has translated into immobility of *Gaddi* men and re-concentration of household authority in their hands. Such changes in terms of division of labour and gender practices indicate a shift in women's agency in socio-ecological terms as their relationship with the components of the local ecology like that of agricultural fields, alter. It further reduces their autonomy and constricts the gendered cultural spaces that they otherwise availed. Kaur's (2022) findings in context of agricultural regions in Punjab are comparable to the case of the *Gaddis*. According to her, absence or presence of men has profound impacts on the women's agency,

autonomy and decision-making abilities that indirectly link with their empowerment (Flintan, 2008). It is often the absence of men that helps women navigate the patriarchal norms and secure better socio-economic positions despite the discourse of marginalisation.

The changed gender dynamics with the declining pastoral practices as observed among the *Gaddis* is also comparable to the pastoral communities of *Raikas* and Rebaris where variable gendered mobilities and im-mobilities can be observed (Köhler-Rollefson, 2018; Maru, 2020). *Gaddi* men are becoming less mobile with the changes in their pastoral livelihood whereas the women are adjusting into the new mobility patterns that do not remain limited to the seasonal migration cycle of the pastoralists. For instance, moving out of their village houses to stay in the urban areas for their child's education reflect the new forms of mobilities that *Gaddans* are undertaking. Such changes imply the diminishing value of pastoral livelihoods and movement patterns along with highlighting the less visible agency of women in discontinuance of *Gaddi* pastoral practices.

Existing literature acknowledges that for a well-functioning pastoral system, men and women acquire complimentary roles and gender practices that also present them with unique risks and opportunities (IFAD, 2020). Similar is true for the traditional *Gaddi* agro-pastoralism where the culturally determined gender-based division of labour, mobility pattern, resource usage and decision-making authority is followed. It consequently assigns men and women different roles and agency required to manage and sustain the pastoral practices. In case of *Gaddis*, complementarity in the men and women's socio-economic roles was an integral part of pastoral system's functioning that is currently subjected to multiple forces of change. The data suggests

that the on-going changes in gender relations closely intersect with the pastoral practices of the *Gaddi* community and play an important role in redefining them.

Based on the cases of Sheela, Kavi and Ganga, relevance of women's direct participation in pastoral practices can be interpreted. Their adaptive and evolving mobility patterns along with the proprietorship of livestock exemplify the shifting socio-ecological interactions within the pastoral system. Such evidence hints at the lesser recognised ways in which women from the community participate in pastoral functioning and contribute to its continuity. Their direct contributions in terms of labour and indirect contributions through marriage alliance (where son-in-law acquires the position of *puhal*) and absentee ownership can be interpreted as positive feedbacks that enable the functioning of pastoral system.

At the same time, an array of negative feedbacks can be inferred from the arguments that highlighted a declining interest in marrying a *puhal* among the young *Gaddi* women, rising education levels among the youth and their changing aspirations for the modern living. Köhler-Rollefson (2018) also observed the similar shifts among the *Raikas* in Rajasthan where lack of will among the women to go on migration and their growing inclination towards settled urban livelihoods presents a tipping point for discontinuation of nomadic pastoralism. In the case of *Gaddis*, similar resistance from women towards the migratory lifestyle of *Gaddi* pastoralists is observed. Apart from the influence of modernization and sedentary lifestyles, their resistance is also a consequence of growing vulnerability in pastoral livelihoods as the frequency of uncertain natural disasters, climatic fluctuations and thefts increase.

The traditionally observed gender relations among the *Gaddis* were crucial for maintaining the dual enterprise of agro-pastoralism as well as symmetrical socio-

economic status for men and women. Their gendered division of labour demonstrated an efficient way of managing resources rather than producing the vulnerabilities as they are popularly understood (Bhasin, 1991; Eneyew & Mengistu, 2013; Onyima, 2019). Contrarily, the on-going changes in the gender relations as observed in the current study indicate the emergence of new hierarchical patterns that were previously absent among the community. These relations that are result of changing pastoral practices in turn, disrupt the synchronised functioning of the pastoral system and affect the socio-ecological interactions between actors and resources. Women's assertiveness and aspirations when analysed from the perspective of situated agency in socio-ecological system gives us a new frame of reference to study the gender and pastoral linkages. It attempts to retrieve the sociological importance of division of labour that intersects with how and what the actor in socio-ecological system remains capable of doing (Fabinyi et al., 2014). At the same time, it provides insights into the changing roles, responsibilities and associated agency of men and women that offers a new way to anticipate the pastoral futures.

## 6.8) Conclusion

In this chapter, shifting gender relations and their relevance for understanding the transitions in the *Gaddi* pastoralism were discussed. Gender dynamics that shape the agency of the actors also determine how they influence the pastoral practices. In the case of *Gaddis*, both men and women, despite their segregated responsibilities in pastoral system affect the process of transitions in it. It was found that women, who otherwise remain at the backseat and almost invisible in the *Gaddi* pastoralism, play an imperative role in steering the way pastoral practices are evolving and

transitioning. In the traditional agro-pastoral settings among the *Gaddis*, women held a vital socio-economic position because of their significant contribution towards subsistence agriculture and indirect role in functioning of pastoral practices. However, in recent times multiple shifts are observed in men's and women's participation in agro-pastoralism. Shifting agriculture practices, changing mobility patterns, increased educational awareness and aspirations for modernity has impacted the traditional gender relations among the *Gaddis*.

Change in gender relations essentially seems to be an outcome of declining pastoral practices among the *Gaddis* but it was also found to feed back into the pastoral system and determine the further conditions of change or continuity in it. With the declining interest of women in pastoralism and their withdrawal from traditionally defined gendered activities, pastoral practices among the *Gaddis* can be anticipated to collapse. For the continuance of agro-pastoralism amidst the increasing external challenges, women's support and involvement can be inferred as a major prerequisite as their productive and reproductive labour, networks mediated through marriage alliances, abilities to manage a household in absence of men and the affinity for traditional occupation play a critical role.

Gaddi women combing the sheep wool


Gaddi women takes charge of household chores and sedantry cattle


A young Gaddi women dropping off the children to school


A Gaddi women at a camping site


A famous painting by S.Sobha Singh- *The Gaddan Her Grace*


*An elderly lady accompanying the Gaddi herd*

*Figure 10 Gaddans and their everyday lives*

**Chapter 7**

**REINTERPRETING CONTINUITY:**

**Actors and Agency Amidst the Changing Pastoral Practices**

**7.1) Introduction**

Pastoral practices throughout the world are in a state of flux, and *Gaddi* pastoralism is no exception (as discussed in the previous chapters). In literature and in common parlance, these practices amidst the increasing challenges are often predicted to end with the current generation of practising pastoralists. Dominant narratives, continuing since the colonial times, label pastoralism as an anachronistic livelihood that doesn't align well with the modern living. Such accounts have remained persistent over decades, but their undesirable consequences are distinctly being felt now more than ever, majorly in terms of labour shortages. Internalization of such narratives by the communities and especially the educated youth, who no longer find pastoralism a desirable occupation raises several questions on the future of these practices.

Labour, in addition to the land and resources, remains cardinal for the pastoral practices (Nori, 2019b). With a rise in education and changes in aspirations that follows it, labour shortage within the pastoral household seems inevitable (Köhler-Rollefson, 2018; Namgay et al., 2014; A. Sharma et al., 2022). Such a change is not only leaving the current pastoral practices in a lurch but raises important questions on its continuance and future. To probe this further, in this chapter we discuss the *Gaddi* pastoral practices and the evolving labour dynamics from an actor and institutional perspective within the SES framework.

Pastoralism in the case of *Gaddis*, not only serves as a livelihood option but has traditionally governed their relationships with the environment and local geography (Wagner, 2013), has shaped a larger political discourse that emerged in chorus with their classification as scheduled tribe (Johnson, 2020) and has also remained a basis for evoking communal solidarity as well as debating

multiculturalism within the community (Johnson, 2018; Kapila, 2008). Considering such discursive cultural significance of pastoralism despite the decline in practice, in this chapter we focus on the transitioning nature of labour dynamics within the *Gaddi* pastoralism. Apart from the other components as highlighted in the previous chapters, transitions in labour dynamics also emerged as a critical aspect for determining the structure and functioning of *Gaddi* pastoral socio-ecological system. In the current chapter, we examine these dynamics of how the *Gaddi* pastoralists manage, regulate, and renew the labour through the means of a well-established traditional institution of *puhal* that facilitates hiring of herders. While analysing these dynamics from the actor's and institutional perspective in the SES framework, we stress on the increasing relevance of individual as well as collective agency of hired herders within the pastoral system. Their engagement and interaction with the other components of the pastoral system (including resources, governance, and cultural dimensions) remain significant to understand the on-going transitions and transformations in it. Thus, the major questions that we attempt to address in this chapter are –

- Who are the actors that remain responsible for the functioning of *Gaddi* pastoral system in its current form?
- If and how there are new actors emerging within this dynamic pastoral system?
- What can be interpreted out of these actor's agency regarding the system level transitions and changes?

As Andrachuk & Armitage (2015) have rightly pointed out, that interpreting the "agency of various actors is an important entry point for engaging with the debates on political and normative aspects of SES change and deliberative transformations". Long term ignorance of actors and their agency within the dominant SES literature has also been lately critiqued by a few other social scientists like Côte & Nightingale

(2011), Fabinyi et al., (2014), Poe et al. (2014), and Stojanovic et al. (2016). In their collective opinion, scope of 'social' in the socio-ecological systems should be widened to incorporate the questions of power, knowledge, and culture that remain significant in determining the role of actors as well as their interactions with other components in any SES. Actors interact with and experience their environments in diverse ways that is often mediated through the cultural dimensions of the system (Poe et al., 2014). Hence, comprehending the hired herders as key actors within the pastoral system, we demonstrate the relevance of their agency in transitioning human-nature relationships for the *Gaddi* community. Such particularly manifests in terms of objects, places, relationships, practices, and processes involved in pastoralism that deliver meanings, values, and identity (Poe et al., 2014) to both the individuals as well as collectives, which in this case are the *puhals* and the overall *Gaddi* community.

The pastoral system as that of *Gaddis*, remains a heterogenous mix of actors where livelihood diversification, caste, class, age, and gender have historically played an important role in shaping the way pastoralism is carried out (Johnson, 2018; Kapila, 2003). These factors also influence the labour dynamics within the pastoral practices affecting its continuity and sustenance, especially in the current turbulent times when the future of pastoralism remains ambiguous. Following the themes that emerged from ethnographic enquiry, here we elaborately discuss the role of *puhals* as key actors and the process of hiring as an institutional practice within the *Gaddi* pastoral system. Out of the various contextual meanings, an applied translation of the term as hired herders is used to understand their role in the larger SES. The various perspectives that come out from the data analysis remain useful in understanding the continuity and change in pastoral livelihoods through the means of exchange of labour. At the end, we conclude that interpreting these transforming practices of

hiring *puhals* remain extremely relevant amidst the on-going livelihood shifts and declining interest among the *Gaddi* youth for their traditional occupation. The findings substantiate the significance of hired herders not only as important actors in continuance of pastoralism but also as an imperative institutional practice that contributes to the maintenance and restoration of the cultural dimensions of the pastoral SES. At the same time, the deliberation in this chapter opens up a scholarly space for discussions on hired herding as an innovative pastoral practice in several pastoral contexts in India and elsewhere.

## 7.2) Labour in Pastoralism

Labour in the pastoral production systems has not grabbed the same academic attention that it receives in agricultural systems (Scoones, 2020; M. D. Turner, 1999). But it remains a 'critical limiting factor' (M. D. Turner, 1999, p. 292) in regulating and governing the pastoral practices to a great extent. Most of the recently available studies discussing pastoral labour remain confined to the African context where practices of absentee herding, entrustments and pastoral group ranches are commonly observed (Bassett, 1994; Fernandez-Gimenez, 1999; Little, 1985; Moritz et al., 2015; Murphy, 2015; Nori, 2019b; Sikana & Kerven, 1991; M. D. Turner, 1999; Unusa, 2012; Yurco, 2017). Apart from that, a few other studies sporadically document some aspects of labour for nomadic pastoral groups in the middle east (Beck, 1980; Bradburd, 1980), transhumant pastoralists in the European countries (Constantin, 2005; Sendyka & Makovicky, 2018) and migratory pastoral populations in Asia (Agrawal, 1992; Gentle & Thwaites, 2016; Namgay et al., 2014, 2021; Rao, 1995; R. Singh et al., 2020; Tiwari et al., 2020). This list of literature substantially represents

the contextual and region-specific processes of labour engagement, allocation, and management within these intensive migratory pastoral systems across the world.

Pastoral systems throughout the world are observing an expansion of such practices where the herd owners are not necessarily the herders themselves (Nori, 2019b). Available literature reflects that, in most pastoral communities, labour was traditionally sourced from within the household or from the extended kin networks (Dyson-Hudson, 1980; Köhler-Rollefson, 2018; Little, 1985). However, with the increasing changes in the household and community organisations, political regimes, resource managements and market forces, labour dynamics in pastoral settings is undergoing tremendous shifts. The existing trend points towards the "commoditisation" and "proletarianization" of pastoral labour (Constantin, 2005; Nori, 2019b; Scoones, 2020; Unusa, 2012) and also reflects the evolution of pastoral practices under the changing socio-economic conditions of the communities involved.

Outmigration and livelihood diversification within the traditional pastoral households have also affected the aspirations of the community members, thereby generating a dearth in labour required for annual herding (Aryal et al., 2014; Köhler-Rollefson, 2018; Namgay et al., 2021; Nori, 2019c; Tiwari et al., 2020). Such a situation has led to different consequences for the pastoral communities across the globe that can be broadly consolidated into the two following outcomes- one, where pastoralists are gradually pushed to abandon the livestock rearing occupation in the absence/lack of helping hands and the other, where they adapt and strategize through various means to keep the pastoral practices alive. Hiring herders is an example of such a strategy (Bassett, 1994) that enables the pastoralists to cope with the emerging labour shortages. It is commonly perceived that labour exchange in pastoral arrangements happens between the capital/resource-intense households and labour-

intense households (Beck, 1980; Hauck & Rubenstein, 2017; Rao, 1995). Therefore, the fluctuating dynamics between capital and labour are generally perceived to create the conditions for demand and supply of hired herders. Schareika et al. (2021) calls this approach as a 'capital logic' where the ultimate aim remains to increase the profit. This formalist economic explanation of pastoral labour, however, fails to capture the traditional arrangements that essentially operate on contextual socio-ecological reasonings. It resonates more with the 'cattle logic' (Schareika et al., 2021) which emphasizes the continuity of livestock husbandry mainly in line with the socio-cultural rationale.

Oscillating between capital and cattle logic, we argue in this chapter that the pastoral livelihoods depend as much on the dynamic socio-ecological interactions and consequent cultural dimensions as they rely on the economic motives and ecological reserves. This makes them resilient and dynamic in nature regardless of other system level transitions discussed previously. When analysed from a socio-ecological perspective, institutional practices like that of hiring herders seem to evolve with the changing interplay between the social and ecological components of pastoral system in addition to its known economic explanation. Keeping that in mind, this chapter elaborates the labour dynamics in *Gaddi* pastoralism as it unfolded during the ethnographic fieldwork to qualitatively assess the institution of hiring herders rather than quantitatively estimating the changing trend in labour pattern.

*Gaddi* agro-pastoral practices remain temporally and spatially regulated with the change of seasons as they periodically transcend from the higher alpine pastures of Lahaul to the lower foothills of the Dhauladhar range and the adjacent agricultural fields across the region in Himachal Pradesh and in the adjoining state of Punjab. The constant migration across the elevations, a large number of small stocks to manage,

and a need to manually carry the camping luggage make *Gaddi* pastoralism physically a very intensive occupation. Along with that, it involves prolonged isolation periods away from home and in the wild that demands high levels of mental and emotional stability. The demanding nature of this job, apart from the external pressures, including changing weather conditions, negotiations with the settled communities and traders, medical emergencies and natural calamities make it a tough livelihood choice. In addition, the devaluation of migratory lifestyle in the face of prevailing development discourse of modernity and urban lifestyle also makes it an antiquated livelihood option for the educated youth. The long standing narratives of backwardness propagated by the state-led interventions and gradually internalized by the community members play a significant role in shaping such beliefs (John & Badoni, 2013). Following this, a shift in the aspirations of the youth of the community, who are increasingly shunning the migratory lifestyle as they perceive it to be devoid of a sense of stability, personal hygiene, social dignity, and public status, is creating a huge void in terms of labour. Similar instances have been recorded for other transhumant pastoral communities in the adjacent Himalayan regions where labour shortages because of education and outmigration are resulting in a decline in pastoral practices  (Aryal et al., 2014; Banjade & Paudel, 2008; Namgay et al., 2013, 2014, 2021; Tiwari et al., 2020). To cope up with this deficit, *Gaddi* pastoralism has seen an upsurge in the recruitment of hired help, which in the local parlance are known as *'puhals*.'

*Puhal*[15]*,* as a category in vernacular translation, carries multiple interpretations that need to be contextually defined. In common usage, it generally means a person who herds, but in specific understanding it is a term used to categorise the hired

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[15] *Puhal* as a term is interchangeable used to refer to the hired herders as well as the institutional practice of hiring them.

herder that a *Gaddi* pastoralist employs. Hiring a *Puhal* in the *Gaddi* pastoral system has been a common traditional practice for ages. However, its connotation and praxis have gradually shifted and evolved over a period of time as interpreted from the comparison in literature and field findings. The available literature that scantily documents the *puhal* institution gives us a reference frame to elaborate on these practices and understand it by using a lens of continuity and change. This theoretical idea where oscillation between continuity and change is used to comprehend the persistence, adaptation and resilience of the system (Jandreau & Berkes, 2016), provides us a critical analytical lens that helps interpret the *puhal* practices in *Gaddi* pastoralism. It further helps to develop an understanding of how social institutions transform spatiotemporally by adapting to the emerging needs while enabling the system's continuity. In this chapter, we thus argue that *puhals* present an alternative to the future of *Gaddi* pastoralism that currently remains embedded in the state of uncertainty.

By collating the evidence from literature on how the academicians have by far interpreted and translated the vernacular term- '*puhal*' into different dimensions, we unpack the questions on who the *puhals* are in *Gaddi* pastoralism, and how, why and by whom are they recruited. These questions largely help in outlining the significance of *puhals* for the *Gaddi* pastoral socio-ecological system by situating them as a significant set of actors that not only influence the working of it but also set the conditions for change.

The existing academic discourse on Indian pastoralism, at the moment, remains swamped with the arguments of uncertainty about the future of these practices. There are not enough studies that document the instances of hired herding and engage in an in-depth discussion on the hiring processes, relevance, and its future scope. Such lack

of focus can be the attributed to the widespread assumptions on non-engagement of herders outside the social sphere in traditional Indian pastoral setups. However, a more plausible explanation is that pastoralism in India has always remained an ignored domain of inquiry (Agrawal & Saberwal, 2004; V. P. Sharma et al., 2003). Within the limited available literature, only a handful of studies (Agrawal, 1992; Köhler-Rollefson, 2018; Rao, 1995; R. Singh et al., 2020) emphasize on practices of hired herding in India. These studies delineate the institutions of hiring herders in traditional setups often recognised by the vernacular terminologies like '*Gwala*' among the *Raikas* (Agrawal, 1992) or '*Ajri*' among the Bakarwals (Rao, 1995). Saberwal (2003) in his study on the shepherds of Himachal Pradesh also hints at the existence of such practices but do not connect it with the transitions or the future of pastoralism. To end that silent spell, a recent study by Singh et al. (2020), examines the hiring of immigrant labours for the pastoral work in Spiti valley and raises concerns regarding the loss of traditional knowledge as well as the local grazing resources. Although differing in their objectives, these studies collectively provide a comparative base for the current work on *puhals* in the *Gaddi* pastoralism.

Based on the analysis, we infer that the practices as that of hiring *puhals* essentially provide an alternative for the survival of *Gaddi* pastoralism by generating new passages for knowledge transmission, accumulation, social mobility, and cultural continuity. We do not intend to ignore the significant changes that hired herding may bring in terms of ecological impact on grazing resources (as highlighted in few studies, including Namgay et al., 2013; Singh et al., 2020; Turner, 1999), but the primary focus is to understand it as a socio-cultural practice catering to the continuity of pastoral lifestyle and occupation. In the following sections, we present a detailed description of *puhals* in *Gaddi* pastoralism, followed by a thorough discussion and

conclusion that sheds light on the significance of such practices not only for this community but also for other pastoral contexts.

### 7.3) *Puhals-* Hired Herding in *Gaddi* pastoralism

### 7.3.1) Who is a *Puhal* and how are they hired?

A *puhal* within *Gaddi* pastoralism can mean different things in different contexts. In the available literature, *puhals* are interpreted as herding assistants (Kapila, 2003), servants (Phillimore, 1982) or hired shepherds (Axelby, 2007; Bhasin, 2013). However, in common parlance, *puhal* invariably refers to anyone who herds. Etymologically, it comes from the Hindi word 'paal' or 'paalna', which means 'to care' or 'look after'. Therefore, in literal terms, *puhal* means anybody who takes care of or manages the livestock. In praxis, *puhal* is invariably used to address a herd owner, a hired herder, an absentee herder, or even an ex-herder at times. However, the term remains gender restrictive following the general criteria for division of labour in the *Gaddi* agro-pastoralism. It is only used for the men who render their services for the pastoral activities. Moreover, the term of reference also varies according to the age and wealth status of the herd owner. A person who owns a large herd of livestock and who is relatively older in age is often addressed as a '*bada puhal*' (literally meaning a big-herder) and anybody with a smaller flock with 10-50 livestock or who is relatively younger in age is referred as a '*chota puhal*' (literally meaning a small-herder). These categories within the *Gaddi* social milieu remain flexible and inclusive. That is, the same terms can also be used in relation to the ownership of the of grazing permits or even to denote the years of herding experience a person has in addition to their herd size and age. It thus, indicates a contextual meaning within the *Gaddi* lexicon.

All these intersectional differences that the term *puhal* represents in line with age, gender, social status, employment, and experience remain useful to understand the evolving labour dynamics among the *Gaddis*. Here, we operationalise the term to denote both the hired herder as well as the institutional practice of hiring labour for pastoral use. Oftentimes the *Gaddi* herd owners referred as *'bad-dhaniya'*[16] hire *puhals* for managing their day-to-day pastoral activities that continue to remain labour-intensive. Traditionally, *puhals* are hired from within the community or from the other local communities residing in the region that have some pastoral background. Any *Gaddi* pastoralist who needs a helping hand for managing their herd spreads a word within their expansive social network to look out for the availability of men. This social network comprises kin and agnates, fellow herders from the same community in the same village, or even the herders from other villages who frequent the same migration routes and pastures. Finding a *puhal* is facilitated through acquaintances and social links generated during the pastoral journeys across the ecological terrains and social landscapes. These informal networks that spread across the pastoral and non-pastoral communities are traditionally maintained over generations and across the geographical distances through mutual reciprocities of different kinds, including exchanging goods, services, knowledge, and information (as explained in chapter 5). Technology like mobile phones and the internet is gradually becoming a common way of coordinating these networks that also makes the process of spreading and seeking information easier.

One of the young *Gaddi* interlocutors from a pastoral household informed about the process of hiring a *puhal* through the following analogy-

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[16] Among *Gaddis*, livestock is perceived as '*dhan*', which literally means wealth and anybody with substantial number of livestock that determines his social status and rank within the community is referred as '*Bad-dhaniya*'.

*"Pastoralist's networks are just like social media platforms where one puts out an advertisement asking for a puhal. People then can make suggestions if they have any reference. Puhal can be a relative, a friend of a friend or any other acquaintance who is actively looking for employment.... As pastoralism is not an activity that can be carried out in isolation, it requires formations of groups, pooling of livestock, sharing of labour and resources, and collectively looking out for each other whenever required. Puhal requirement is one such instance where you can count on your networks and informal relationships to fulfil the void that shortage of labour within the households generates." (Field Data, 2019)*

Traditionally, *puhals* are the community men who seek employment by exchanging their labour within the pastoral arrangements. The label '*puhal*', although representing a lower social status and economic dependence, was not traditionally considered patronising (Phillimore, 1982). However, with the gradual decline in pastoral activities within the community, becoming a *puhal* is no longer favoured. In general, *puhals* are appointed out of need, but there are instances where their recruitment can result from other social interactions, including familial obligations as well as marriage alliances. Kapila (2003) and Phillimore (1982) in their work on *Gaddis*, have documented such traditional practices where a bridegroom was obliged to offer his services as a *puhal* for his father-in-law. This used to be a common practice in the households with no male heir, which remains a fundamental need for herd inheritance. In such instances, son-in-law would exchange his labour as bride service and, in turn, also inherit the livestock wealth of his father-in-law. During the fieldwork, we didn't come across many such instances but only one. Riddhi Ram, who was in his 60's and

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owned a larger herd of almost 400 livestock, had pooled with his son-in-law to manage his herd. In his opinion, continuing to migrate would get difficult as he ages further and therefore, would need more helping hands. He has a daughter and a young son, who also accompany him mainly during the winter migration to the lower plains. As his son is quite young (15 years), he cannot be vested with the responsibility of the herd at this age. Under these circumstances he married off his daughter to a *puhal* who now looks after his herd with him.

> *Apart from such situations, puhals in the Gaddi community have also been portrayed as favoured match for the young Gaddi women because of their physical endurance and ability to fetch milk, wool and other necessities for the household in many folk songs and regional legends (V. Verma, 1996). However, with the evolving nature of pastoral practices among the Gaddis, puhals no longer remain the primary choice for marriage alliances. As one of the elderly ex-pastoralists from the Chobia village told me, "...in currents times, nobody would like their daughter to marry a puhal, who stays out in the wild and hardly comes home. Earlier the things puhal provided for the household were valued and so was the whole business of pastoralism. Now the meaning of wealth and status has changed." (Fieldwork Data, 2019)*

### 7.3.2) Need for hiring *puhals* and institutional dynamics

*Gaddi* pastoralism has always remained labour-intensive as they practice traditional vertical transhumant migration that involves crossing different altitudes, agricultural sites, and rugged terrains. Moving with the flocks of sheep and goat across the mountains has always remained a group activity for *Gaddis*, requiring many helping hands for various day to day activities. Thus, employing *puhals* has remained a traditional activity to supplement one's camp with additional labour. However, the need to hire a *puhal* has increased manifold with the declining desirability to carry out pastoralism among the educated youth of the community who seek city jobs after completion of their higher education. Apart from that, specific government-run programmes including MGNREGA[17], also affect the availability of local pastoral labour. Many *Gaddi* men and youth from the pastoral households now prefer working as a daily wager in their village's vicinity from where they can go back home every day and avoid the difficulties of migratory pastoral life.

*"Instead of working as a migratory pastoralist if we are working as a wage labour in the village at least we get to sleep under our roof, eat proper meals and meet our family every day."*- said Diwan, an ex-*Gaddi* pastoralist who left the profession almost 5 years back and is currently working as a daily wage labourer in the public welfare department's road construction project under MGNREGA. The decline in the availability of local labour for herding activities is also leading to an inflow of migrant labour from outside the district and the state. Cases were reported

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[17] MGNREGA stands for Mahatma Gandhi National Rural Employment Guarantee Act, 2005, under which wage employment is generated through the village level-Panchayati Raj institutions in India. It guarantees to provide 100 days of annual employment to the adult members of the rural households in and around the village.

where the *puhals* were from the nearby state of Uttarakhand or were even as far as from Bihar (Kapila, 2003).

*Puhals* are in constant demand to manage the existing flocks despite an overall decline in pastoral practices in the region. Employing a *puhal* depends on many factors, including the flock's size, seasonal variations in availability of resources, livelihood diversification, shortage of labour within the household and a combination of other exigencies. These factors remain applicable for both the *Gaddi* herd owner to hire a *puhal* and for the *puhal* to seek employment. In many cases, *puhals* are employed by the elite *Gaddi* pastoralists as assistants, servants, or additional helping hands to manage their large flocks. But when the *puhals* become trustworthy after serving for longer durations, it is not uncommon for the *Gaddi* pastoralists to gradually convert into the absentee herd owners and let the *puhals* take a charge. As one the *Gaddi* pastoralists from the Sachuin village articulated-

> *"I have got a large flock and my health doesn't support the migratory shepherding practices anymore. For the upkeep of my herd, I have hired two puhals….one of my employed puhal has been with me for as long as 14 years. I can trust him with my livestock as he takes good care of them" (Fieldwork Data, 2019).*

It is to be noted that within the *Gaddi* pastoral practices, hired herding is not restricted to the elites and large herd owners alone. In my field observations, we encountered many small herd owners with limited livestock (not more than 100-150 headcount) who regularly employ *puhals* depending upon the contingent needs and their capacity to bear additional labour costs. These employments are seasonally renewed when the

herd owner needs extra labour to manage his flock's migration or to take out time to diversify his economic pursuits.

> *"Every winter, when we have to go down to the plains in Kangra and adjoining districts, we need extra men to look after the herd. At that time, we employ puhals, who have small herds of their own or are just looking for employment as labour…. we either pool in two-three small herds together for our convenience or hire a puhal with no livestock of his own on a wage basis. It has become a need to hire a puhal during these days to save ourselves from paying hefty amounts of fine to the settled agriculturalists for any damage that our livestock might cause to their crops.  We also need to be very careful in protecting the plantation that the forest department has done here and there near the roads. Apart from that, we have to protect our livestock from eating poisonous 'buti' (grass)[18] that remains widespread in that area. During winter migrations, livestock rearing requires almost double the labour as it does in summer months." (From an interview with a son of a practising pastoralist, Field data 2019).*

Hiring a *puhal* is gradually emerging as a necessity to continue transhumant pastoralism amidst the spiralling external challenges such as shifts in agrarian practices, afforestation drives carried out by the forest department, or the spread of poisonous weeds like *lanatana*. Even the non-pastoral settled *Gaddi* population

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[18] *Lantana camerata*- an invasive unpalatable shrub that has seen an increasing growth in the winter pastures of the Gaddi pastoralists in Kangra and nearby areas. (For more details refer Ramprasad et al., 2020)

located in the region, is transitioning and diversifying to cash crop cultivation and horticulture, which impacts the pastoral practices by breaking the local synergies (explained earlier in chapter 4) and results in an increased labour demand. This disrupted agro-pastoral dependency also influences the labour dynamics within the *Gaddi* pastoralism.

With increasing livelihood diversification emerges a need for hiring a *puhal* in case one wishes to keep the herd intact. In such a scenario, often the livestock are entrusted with other practicing pastoralists, who then serve the role of *puhals* for the herd owner irrespective of their own herd size. All the livestock are pooled together, resources are shared and *puhals* are paid for the upkeep of the owner's share. In such cases, livestock rearing remains a secondary occupation for the herd owners through which they source the additional income as well as other pastoral by-products including wool and rams for sacrificial purposes that continue to hold cultural and ritual significance. However, in these cases the relationship between the livestock owner and the *puhal* is not of subservience but more of obligation. The rationality and profitability of such arrangements remain questionable and can be further probed as a future scope of this study.

Additionally, one more arrangement is exemplified by the instances where *chota puhal* (smaller herders) collaborate with the *bada puhal* (bigger herders) and acquire the role of *puhals* for the latter. In such cases, a *chota puhal* with a small herd of his own joins the herd of a *bada puhal* by trading his labour. Reasonings for such an exchange range from the non-viability of small herds to the unavailability of grazing permits. Axelby (2016) discusses a similar instance where he observes small herders pooling their livestock with a bigger herder. Through these means, smaller herders negotiate access to grazing resources under the legal protection of the bigger

herder's formal grazing permit. Smaller herds in the transhumant system like that of *Gaddis* are expensive to manage and herding alone is challenging both in terms of labour and unforeseen conditions of migration. Therefore, small herders, many a time, join the bigger herders where they pool their animals together and get paid in exchange for their labour. Such recruitments of *puhals* are possible when the bigger herd owner has a scope for accommodating the additional livestock on his grazing permit that specifies a particular headcount. It can be understood through a situation that one of the interlocutors explained as-

> *"Dharam Chand has a permit that allows him to graze almost 500 livestock. But currently he has a herd size of 250-300, that allows him to share his grazing permit with small herders. Chote puhal (Small herders) with 50 to 100 livestock of their own who do not hold any permit can join his herd and pool their livestock together. This would give them a legal access to the dhars (grazing grounds) under his permit and Dharam Chand, some additional labour in the form of puhals." (Fieldwork data, 2019)*

Apart from the above-described situations in which hiring of *puhals* remains definable, there is a possibility of many other complex arrangements within the *Gaddi* pastoralism where the recruitment of *puhals* occur depending on the evolving needs and situations.

> *"We need to look for puhals when we do not have enough helping hands at home. After my father stopped migrating and my brother joined the army services, I was the only one left to look after our herd*

*and I couldn't do it alone. I had to hire puhals for maintaining our herd and getting some time out to look after our agricultural fields in the village. During summers, puhals take care of the livestock as they remain in the nearby pastures, and I work on my fields here in the village. I visit them regularly, but it doesn't require my constant presence. Whereas, during winters, I accompany the herd and puhals downhill, as there remain high chances of deceit and theft." (Interview data from a practicing Gaddi pastoralist from Kugti Village in Bharmour, 2019).*

### 7.3.3)  Recruitment and Negotiations

Hiring a *puhal* in *Gaddi* pastoralism is performed majorly through informal oral contracts. There are no legal procedures or written codes of conduct involved as everything is decided based on trust and word of mouth. In usual circumstances, a *puhal* is sought from within the community members, or from friends, relatives and acquaintances introduced through the pastoralist's social network. The faith vested in these informal linkages provides confidence to hire a stranger who is gradually tested for herd management qualities. He needs to be physically fit and mentally strong to carry this difficult task that involves walking across the altitudes and sustaining a prolonged isolation period. There are no fixed rules to judge a *puhal* during recruitment, but his abilities are tested over time.

A *puhal* can enter *Gaddi* pastoralism with no livestock and almost no knowledge about herding, or he might have a small herd of his own. Depending upon

the levels of expertise, pastoral background and number of livestock owned, terms of employment and remunerations for *puhals* are determined. A *puhal* as an apprentice with no herd of his own undergoes different negotiations with his employer than that of a smaller herder joining a bigger herder. Remunerations are also subjected to what a *puhal* aims at achieving by exchanging his labour.

> *"Puhals are paid both in cash and livestock. They are given some amount like 5-10 thousand rupees and one sheep per month. Goats are not given generally, but he might ask for one or two of them in a year. Following this, by the end of the year, a puhal will have almost 12 sheep of his own. He can keep the sheep within the flock that he herds for his employer or can sell them off to make money. If he continues over the years, he can accumulate more livestock and build his own flock. Or, if there is an urgent need, he can exchange it for cash." (An ex-pastoralist from Bharmour, Interview data, 2019)*

The general terms of employment are discussed before a *puhal* joins the herd, but it remains open for negotiations over time. Word of mouth in such contracts carries immense value, and the oral agreements are held solemn.

> *"It is a time-bound contract with a puhal. Before he is employed, terms and conditions are made clear to him. It is known to him that he will have to stick to the herd owner for a stipulated time period. Generally, it is almost two years in a row, and people in our region are aware about these conditions." (An old Gaddi man who worked*

*as a puhal for a bigger herder from his village long back in his*

*younger days, Interview data, 2019)*

Hired *puhals* are entrusted with the herds and their daily maintenance needs but are not handed over the decision-making authority, including selling and buying of animals, and changing the migration routes. They enjoy limited autonomy in day-to-day activities as the *Gaddi* pastoralists use various surveillance mechanisms to keep a check on their activities. In most cases, *Gaddi* pastoralists accompany their *puhals* during migrations or at times, they send their kin to keep a check. It remains crucial for the herd owner to be present during critical phases of grazing cycle to avoid conflicts, thefts and to maintain smooth transactions (Kapila, 2003). In a focus group discussion on the pastoral activities, a middle-aged *Gaddi* man from the Kugti village in Bharmour informed us-

*"Usually, in the initial years of recruitment puhals are not left alone*

*with the herd, except for the time when they are at the summer*

*pastures in Lahaul. Lahaul, being on a high altitude remains a far-*

*flung mountainous area with minimal reportage on crime and thefts.*

*However, the thefts of livestock and attack on the herders are a*

*regular nuisance during winter migration in the lower plain areas of*

*Kangra and nearby districts. There have been instances in the past*

*where puhals sold off the livestock to the traders and reported it as*

*theft to their owners." (Field Data, 2019).*

Apart from that, if the *puhal* is new to pastoralism, he can't be expected to take charge of all the activities that remain crucial for maintaining a herd. Anyhow, migratory

pastoralism is not an individual's enterprise. Among *Gaddis* also, traditionally the herds were jointly owned, and the men of the *'shareek'* (an extended family) used to take turns to look after them. With the disintegration of joint families and the emergence of nuclear households, the inadequacy of pastoral labour has led to a decline of pastoralism. In some households, where it remains a common livelihood practice, sharing of labour within the *shareek* still continues. In a candid conversation with a young *Gaddi* pastoralist from Bharmour who informed about his pastoral journey, I came to know more about the work relations between the owner and the hired herder. In his words-

> *"I just dropped off my herd at Lahaul and recently came down to my village [at Bahrmour] to stay with my family. Till I stay here, my cousin and two puhals will take care of our herds along with other shareek members who have gone with herds of their own. Then after some days I will go back, and my cousin will come home. I might relieve my puhals also, so that they can visit their family for some days before our downhill journey starts." (Field Data, 2019).*

Herd owners generally accompany their *puhals* until they become well competent to handle a flock independently. Even the absentee herd owners themselves pay a visit or request their pastoral kin to keep a check on their *puhals*, especially during winter migrations at the foothills or plainer areas. They believe that with the expanding road networks and many exit points, the chances of thefts in these areas increase manifold, and *puhals* may get involved with the miscreants. Their presence during winter migration also makes the negotiations with the farming communities situated on the migratory routes slightly easier. These communities sharing the reciprocal

relationships with the pastoral families since generations might not be acquainted with their employed *puhals*. Therefore, it requires the owner or a family member to intervene at regular intervals. Their supervision crucially governs the activities of the *puhals* and is also important for their training.

In the case of migratory pastoralism, herding is round the clock job. Herds cannot be left alone and require continuous monitoring. During the summer migration cycle, *Gaddi* pastoralists drop off their herds with the *puhals* at the summer pastures and return to the villages to look after their agricultural fields/ orchards and be with their families. Sometimes *puhals* are also relieved from their duties and are a given a short break. According to many interlocutors, once they reach the upper alpine pastures in Kugti or Lahaul, their workload decreases relatively, and they have a lot of free time in hand. Because of the extensive pastures in livestock there can roam freely, unlike in the winter months in the plain areas. Depending upon the need, even older people who cannot migrate with herds on foot, travel to Lahaul on buses to take charge of the herds there. This arrangement also helps the younger members and the *puhals* to take a time out and pursue other agriculture related duties. Therefore, *puhal* recruitment, their workload and surveillance remain subjected to the on-going negotiations that depend on the changes in locations, seasons, nature of resources among the other factors.

### 7.3.4) Transaction Costs and Remunerations

*Puhals* in the *Gaddi* pastoralism are hired under various conditions to secure pastoral labour for both economic and cultural reasons. Apart from other implications, hiring *puhal* results in an increase in the transaction cost involved in livestock rearing for the herd owner. With the employment of external labour, a *Gaddi* pastoralist must pay the

wages and look after the daily needs of the *puhals* while also making his own living out of herding activities. A herd owner is responsible for *puhal*'s food, clothing, and other necessary items that he needs to carry along during migration cycles apart from the pre-negotiated monthly wages and number of livestock he would receive in exchange for his annual labour. Hiring a *puhal* does not always translate into capital gains or even a growth in the herd size for the herd owner. But it majorly supplements the labour that remains crucial for managing the existing herd and diversifying into other occupational activities.

An old *Gaddi* man from the Sachuin village in Bharmour, with years of experience in pastoralism has stopped migrating with the herds because of his old age and has hired *puhals* to look after his livestock. In such a practice, he has become an absentee herder who now exercises his control on the herd as well as on the far-flung grazing resources through the agency of his *puhals*. These *puhals* migrate yearlong with his herd of almost 200 animals and are paid both in cash and kind annually. His nephew (a distant kin), who has a herd of his own, keeps a check on his *puhals* every now and then. He reports-

> *"I have to pay the puhal both in cash and livestock. The cash payment goes up to some 1-1.5 lakh per year, depending upon the settled agreement beforehand. Along with that, I have to arrange for shoes, food, clothes and blankets for my puhals that they need during migration. All this adds a lot to my expenditure, but it remains unavoidable to maintain a herd. In order to keep my livestock in good health, I need to make sure that my puhals are doing fine." (Field Interview, 2019).*

Hiring a *puhal* limits the profits that a *Gaddi* herd owner makes from the pastoral activities. According to Beck (1980), hiring herders is profitable when the owner has multiple herds and profit margins are higher. Hiring results in cutting down a good amount in the form of wages paid to the hired herders from the herd owner's net household income (Beck, 1980). In the case of *Gaddis*, it can be observed that *puhals* are not solely recruited for profitability purposes but have become a need of the hour to sustain existing pastoral practices. Herd owner's socio-economic status does play a role in hiring a *puhal,* but it doesn't remain the sole criteria as illustrated for some African contexts (Beck, 1980).

### 7.3.5) Resource access, rights & permits

*"Gaddi pastoralists were generously bestowed with the grazing permits long back after independence, unlike the pastoralists in other states. These permits have all the required information that is needed to keep a check on the pastoral activities. It has the owner's name, number of livestock he has, names of his legal heirs, rights of usages at different locations acknowledged in local terms. For example, the alpine grazing grounds are identified as Dhars with specific indigenous names and so are the forest areas in the plains. These areas as well as the permits have been continuing since generations over decades. Permits must be renewed at an interval of 2 years from the forest department's office, where the pastoralists have to pay a stipulated fee depending on the head count of his herd. The fee is minimal and has not even been revised since a long time." (From an*

The above excerpt highlights how the pastoral resources are controlled by the state using legal tools like that of grazing permits that allows only for rights of access and not ownership. However, in common parlance the lines between the ownership and usufruct are blurry. The nature of these permits that only sanctions the customary usage i.e., for the households that have been holding the permit since they were first allotted, makes the matter ever more complex.

A choice to become a *puhal* does not necessarily come from the economically disadvantageous position but is also grounded in a lack of legal access to resources. *Gaddis* who have been traditionally continuing the agro-pastoralism, enjoy the customary rights to the seasonal grazing grounds (referred as *dhars* in case of alpine pastures and *jungles* in case of forest pastures in the plain areas) that are recorded in the forest settlement reports (explained in details by Saberwal, 1996a, 1996b). Based on these reports and archival records (Lyall, 1874), the state Forest Department (FD) issues them a renewable legal permit that secures their access to the grazing resources and migratory routes while also capping the number of livestock they can rear in their migratory herds. These permits remain the sole legal documents that acknowledge the *Gaddi* pastoral practices in the state along with the archaic report on the grazing policy in Himachal Pradesh (Grazing Advisory Committee, 1972).

All the *Gaddi* households do not possess this document as many of them in the past, either practised pastoralism by pooling in their herds under the elite pastoralists or didn't even practice it at all during the time when the forest settlement in the region took place. According to the interviews with the forest officials, grazing permits have remained unchanged for several years and with a decline in pastoral practices the

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number of permits that come for renewal have also gone down substantially. Grazing permits are inheritable but not transferable. State's FD issues no new grazing permits now and only renew the old ones every two years after collecting the due grazing fee from the pastoralists based on the headcount in their herds. Initiated during the colonial times (Chakravarty-Kaul, 1998) and continued since then, permits put a check on the number of pastoralists who depend on forest resources while restricting the entry of new people into the resource system. However, these institutional regulations are negotiated often using various informal mechanisms that enable sharing of permits as well as the grazing grounds. Axelby (2007, 2016) discusses the issues regarding the access and inclusion in his work on the *Gaddi* pastoralists and their negotiations to secure resources. Hiring of *puhals* remain one such tactic, which is increasingly becoming significant for the continuation of *Gaddi* pastoralism amidst the mounting resource related challenges.

### 7.3.6) A rite of passage- Knowledge transmission and training

*Puhals* in *Gaddi* pastoralism are mostly perceived as apprentices or servants that help the herd owner look after their flocks. They are vested with management responsibilities of the livestock herds and the temporary camps known as 'dera' on their migratory routes. *Puhals*, depending upon their age, the number of the livestock they add to the owner's herd, the status of their customary rights, prior experience, and/or merely their purpose of joining as a *puhal*, are entrusted with different roles and responsibilities. Ranging from cooking, fetching water, caring for the new-born and ill livestock to carrying the luggage and keeping the herd together, *puhal* must learn multiple tasks involved in migratory pastoralism.

*"Herding a flock of hundreds [of livestock] is not an easy task. One cannot just become a puhal in a day. He needs to be physically and mentally active and emotionally strong. He has to walk long distances with the luggage on his back and new-borns [lambs] in his pocket. Sheep and goats can go anywhere, bringing them back and directing them on the busy roads needs physical strength and training. Not everyone can do that. Not everyone can even count how many livestock are there in one herd, let alone manage them. You have to learn it all through practice." (As opined by a son of a practicing Gaddi pastoralists who has accompanied his father on several seasonal journeys but do not intend to take up pastoralism as a full-time livelihood, Field Data 2019)*

Becoming a *puhal* is a process that involves rigorous training and acquisition of specialised skills that either one learns by carefully observing or through apprenticeship. Traditionally, in the *Gaddi* community, the sons were expected to accompany their pastoralist fathers during migration and learn pastoral skills through experience. However, with the incoming of formal schools and awareness about education, it no longer remains a common practice. Education has played an important role in changing the pastoral labour relations within the households and even within the community. The same has been the case with inter-generational knowledge transfer and apprenticeship.

For example, Aman, a young *Gaddi* boy from the pastoral household, is a graduate in economics and works as a statistical officer in a government office. He foresees no future for his father's herd as both him and his younger brother, who is

currently in college and aspires to be a civil servant, won't be pursuing pastoralism in the days to come. His father, who is already in his late 50's is continuing the transhumant pastoralism with the help of a *puhal*, who owns a small flock of his own. According to Aman, as his father ages further and finds himself incapable of walking long distances, he would have no option but to sell off the herd. He also confirmed that the *puhals* remain integral for those *Gaddi* households where next generation remains unable to take up pastoral practices. He perceives that the increased profits and the general unemployment are attracting many non-pastoralists to become *puhals*. However, he feels that not everyone is readily equipped and knowledgeable to take it up as a livelihood. In his words-

> *"Puhal needs to be trained thoroughly. It's like joining a new office. When I joined my job, I didn't know what files were kept where. I didn't know where to find the data. It took me some time to figure out the file numbers and get acquainted with the type of data we use in our office. I never read that before in the books. It all came through experience and especially through the help I received from my colleagues. The same goes for puhals. They learn step by step how to identify their livestock from the rest, how to guard them and keep them healthy, how to herd them by using different signals and sounds, what fodder is good and what is poisonous. It's a long and a-time taking process, which involves continuous learning." (Field Data, 2019)*

A similar view was echoed by another young *Gaddi* pastoralist, who is a college graduate and aspires to join public services but at the moment continues to engage

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with pastoral practices in the lack of other employment opportunity. According to him-

*"It isn't easy to even rear livestock these days [as people perceive]. An illiterate cannot be a shepherd. Apart from managing the daily chores involved in pastoralism, one needs to be aware of legal documents, rights and claims that one can make. With an increase in cases of thefts and accidents, literacy among the pastoralists becomes a need of the hour. All this tedious paperwork cannot be done if one doesn't know how to read and write. People might just fool you as they anyway think shepherds are oblivious and uneducated". (Field Data, 2019)*

Clearly, the learning curve involved in becoming a *puhal* or for that matter a pastoralist, also includes the need for formal education to deal with bureaucratic formalities involved in everyday pastoral practices. The process of hiring a herder which otherwise seems to be just an agreement augmenting the availability of labour within pastoral settings goes much beyond the economics of the system. Apart from the inherent physical endurance and understanding of certain legalities, a *puhal* also needs to acquire local traditional knowledge on various aspects of pastoralism, which includes animal caring, identification, birthing, flora and fauna on the migration routes, health, and disease prevention, to list a few.

Above mentioned views on *puhal* recruitment reflect how training, skill sets and local knowledge regarding pastoralism remain essential in the hiring process. A *puhal* has to undergo a rite of passage to become an efficient herder, which seems to

be embedded in the domain of knowledge transfer through practice-based learning and apprenticeship.

## 7.4)    Discussion

Hiring a herder remains prevalent among many pastoral communities spread across the world (Nori 2019a; Nori and Scoones 2019; Rao 1995; Scoones 2020; Namgay et al. 2014). However, how these practices materialise in terms of recruitment, payments and management remain contextually variable. The hired herding tradition, as demonstrated through the institution of *puhals* among the *Gaddis* of Himachal Pradesh provides an essential insight into the status of pastoral practices in India. The major findings suggest that a range of reasons such as household labour void, need for extra help during seasonal pressures, livelihood diversification, herd growth and continuity of traditional pastoral practices stimulate the requirements for hiring a *puhal*s. It was also observed that the employment opportunity and wage availability along with the access to the grazing resources and accumulation of own herd incentivize the *puhal*s to become hired hereds. Hiring a *puhal* undoubtedly incurs an additional transaction cost onto the herd owner (Phillimore, 1982) but essentially facilitates their pastoral livelihoods. Such practices remain integral amidst the escalating external pressures, labour shortages and dwindling pastoral practices (Farooquee 2010; Nori 2019a; Namgay et al. 2014). At the same time, the changing labour dynamics as observed through *puhal* institution essentially contributes in reconfiguration of pastoral socio-ecological system as well (Schareika et al., 2021).

Many factors, including the increased levels of education, outmigration, and the myriad of challenges involved in herding are dissuading the next generations from

taking up herding as a full-time occupation (Aryal et al., 2014; Köhler-Rollefson, 2018; Namgay et al., 2013, 2014). This is resulting in increased vulnerability among pastoralists with an almost negligible generational renewal of labour (Nori, 2019a, 2019b). Severe shortage of helping hands at the household level are forcing many to give up their traditional pastoral profession or seek hired help outside their domestic sphere. From such a situation, it can be inferred that gradually the pastoral labour, as we observed among the *Gaddis*, would be sourced from outside the kin and social networks on a contractual basis if the traditional pastoralism is to be continued. Similar instances have been observed for some other pastoral contexts across the world (Blench 2001; Kreutzmann 2012; Nori 2019a; Namgay et al. 2014).

According to Blench (2001), Phillimore (1982), and Rao (1995), class and caste structures critically determine the hiring process of herders among the traditional settings. However, the current findings from the *Gaddi* context fall out of line from this argument. The insights gathered reflected on the emerging trends of hiring *Puhals,* where the caste and class logic are not followed as strictly as they were previously identified in the literature. Based on the analysis of *puhal* recruitment by the *Gaddis*, we interpret that the hiring of herders currently depends more on the contingent needs driven by household labour shortages and other variable external exigencies than the social determinants like class and caste that earlier regulated the process (Kapila, 2003; Phillimore, 1982). Additionally, the mounting ecological challenges emerging from climate and resource uncertainties also play an essential role in influencing extra labour demands within the pastoral systems (Nori, 2021).

Under the fold of hired herding, different negotiations including labour contracts, entrustments and clientelism (M. D. Turner, 1999) are carried out within the class-based societal structures. In literature, elite livestock proprietors or absentee herd-

owners are documented to employ the marginalised pastoralists to manage the migration of their flocks (Hauck & Rubenstein, 2017), which is assumed to fuel the processes of pauperisation, social stratification or proletarianization (Bassi, 2017; Nori, 2019b). However, among the *Gaddis* we observed that this is not always the case. Because of increasing resource fluctuations and external pressures, even small herders remain dependent on *puhals* albeit for a specific season. At the same time, reverse dependency of *puhals* on the herd owners to provide them with wages, livestock and access to resources also exist. From most of the instances discussed in this chapter, we recognise that *puhal* as an institution not only works in favour of a rich or elite pastoralists but also happens to be a way-in for the small herders to secure a pastoral livelihood. The transactions under this institutional practice involve the exchange of labour, livestock, money, daily necessities, pastoral by-products and most importantly, access to resources that indirectly foster the continuity of *Gaddi* pastoralism. Such an arrangement do mirror the principles of capitalism that seem to favour the rich (Scoones, 2020; Unusa, 2012), but based on the findings from *Gaddi* context, we argue that it also provides the opportunities for accumulation to those who neither own the herds nor the rights over resources. In a way, practices like hiring *puhals* have a dual advantage- one, for the herd owners as it helps them cope with the labour shortages and endure the seasonal challenges. And other, for the *puhals* as they secure not just the livelihood by getting a fixed payment but also accumulating wealth in the form of livestock.

In African pastoralism, entrusted livestock are often seen as 'revocable gifts' or the wealth stores for the elites (M. D. Turner, 1999) who hire herders to diversify their sources of income. In these cases, the herding contracts imitate more of an employer-employee or a patron-client relationship where the non-pastoralists and urban-

dwelling populations invest in herds that are then reared at remote locations by the hired labour (Little, 1985; Scoones, 2020). In such cases, most of the decisions regarding the livestock are taken by these hired herders. Whereas in the case of *Gaddis*, hired herders are not always bestowed with all the decision-making authorities as they are often accompanied by the herd owners themselves, or remain subjected to a regular surveillance.

It is also not rare for the small herders from the *Gaddi* community to take up the labouring jobs with the absentee owners just to ensure the viability of their own herd that comprises a small number of livestock. These dynamics hint at the transforming nature of traditional pastoralism where labour is no more limited to the household obligations but is sought and exchanged as a commodity following the conditional needs (Little, 1985; Unusa, 2012). However, it's not only the economic rationale that regulates these practices. Following the 'cattle and capital logic' (Schareika et al., 2021), we infer that *puhal* practices of the *Gaddis* demonstrate a hybrid of both. These practices not only carefully endorse the pastoral values following the cattle logic but also exhibit the capitalistic instincts that are rooted in capital logic. *Gaddi* pastoralism anyhow remains well integrated within the market economy as it produces for commercial purposes, but with such shifting dynamics of the labour as demonstrated through *puhal* practices, it seems to be eventually progressing towards becoming a wage-based economy that continues to remain grounded in the larger socio-cultural realm. Hence, indicating the emergence of new actors, and transformed interactions between the resources and actors in pastoral socio-ecological system.

Apart from that, hired herding also remains vital for land and livelihood diversification. In agreement with the case of mountainous pastoralism as presented by Kreutzmann (2012), hired shepherds who do not possess livestock of their own

carry out the pastoral work for the economically diversified proprietors who primarily practice settled farming and own sizeable agricultural fields. In such a case, a combination of hired herding and farming supplements the proprietor's household income as it supports their pastoral practices using their own agricultural fields. The diversification allows them to benefit out of seasonal grazing and penning of livestock on the fallow fields after the harvest season for manuring. While remaining ecologically desirable, it also generates additional employment for those who neither own the land nor the livestock (Kreutzmann, 2012). Such practices facilitate changes in land use patterns by allowing livelihood diversification on the one hand, while on the other hand continue to foster agro-pastoral synergies in some instances.

Hiring of *puhals* as a traditional practice in the *Gaddi* pastoralism operates on localised norms and rules that reflect the complex interplay between institutions and actors which in-turn influence the functioning of larger socio-ecological system (SES). It enables a continued usage of marginal resources and control over the far-flung territories, which otherwise remain unused and unvalued (Nori, 2019b). Hired herding in its current form not only prevents the *Gaddi* pastoral SES from disintegrating but also widens the scope for even non-pastoralists to enter this specialised domain of livelihood despite the formal restrictions. It also remains an effective means of knowledge transference and succession in case of lack of household labour. Unlike the conventional wage labour arrangement, *puhals* are gradually socialised into a value system that remains compatible with pastoral knowledge and resource management (Schareika et al., 2021). This process secures the abundant local knowledge from getting lost in translation and enhances the adaptive nature of the pastoral systems through continuous relearning. Unlike the negative impacts of hired herding stated in a few studies (R. Singh et al., 2020; M. D.

Turner, 1999), hiring of *puhals* in the *Gaddi* context provides an alternative option for continuity and sustenance of pastoral livelihoods without much ecological harm. *Puhals* are carefully inducted, trained, and observed till they acquire the essential pastoral skills enabling them to make judicious use of the limited ecological resources. Such a practice is largely contributing to enduring a sustainable transhumant lifestyle and a valuable system of production in the Indian Himalayas.

## 7.5)    Conclusion

In this chapter, we established the importance of understanding the dynamic nature of pastoral labour which thus far has not received adequate coverage in theory and policy. We intended to acknowledge the relevance of traditional institutional practices as that of *puhals*, which are contextually diverse and culturally rooted, in providing appropriate need-based solutions for the functioning and continuity of pastoral livelihoods. As observed in the *Gaddi* context, labour relations remain central to suggesting possible interventions that could promote and safeguard the vulnerable pastoral livelihood strategies in other parts of the world as well.

The practices of hiring herders have been traditionally followed among many pastoral communities for ages, but the way they are evolving and reshaping the pastoral systems are inadequately documented. Unlike peasantry, pastoral labour has remained neglected (Scoones, 2020) despite being one of the most critical factors determining the functioning of pastoral socio-ecological systems. More so in the current times, when pastoralism remains in a state of flux with labour shortage being one of the primary factors responsible for its decline (Namgay et al., 2014). Paradoxically while it is being argued that the pastoral futures remain uncertain, their

viability as a livelihood practice in face of dwindling and variable SES, is now being established through international efforts[19]. To cope in such turbulent times, pastoralists are adapting and modifying their ways not only for the reason of economic advantage but also for their cultural and occupational continuity. The resulting changes carry the potential for altering the whole functioning of the socio-ecological systems by creating new forms of agency and institutional practices. An increase in hired herding as observed across the contexts is one way through which the pastoral systems may be interacting with the changing dynamics of production and exchange in the emerging global environments (Hauck & Rubenstein, 2017). Such a scenario makes it crucial to explore the contextual, structural, and functional dynamics of pastoral labour to understand the continuity and change in the overall pastoral livelihoods.

In the Indian context, where the livestock economy seems to be constantly expanding (Ramdas & Ghotge, 2006), refocusing on pastoralism and the employment possibilities it generates remains timely as well as desirable. Within that purview, the evolving local institutional practices guide the ways in which economic diversification within the pastoral households and employment for the non-pastoral households could be generated. Practices such as hiring a *puhal* indicates the socio-economic transitions among the pastoral communities and also, the need-based and wage-based hiring of herders that allow for the continuity and sustenance of pastoral livelihoods. Despite depending on the shrinking base of marginalised natural resources, these innovative institutional practices continue to provide livestock accumulation opportunities for the small herders.

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[19] Refer https://iyrp.info/ - a movement to organise an international year for Rangeland and Pastoralists in 2026, endorsed by FAO council and supported by several nations with practicing pastoral populations.

In the absence of the formal institutional and policy-based support, continuity of the traditional practices like hiring *puhals* ensure that pastoralism doesn't get squeezed out of the socio-economic fabric. It also ensures diversification of income sources along with the reproduction of cultural practices and pastoral by-products. Despite the declining numbers of pastoralists and desirability among the youth that restricts generational renewal of labour within the households, hiring herders provides an alternative to keep the pastoral practices from withering away. Instances of long term hired herding, absentee ownership, and increased dependency on hired herders have a clear and strong transformative effect on the form and praxis of pastoralism.

Amidst the on-going shifts in pastoral labour and other crucial variables discussed above, there remains a lack of consensus among the scholars and the local pastoral practitioners about the future of pastoralism in India. Discussions on hired herding, to some extent, address the numerous claims and conjectures about this uncertainty and present an alternative to maintain the viability of pastoralism. However, we refrain from making overgeneralizations following the arguments that present the undesirable and unsustainable outcomes of hired herding including the rise in transaction costs (Namgay et al. 2014) and negative impacts on ecological resources (R. Singh et al., 2020). Yet, we believe the inferences drawn from the *Gaddi* context provide a valid reason to revisit and reformulate the discourse on disappearing pastoral practices in India and elsewhere.

Although, the decline in pastoralism in current situation seems inevitable but the continuing practices like of hiring *puhals, a*s discussed in this chapter, generate an insight on how the decline may just be another readjustment in the face of on-going socio-ecological transitions. In agreement with Yurco (2017), who very appropriately calls the emerging shifts in labour as 'remaking of pastoral livelihoods', we conclude

that evolving institutional practices of hiring *puhals* reflect the changing significance of hired herders as crucial actors within the pastoral system. It also hints at the future trajectory of *Gaddi* pastoralism, in particular and Indian pastoralism, in general.

Puhals during their summer migration



A young Gaddi boy accompanying his pastoralist father



A traditionally dressed Gaddi pastoralist at a halting site



A Gaddi puhal nursing an unwell goat



A chota puhal grazing the flock in the village forest



Puhal and his belongings during the journey

*Figure 11 Gaddi Puhal on their migration routes*

# Chapter-8

## Transitions in the *Gaddi* Pastoralism: A Socio-ecological assessment

### 8.1) Overview

This study was motivated by the need to understand the coupled socio-ecological transitions in the pastoral system of the *Gaddis*- a Himalayan agro-pastoral community, that has been traditionally practising transhumant animal husbandry for decades. Pastoralism in the case of *Gaddis* is not only limited to a livelihood strategy or an adaptation to the ecological conditions but has been identified as an integral aspect of their socio-cultural living, community organisation and place-making process (Bhasin, 2013; Johnson, 2020; Kapila, 2008; Wagner, 2013). In the recent past, a decline in the pastoral practices of the *Gaddis*- just like many other pastoral populations across the worlds- has accelerated. Such shifts that have been previously examined using the theoretical lens of livelihood diversification remain co-terminus with the larger social, economic, cultural, political, and ecological changes. However, these interrelated aspects of pastoral practices and associated living have not been paid adequate attention or are often understood in isolation. As a result, there exist a widespread gap in comprehending the holistic nature of the on-going transitions in pastoral systems that impedes the process of mainstreaming it as a livelihood and a lifestyle choice despite its immense potential to contribute towards multiple SDGs.

In this study, thus, we approached the transitions in pastoral practices of the *Gaddis* using SES framework that allows to holistically understand the complex processes of causation within the system. Following the ethnographic research design, we unpacked the everyday understanding of transitions in pastoral practices through

observations, experiences, and narratives of people from the community, using combination of qualitative methods. With the help of localised interpretation of social and ecological interactions that make the *Gaddi* pastoral system functional, we determined the change and continuity in these practices along with the transitioning significance of pastoralism as a whole. The findings of this study catalogue the processes and variables that community people regard as significant for defining their pastoral system as well as the transitions in it. It includes turning the analytical gaze inwards towards the endogenous socio-cultural factors that play an important role in inducing the transitions in pastoral system. Such an understanding essentially contributes towards filling the gap in research, policy, and practice in pastoral contexts in India and elsewhere where similar conditions exist.

In this chapter, we synthesise the findings and analysis of the study within the theoretical consideration of SES approach to provide applied insights into the pastoral transitions. The conclusions drawn from the *Gaddi* context are discussed in the light of prior research for comparison and contradictions. Finally, the specific contributions of this study, policy implications based on the inferences along with the scope of future research in this area are discussed.

## 8.2) Synthesis: Socio-ecological transitions in Pastoral SES

The agro-pastoral system of the *Gaddi* can be conceptualized as an aggregate of various social and ecological components including multiple resources systems, resource units, actors, norms, and rules. Based on the findings of this research and review of the existing literature that documents the *Gaddi* pastoralism, resource systems that remain crucial for their transhumant pastoral practices mainly include

customarily used alpine pastures and water resources, village commons, privately owned agricultural fields and state-owned forests and wastelands across different ecological zones. Pastoral practices of the *Gaddis* show a seasonal dependency on this wide range of resources that are utilized, managed, and governed variably across space and time. Access and control over these natural resources is negotiated through several formal and informal arrangements (Axelby, 2007, 2016; Saberwal, 1996a, 1996b) that have made the continuity of pastoral practices possible till date. However, the changing nature of these resources as well as the interactions of the actors with them, adds an extra layer of complexity to the functioning of pastoral system of the *Gaddis*.

Actors and their shifting agency within the larger socio-cultural milieu of the *Gaddi* community affect the interactions between the social and ecological components within the pastoral system and determine the on-going transitions in it. Our findings suggest the crucial role of women, non-pastoral agricultural communities and *puhals* in the functioning of *Gaddi* pastoral system. Through their situated agencies, they are able to shape the socio-ecological interactions and the consequent outcomes resulting in transitioning pastoral practices. Their agency should be understood in dynamic terms, which develops over a course of time and is contingent on their changing interactions with environment, culture and within the social networks (Charli-Joseph et al., 2018). These actors- as individuals or informally organised group of people, utilize or interact with the resource systems unevenly to produce the variable outcomes that feed back into the system and its other components. It is important to note that actors and their agency is deeply rooted in the socio-cultural conditions that determine their role, status, and participation in the pastoral SES.

We identify that socio-cultural conditions that otherwise are considered to play a passive role in the functioning of SES are responsible for the dynamic interactions between the socio-ecological components. Thematic analysis of ethnographic data reveals four salient aspects that are intricately related to the transitions in *Gaddi* pastoral system. It includes- 1) food related practices, 2) intra-community relationships and reciprocities, 3) gender dynamics and 4) labour practices and institutional arrangements. These apparently discrete but inter-related aspects largely influence the process of transitions in pastoral practices of the *Gaddis* posing larger questions on its continuity and sustainability (refer to Figure 12).



*Figure 12 Pastoral Socio-ecological system of the Gaddi in transition*
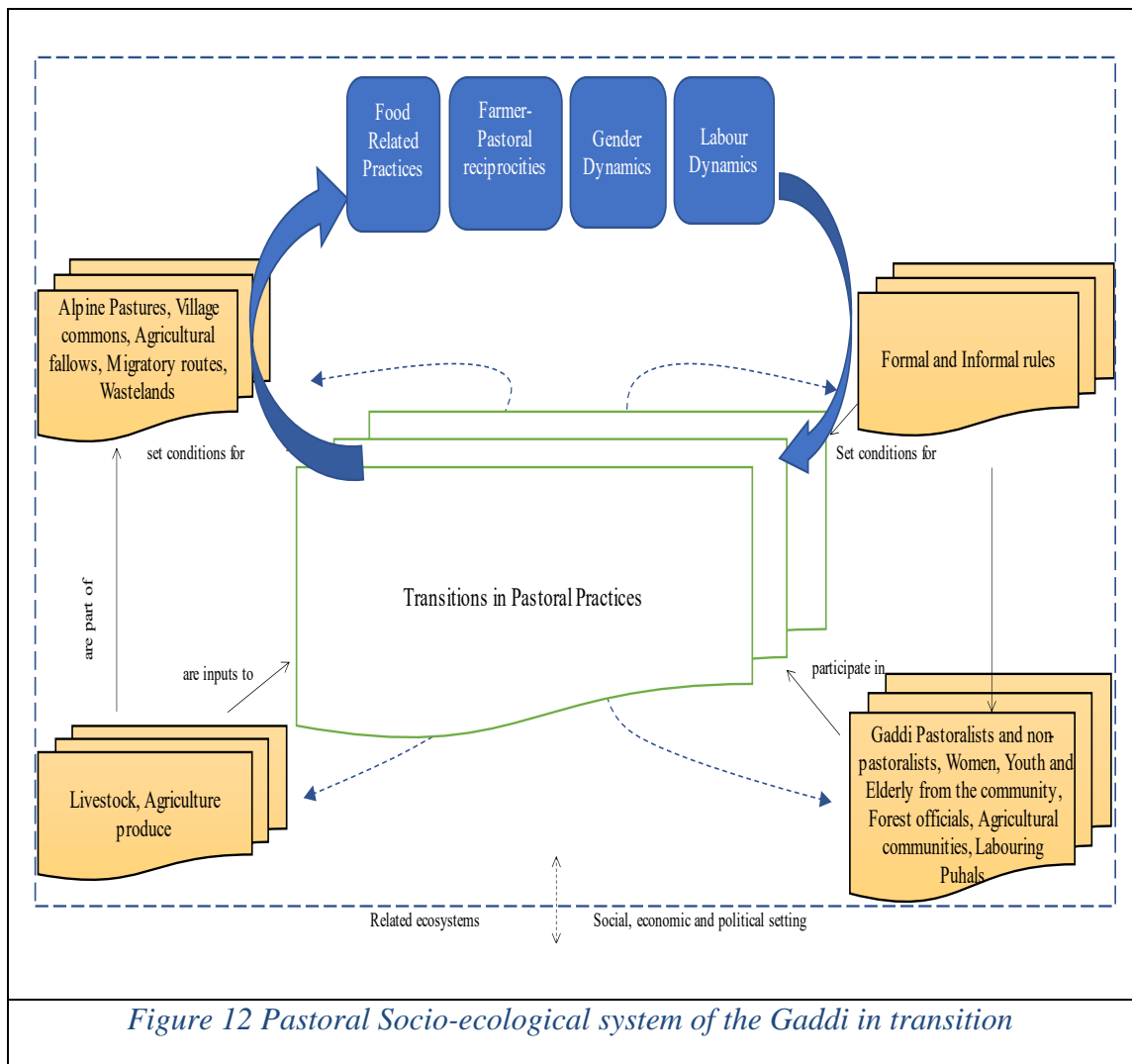
Based on the thematic findings discussed in chapter 4, 5, 6 and 7, we derive the following inferences:

- **Transitions And Trade-Offs in the *Gaddi* Pastoralism and Food Practices**

Findings shed light on how the *Gaddi* pastoral practices are influenced by, and at the same time, have a bearing on traditional food practices of the community. The on-going trade-offs observed in food production, distribution, consumption, and procurement processes offer a nuanced and alternative explanation for the decline in agro-pastoral livelihood of the *Gaddis* and simultaneously question the unsustainable development trajectory that affects their food practices. Although on surface these changes seem to be unrelated and discrete, in reality, they coalesce to generate system level shifts that influences the functioning of pastoral SES. Conclusions from this chapter not only recentres the focus on lived implications of transitions in pastoralism, but also set a stage for analysing the role of other socio-cultural elements in change and continuity of pastoral practices.

Following the socio-ecological system approach, we discovered strong links and feedbacks between the *Gaddis*' food practises and their pastoral livelihoods. The findings discussed in Chapter 4 reveal the co-terminus nature of such changes in these practices. It was observed that shifts in pastoral practises are both a cause and a consequence of changes in food practises at the household and community levels. We observed that the *Gaddis*' livelihood diversification results in increased horticulture and commercial cash crop cultivation, which alters their food production processes as well as the pastoral resources. The subsequent changes in land use patterns with increasing acreage under fruit tree plantation and housing infrastructure dwindle the

availability of grazing spaces required by the migratory herds of *Gaddi* pastoralists. Such a change also results in shrinking diversity of food crops, and a gradual shift toward synthetic chemical-based pesticides and fertilizers.

These shifts in land use and livelihood patterns provide additional impetus for changes in family composition and social organisation. Evolving aspirations and outmigration of *Gaddi* youth, combined with the disintegration of joint families, result in severe labour shortages to carry out the agro-pastoral practises. It comes along with their increased dependency on the public distribution system that eliminates the need to produce own food and also obliterates the traditional crop and dietary patterns. These concurrent changes in the ways food is produced, consumed, and distributed within the *Gaddi* households and throughout the community generates negative feedback for the continuation of pastoral practices.

With the collective changes observed in all these aspects, the necessary social and ecological conditions required for the functioning of pastoral system of the *Gaddis* alter. The nature of the resources, actors' interaction with them, as well as how they are managed, undergo a simultaneous change that have a deleterious impact on their pastoral practices.

- **Pastoral-Agricultural Reciprocities: Transitions in Relationships of Exchange**

Another aspect that directly links with the transitions in Gaddi pastoral practices are their changing relationships of exchange with the settled agricultural communities. In the *Gaddi* pastoralism, these relationships developed through long standing interactions hold immense significance (Axelby, 2007). They exemplify the reciprocities in terms of resources, knowledge, labour, and other socio-cultural

aspects that bring the migratory *Gaddi* pastoral community in close contact with the agricultural communities of the region. Developed over the cycles of migration, these reciprocities have been previously acknowledged (Bhasin, 2013; Kapila, 2003; Saberwal, 1996b; M. Sharma, 2013; Wagner, 2013) but rendered static.

In chapter 5, we address this gap and critically examine the enduring reciprocities that embed the *Gaddi* pastoralism within the larger agrarian economy of the region to understand their role in shaping the socio-ecological transitions. As key actors in the pastoral system, relationship with the agricultural communities were found to have significant effect on the mobility patterns, resource access and labour arrangements of the *Gaddi* pastoralists. Their dependency on the agriculturalists for arranging forage for their herds during the lean season in winters followed by their personal needs like shelter, food, security, and avenues to market their pastoral by-products remain constant. In return, they offer the organic manure, meat, milk, wool and labour for the agricultural purposes that were highly valued and appreciated.

With gradual changes in the agricultural practices in the region, breakdown of farmer-pastoral reciprocities can be clearly identified. It hints at the declining complementarity between the production systems and increasing conflicts among the practicing communities. The impact of such changes is highly asymmetrical as the pastoralists bear the direct brunt of resource scarcity while agricultural practices continue to expand. Such decoupling of migratory pastoral practices from the agrarian landscapes contributes in altered socio-ecological interactions that eventually hamper the sustainable sharing for resources. These changes in community relationships and reciprocities, when analysed from the SES perspective illuminate a tipping point that drives pastoral transitions and the change in overall system. Additionally, the

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prejudiced binaries like sedentary-mobile and modern-primitive (Maru, 2020) also get reinstated in the process.

- **Gender Dynamics And Transitions in the *Gaddi* Pastoral SES**

Gender dynamics and variable agency of men and women remain integral for interpreting the trajectory of transitions in pastoral socio-ecological system of the *Gaddis.* Examining the changes in pastoralism from a gender perspective reveals the variability in the agency of the actors involved in the pastoral SES. Gendered agency determines their interactions with the social and ecological components based on their variable participation in pastoral practices. It is the "different forms of cooperation, negotiation, and power relations between women and men" (R. Verma & Khadka, 2016b, p. 5) that enable the functioning of pastoral systems. Findings from the *Gaddi* context renew the way gendered issues are considered in the study of pastoralism. Ethnographic evidence suggests that *Gaddi* women, whose agency in the male dominated pastoral occupation has been traditionally discounted for their non-participation, actually contribute, and negotiate the change in these practices through their socio-cultural and economic positionality. As the crucial actors in the functioning of pastoral system, women's changing aspirations, choices and preferences directly impact the continuity or collapse of the *Gaddi* pastoral practices. Their lack of willingness to migrate seasonally, to marry a *puhal* and to acquaint their children with pastoral lifestyle are some of the everyday acts through which the women resist the continuity of pastoral practices. At the same time, by adapting new mobility patterns using transportation facilities, enabling labour renewal through

marriage alliances or by becoming absentee proprietors of the herds themselves, they assist in continuation of these practices.

Despite the two diverging outcomes, these findings crucially indicate the relevance of gendered agency in the functioning of pastoral system. It also supports the argument suggested by Köhler-Rollefson, (2018) in her study on the *Raikas* of Rajasthan that 'women act as the lynchpin' in the contemporary pastoral practices that are nevertheless overburdened by multiple other external stressors. As also highlighted in the *Mera Declaration of the Global Gathering of Women Pastoralists* (2010), concerns of men and women in pastoral occupations are somewhat indistinguishable but it is their response to those concerns that create the difference. In the case of the *Gaddis*, we found that soaring climatic uncertainties, instance of thefts and subsequent threat to life are also dissuading the women of the community from supporting pastoral livelihoods. Additionally, the rising education levels and inclination towards a sedentary lifestyle among women also creates subtle forms of coercion that influences the livelihood choices among the men of the community. Based on the analysis of everyday instances, it can be inferred that without the women's co-operation and participation, pastoral livelihoods of the *Gaddis* have a great chance of faltering and collapsing.

Changing gender relations among the *Gaddis,* on one hand result in shifting pastoral practices, on the other are an outcome of such shifts. It is observed that declining pastoral practices affect the gender relations among the *Gaddis* by reconfiguring the division of labour, mobility, resource utilization, socio-economic status, marriage alliances, and exchange networks. With the increasing presence of men at home and consolidation of control over economic resources in their hands, women's everyday decision-making authority is dwindling. This obscures their socio-

economic status that they enjoyed by the virtue of their active involvement in agricultural activities. Even though women rarely owned the land or the livestock, they asserted an indirect control over agricultural resources. But with livelihood diversification and horticulture replacing the subsistence cultivation practices, gendered division of labour and interaction with resources is altering. It is resulting in declining control and participation of women in agricultural activities, which already have turned redundant for the household subsistence. With such changes emerge the new gendered hierarchies and socio-ecological interactions that influence the transition in the pastoral system of the *Gaddis* in multiple ways.

Analysis of *Gaddi* pastoral practices strongly suggest that the reconfiguration in gender relations is not merely an outcome of declining pastoral practices but also the condition for the onset of change in them. Through their gendered agency, men and women play an important role as actors in the functioning of *Gaddi* pastoral system that influences the future of pastoral practices. In a context specific manner, their gendered agency determines how the systems components interact to produce changes at both system as well as component levels in the backdrop of community specific socio-cultural norms. It can be inferred that the shifts in pastoral practices and gender relations co-produce each other.

We thus, conclude that the complex ways in which gendered relations shape the processes of social, ecological, and cultural change are important to determine the transitions in SES. Gender, as one of the major axes of social differentiation, decides the heterogenous participation and decision making processes among the actors (Cote & Nightingale, 2012). Their variable agency, in a culturally specific manner, not only alters the socio-ecological interactions in SES but also reveal the changing dimensions of human-environment relationships entangled within these systems.

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- **Hired Herding and Labour Arrangements in Pastoral Transitions**

Hired herding across the pastoral communities is on rise as a consequence of mounting socio-ecological uncertainties (Nori, 2019b). Similar instances are observed across other Himalayan communities where transhumant practices are declining because of acute labour shortage (Namgay et al., 2021; Tiwari et al., 2020). With a dip in the generational renewal of household labour, hiring of herders provide an alternative to continue pastoral practices for those communities where the youth outmigration and disenchantment with pastoral living is on a rise. These adjustments coincide with the numerous amendments in the norms and rules governing the functioning of pastoral system as discussed in Chapter 7.

In the case of the *Gaddis*, we observed the emerging role of '*puhal*'- as an actor and an institution in the continuance of pastoral practices. The in-depth ethnographic analysis shows that the hiring of *puhals* evolves with the overall changes observed in the *Gaddi* pastoral system. *Puhals* are now employed from outside the social circles based on monetary agreements, in contrast to the earlier arrangements where they were typically hired from the extended kin circles or from other pastoral groups dwelling in the adjacent regions. Through such commoditization of labour, pastoral livelihoods of the *Gaddis* are no more restricted to the caste or the community members and is paving a way for the non-pastoral people to enter the pastoral system.

With *puhals* acquiring the agentic role in the pastoral socio-ecological system of the *Gaddis*, changes are observed in the resource-actor interactions as well as the norms that govern them. It is by hiring *puhals,* the aging *Gaddi* pastoralists, or those who have diversified into other occupations, are able to continue herding by acquiring

the role of absentee owners. It helps the *Gaddi* pastoralist to satisfy his pastoral obligations and sidewise manage non-pastoral commitments (Kapila, 2003). Apart from the apparent economic benefits, it helps also them continue their control over the far-flung pastoral territories accessed through customary rights (Nori, 2019b). At the same time, it allows the resource access for those who do not have the legal permits to the customarily inherited grazing resources but desire to pursue pastoral occupation (Axelby, 2007).

Since no revisions have taken place in the state's formal regulations (permits) and guidelines on the pastoral livelihoods that could bring new pastoralists into its fold, initiation of *puhals* solely happens through informal social contracts that are orally managed and negotiated. These unofficial contracts reflect the institutionalisation of hiring practices away from the criteria of class, caste or authenticity of labour as earlier documented by Kapila (2003). Such a change can be attributed to the on-going value shifts in pastoral livelihoods of the *Gaddis* as they transcend from what Schareika et al. (2021) calls 'cattle logic of production to capital logic of production'. Amidst these changes, labour in the form of *puhals* demonstrates an emergence of new actors in the pastoral system of the *Gaddis*.

To some extent, hiring of *puhals* also hints at the ongoing process of proletarianization in pastoral livelihoods where small herders are increasingly being employed for their services by the large herders or the absentee owners (Nori, 2019b). This type of 'substitutional pastoralism' has been commonly observed across the African contexts where it often emerges and even results in increasing household level socio-economic disparity. However, in the case of *Gaddis*, hired herding remains beneficial to both the employer as well as the employed *puhal*, as it offers a

fair chance of upward social and economic mobility by allowing accumulation, both in monetary terms and livestock assets.

The findings of this study also highlight the importance of *puhal* practices in knowledge transmission and cultural continuity of pastoralism for the *Gaddis*. With the decline in its practice, pastoralism is gradually becoming a part of elders' memories that require a knowledge holder, a culturally informed context or place of encounter, and a willing novice for renewal (Jandreau & Berkes, 2016). It is by hiring *puhals, Gaddis* are able to pass on the colossal amount of knowledge accumulated through their pastoral endeavours across the ecological zones in the region and sustain their pastoral cultural economy. As the youth of the community distance themselves from the pastoral practices, hired *puhals* shoulder the responsibility of continuing it. In a way, *puhal*s have become critical for the upkeep of *Gaddi* pastoralism and its sustainability as their labour determines the renewal or collapse of the pastoral system.

To conclude, pastoral SES of the *Gaddis* is observed to be transitioning with the collective changes in their food practices, intra community relationships and reciprocities, gender dynamics and labour arrangement (as shown in Figure 12). These interconnected socio-cultural aspects that form a set of dynamic processes, relationships and practices shared by a collective group of people (Poe et al. 2014), remain responsible for the reorganization of social and ecological interactions within the situated context of the *Gaddis*. They critically determine the emergence of multiple action situations that jointly feedback into the pastoral system and determine the change and continuity in the *Gaddi* pastoral practices.

## 8.3) SES Transitions and the Future of Pastoralism

The research findings in this thesis agree with what *Purnendu Kavoori*, an Indian researcher who has extensively worked on pastoralism and common resources, stated during a public lecture- "*Changes in Indian pastoralism should be visualized in a wave like pattern that has several ebbs and flows.*" This study also reflects the transitions in Gaddi pastoralism as a continuous process where change and continuity go hand in hand. It reveals how pastoralism, on one hand is gradually declining with the changing socio-cultural fabric of the community, while on the other, is resuming in a renewed form and praxis. Such changes thus, demonstrate a continuum of *de-pastoralisation* and *re-pastoralisation*, essentially reflecting the shifts in socio-ecological or human-environment relationships embedded in these practices.

Transitions, as observed in the pastoral SES of the Gaddis, also point towards the evolving meanings and values attributed to the pastoral practices by the community members, their shifting practical engagements with pastoral resources, delinking of pastoral attributes with their lifestyle and reorganization of the bio-cultural landscape around them. Such gradual shifts alter the significance of pastoralism for the community as it no longer remains the favourable means through which they manage their social and environmental reality. The cascading effect of emerging endogenous changes at the micro level of household and community highlight the changing outlook of people towards pastoral practices. As a result of these changes, there emerges a possibility that in future pastoralism may be an amalgamation of lesser cultural attachments, eroded sentimental notions and a pragmatic profit-generation solutions and means to environmental change (Jandreau & Berkes, 2016).

Transitions in the pastoral SES of the *Gaddis* also imply a critical role of tribal development, natural resource management, gender mainstreaming, food and livelihoods security and socio-ecological sustainability in determining the future of pastoral practices in India. These transitions that emerge out of increasing complexity demands a holistic intersectoral approach to manage the resilience and sustainability in pastoral systems is the long run.

## 8.4) Contributions of this Thesis

This study significantly contributes at three levels- empirical, theoretical, and methodological. Firstly, as an empirical contribution it updates the socio-cultural and ecological account of the *Gaddi* pastoralism by documenting the status of practices as they exist in the current times. Departing from the static description of the *Gaddi*'s cultural context as used in the previous studies, this research renews the focus on cultural understanding of dynamic social and ecological processes. It highlights the shifting conceptualization and meanings of human-environment relationship by investigating them using system's approach. Even though the problem taken up for research in this study was delimited to a specific community in India, the results and findings are analytically generalizable to other similar contexts across South Asia and other parts of the world where similar pattern of transhumant pastoralism are commonly practiced.

On theoretical plain, this study conceptualizes pastoralism as a socio-ecological system to demonstrate interactions between the social and ecological components and the cultural dimensions of the community in consideration. It also advances the dynamic understanding of 'social' in the social-ecological systems'

framework that otherwise gets overshadowed by the stress laid on the ecological conditions. This study thus, provides a conceptual model to comprehend the transitions in pastoralism, which should be adapted according to the place-based and community specific categories, if similar studies are to be conducted elsewhere.

At methodological level, usage of ethnographic qualitative methods to enquire the transitions in SES by focusing on emic perspective of community people provide a glimpse of their lived reality. It moves away from previous trends in SES studies that primarily rely on quantitative estimations and ignore the relational, cultural and context specific nature of transitions.

## 8.5) Policy Implications

It is commonly observed that the development policies often overlook the local socio-cultural aspects pertaining to the communities or landscapes that often result in unintended consequences, ecological degradation, or social upheaval. The isolated approach of eliminating social or environmental issues without realising their interconnected nature remains problematic and often do more harm than good. Such instances can be noted widely; it has been seen in the intersections of Public Distribution System(PDS) with pastoral socio-ecology in the case of the *Gaddis*. Although, PDS remains an efficient way of ensuring food security, the ways it is impacting the livelihoods, socio-ecology, and cultural ways of living often lead to questions regarding its proficiency in a long run. Based on many such instances discussed in the previous chapters of this thesis, we suggest a 'feedback learning' approach (Chopra, 2011) for designing and implementing appropriate policies and development programs that remain in tune with the local socio-cultural responses and

enable constant learning and un-learning. In no ways, we mean to impose the continuation of pastoral practices without the will of the community, but we intend to propose appropriate policy support that could enable them to make informed choices.

Based on the holistic findings of this study, we suggest the following recommendations for the policymakers-

- Documenting and developing the database on bio-cultural heritage of the *Gaddis* and other pastoral communities in India to safeguard the value of pastoralism and pastoralist cultures while providing an alternative vision for development.

- Identifying and promoting the role of agro-pastoralism in biodiversity conservation, nutritional diversity, food and livelihood security and landscape management using scientific estimations.

- Integrating pastoral practices with the agro-ecological agenda of the state for sustainable livelihoods, food production and environmental management.

- Evaluating and scrutinizing pastoral needs and impacts of the government-run development interventions like MGNREGA, Awass Yojna, Ujwala Yojna, social forestry, afforestation schemes and fertilizer subsidies on them at regular intervals.

- Drawing inspiration from the examples of pastoral production in Europe and other countries, Indian State and Centre governments can also incentivize the pastoralists for their valuable contributions towards maintaining the socio-ecology of remote fragile landscapes. In addition, an awareness drive with promotional content, acknowledgement of pastoralism's contribution to the state's economy and socio-cultural diversity as well as its environmental

benefits should be launched to eliminate social stigma and perceptions of backwardness that overshadow the pastoral future.

- Revising the grazing policy of the state after due acknowledgment of the changing needs of pastoralists and pastoral SES is also desirable. There is a need to develop new ways of redistributing the grazing permits among the interested small herd owners who till date remain bereft of usage rights even after the conception of legislations like Forest Rights Act (2006).

- Promoting regional as well inter-state cooperation between pastoralists and agriculturalists through regular interactions: the State Governments should convene a committee to develop appropriate seasonal calendars that chart out the migration's cycles, duration of stay and benefits of exchange. This timely intervention that will promote alliance-based farming strategies would also ease out the conflicts and boost circular economy by strengthening pastoral-agricultural reciprocity.

- Developing appropriate tourism policies to promote pastoral trails, lifestyle, hikes, and camps for their distinguished features could also possibly contribute to safeguarding the traditional pastoral practices while boosting region tourism economy. Such a measure would not only be making people aware of pastoralism but would also contribute to diversifying the pastoralists' income sources while encouraging the youth to take it up as a livelihood choice.

## 8.6) De-limitations, Limitations and Future Research Directions

This research reflects a process of finding answers to a battery of questions that arise from the doubts in existing literature and prevailing knowledge on pastoralism.

However, not all questions can be answered in one thesis. Our efforts in this study were focused on understanding the transitions in pastoral system of the *Gaddis* using SES frameworks. Following the ethnographic approach, we highlighted the specific dimensions that emerged as dominant themes in the analysis of qualitative data. As it was a place-based and community-specific study, it is likely that the variations could be observed in these socio-cultural dimensions across other pastoral contexts. We also acknowledge the possibility of different patterns of interactions, transitions, and feedbacks between the social and ecological components in other pastoral SESs. Additionally, this study has the following de-limitations-

- To draw system's boundaries in the SES research and ethnographic tradition is a subjective aspect determined by the research questions, theoretical-analytical choices, scale of enquiry and researcher's subjectivities. Therefore, there is a possibility of variable conceptualisation of the similar agro-pastoral SES under a different set of considerations.

- This study relies on a combination of multiple qualitative methodologies that generates in-depth ethnographic understanding of transitions in pastoral system of the *Gaddis* as experienced by the people of the community. As our goal was not to produce a statistical account of change in pastoral population, we refrain from making any quantitative claim or generalizations. It also remains difficult to quantify the transitions in pastoral system of the *Gaddis* because of their geographical spread and lack of official data.

- This study is based on a small sample size that may not suffice for the increasing heterogeneity within the community. Although, the sample remains representative of intersectional differences (age, gender, occupation), there

remains a scope to explore these differences exclusively in relation with the on-going changes in pastoral occupation of the *Gaddis*.

- The study doesn't capture all the possible social-ecological relations and interactions present in the pastoral system as the focus was on those that are considered most important for generating the transitions in pastoral practices by the people of the community.

We ensured to answer the research questions in a best possible manner, yet there remain some limitations that could be observed while compiling the thesis. The potential limitations of this study are:

- It doesn't provide a statistical account of the changes that could reflect the decline in pastoral practices among the *Gaddis* and also the emerging trend of hiring the *puhals*. The geographical spread of the *Gaddi* population across the villages in Bharmour and other districts along with an overlap, in many cases, of pastoral and non-pastoral households that share the resources through informal arrangements, make the estimation process challenging.

- As change in SES and pastoral practices is an on-going process, this research only accounts for the changes observed during the ethnographic present (i.e., the time period during which the field work was conducted). Therefore, it remains unable to provide the insights on the unanticipated situations like the one presented by the Covid-19 pandemic.

Based on the de-limitations and limitations of this study, there exist the following possibilities that can be taken up for further research:

- A longitudinal study on the changing pastoral practices and their socio-ecological impact using the mixed methods can be proposed to draw some generalizable conclusions.

- As the main objective of the study was to advance the understanding of pastoral practices, other crucial aspects that emerged during the ethnographic inquiry like emerging tourism economy, cultural appropriation and related politics, and socio-economic impacts of livelihood diversifications were not probed in-depth. All these aspects hint at the possible research areas that could be explored further in the future.

- In this study, we focused on gathering the qualitative insights into pastoral transitions as experienced and understood by the people of the community that traditionally associates itself with pastoral identity. For that reason, the research participants were not only limited to the currently practicing pastoralists but even included those who do not directly take part in it but share a communal affiliation. However, conducting a field-based ethnography on the everyday life of pastoralists would be useful to understand the nitty gritty of their local realities.

- Increased usage of social media to maintain and manage the community affiliation were observed during the data collection process. Such reach and relevance of social media in the lives of the people present a parallel reality lived in the virtual world. A study can be proposed to understand how pastoral identities are shaped in the virtual world and are utilized (like Facebook and Instagram) to affirm cultural cohesion.

- Lack of academic and policy attention towards the diverse pastoral spectrum observed across India limit the current study from drawing parallels for

comparative understanding. Based on this persistent gap, we believe that the current study can be taken up as a guidebook for the future research on other pastoral contexts in India to produce comparable inferences.

Pastoralism has varying dynamics, rationales and entanglements that deserve to be explored in a context specific manner to understand the intricacies of such practices. Complexity that pastoralism beholds is quite difficult to condense in one thesis, but the effort remained to provide a snapshot of how it occupies an integral space at the cusp of human-environment relationships. Keeping pastoralism at the centre, this thesis was an attempt to shift the gaze from economic and ecological reasonings of transitions in pastoral practices towards the socio-cultural predicaments influencing its continuity and change. In pastoral systems, there is much more to the human-animal relationships than the economic dependency and domestication as the cultures, communities, landscapes, and environments also depend on them for co-construction. Comprehending the world of pastoralism gives a new lens to look at everything whether it's the meat on our plates or the woollen apparel we rely on for a cosy winter. The things we often perceive as merely the articles of everyday use, are parts of such expansive processes that connect the social and ecological realms in multiple ways. This study captures these interconnections and how the communities are reimagining and redefining the meanings of pastoral practices in their ordinary lives.

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# List of Appendices

## APPENDIX I

## <u>Informed Consent Release</u>

Dear Participant,

     I, <u>Aayushi Malhotra</u>, am working on my PhD thesis tentatively titled "Pastoral Socio-ecological systems in transition: An ethnographic study of the *Gaddis* of Himachal Pradesh", in affiliation to BITS Pilani, Rajasthan and thereby need your permission to collect and present data relevant to the proposed theme.

The study demands me to look into the matters including local perception of socio-ecology, gender roles and traditional knowledge system, pasture usage and management, implementation and information about the Forest Rights Act etc.

All the information would be kept safe and will be used judiciously to enhance the academic understanding of the particular matter.

Involvement in the study is voluntary, so you may choose to participate or not.

**<u>Participant</u>** –

"All of my questions and concerns about this study have been addressed. I choose, voluntarily, to participate in this research project. I certify that I have no problem in giving the information as per the researcher's requirement."

   Name & Signature of the respondent

Date_____

# APPENDIX II

## <u>सूचित सहमति प्रपत्र</u>

प्रिय प्रतिभागी,

मैं, <u>आयुषी मल्होत्रा</u>, मेरी पीएचडी थीसिस के लिए काम कर रही हूं, जिसे अस्थायी रूप से "चारागाही सोशियो-इकोलॉजिकल सिस्टम इन ट्रांज़िशन: हिमाचल प्रदेश के गद्दियों का एक नृवंशविज्ञान अध्ययन" के रूप में शीर्षक दिया गया है| यहअध्ययन बिट्स पिलानी, राजस्थान से संबद्धता में आयोजित है और इस संदर्भ में मुझे जानकारी एकत्र करने के लिए आपकी अनुमति की आवश्यकता है जो प्रस्तावित विषय के लिए प्रासंगिक है।

यह अध्ययन मुझे सामाजिक-पारिस्थितिकी, लिंग भूमिकाओं और पारंपरिक ज्ञान प्रणाली, चरागाह उपयोग और प्रबंधन, कार्यान्वयन और वन अधिकार अधिनियम के बारे में जानकारी आदि पर स्थानीय धारणा सहित मामलों को देखने की मांग करता है।

एकत्र की गई सभी जानकारी को सुरक्षित रखा जाएगा और केवल विशेष मामले की अकादमिक समझ को बढ़ाने के लिए विवेकपूर्ण तरीके से उपयोग किया जाएगा।

मैं आपको चल रहे शोध कार्य का समर्थन करने का अनुरोध करती हूं हालांकि अध्ययन में शामिल होना स्वैच्छिक है, इसलिए आप भाग लेना चुन सकते|

<u>प्रतिभागी -</u>

"इस अध्ययन के बारे में मेरे सभी प्रश्न और चिंताओं को संबोधित किया गया है। मैं इस शोध परियोजना में भाग लेने के लिए स्वेच्छा से चुनता/ चुनती हूं। मैं प्रमाणित करता/ करती हूं कि शोधकर्ता की आवश्यकता के अनुसार मुझे जानकारी देने में कोई समस्या नहीं है।"


_____          _____

हस्ताक्षर (व्यक्तिगत / प्रतिनिधि)                                          तिथि

**APPENDIX III**

**Village Profile**

- Name of the village:

- Tehsil:

- District:

- Sub-District:

- Does it fall in 5<sup>th</sup> Scheduled Area? _____

- Approx. total No. Of households:

- Number of *Gaddi* Household:

- Major occupations:

- Major natural resources available in the village and nearby:

- Agricultural practices:

- Seasonal calendar:

  - For crops

  - For transhumance

  - For labour activities

Disturbance analysis for changes in weather patterns

# APPENDIX IV

## Sample Checklist of Questions for The Practicing Gaddis

**Name:**                          **Age:**
**Gender:**                   **Caste:**

1) Practicing pastoral activities since:
2) No. of people in the family who practice pastoralism:
3) Other livelihood practices, if any:
4) How many livestock do you own in total?
   a. Goats
   b. Sheep
   c. Horses
   d. Dogs
5) What is the logic for the number and herd size?
6) Where do you go for your summer grazing and winter grazing?
7) What migration route do you follow? (Name the places in between/ ask to draw map)
8) Does forest department decide these routes and grazing grounds?
9) Do you have Forest department's permit?
   - What all places do you get the permit from- (HP, Punjab etc.)
   - Whose name is the permit on?
   - What is the name of the grazing ground written on the permit?
   - Do you share the permit or the grazing ground mentioned in it with anyone?
   - If yes, how are the shares decided?
   - How often and where do you renew the permit?
   - What is the fees to obtain the permit?
   - How much do you pay per livestock head?
   - Are there any other types of fees apart from grazing tax involved?
   - Who collects the tax and in which office is it paid?
   - What is the duration of the tax cycle—is it paid differently for summers and winters
   - Has the tax amount changed in the recent past?
   - Do you think tax collection is justifiable?
   - Have you ever experienced corruption in the grazing tax context?
10) How do you identify your grazing ground?  Is there any boundary to it?
11) How is the current condition of your pastures? Is the grass availability, and quality still the same?
12) Where all do you take your livestock for grazing?  (Classification of land)
13) How do you ensure the health of pastures for next grazing cycle?

14) How much time does it take to finish one transhumant cycle- summer and winter?

15) For how many days do you stay at the grazing grounds at a stretch?

16) How many days it takes to reach the grazing ground from home and then coming back to home?

17) Is your migration regulated with the weather fluctuations?

18) How do you predict/know the weather conditions?

19) Is there any ritual where the coming year events related to your livestock or transhumance predicted by oracle?

20) What is a good grazing cycle for you?

21) How is the number in the herd decided?

22) What if the number goes beyond the herding capacity, how are the herd sizes regulated?

23) Are all your livestock native breeds?

24) Do you have any cross-breed livestock?

25) Where do you take them for cross-breeding?

26) Does government provide any help in-
   a. Cross breeding
   b. Migration
   c. Wool shredding
   d. Sale and process of wool
   e. Meat marketing
   f. Food procurement

27) How do you categorize good fodder and are you able to get it from the natural grasslands these days?

28) Do you source some processed market-based food-fodder for your livestock?

29) What is the diet of a healthy livestock?

30) Who takes care of the livestock usually?

31) How do you get to know when livestock is not well?
   - What are the major steps taken for its recovery?
   - How often do you visit a veterinary doctor for help?
   - Do government provide any kind of health support for the animals?

32) Who helps in delivering the lambs and kids?

33) Where do you get the new livestock from, if you have to purchase?

34) Is there any event/fair where sale/purchase of livestock takes place?

35) How do you manage to increase the herd size?

36) Do livestock have any transactional significance?

   Wealth,           gift,              dowry,
   Social status,   totem,   spiritual,   asset

37) How is the livestock inherited?
   a. Who do give your livestock to as property?
   b. Do daughters and sons get equal share and say in livestock property?

38) What kind of relationship do you share with your domesticated animals?

39) How do you train the *Gaddi* dogs?

- Is the training just like another pet dog or it involve special activities?
- Where do you get the dogs from? (Price, market,
- Are these special breeds adapted to the hilly climate?
- How many dogs do you usually require?
- What are the main functions they perform?
- What do they eat?
- How are they trained to take care of the livestock?

40) What all is carried during your migration? – a *Gaddi* travelling kit?
- Is there any difference in summer and winter travelling kits?
- *Gaddis* wear typical coats, is that the usual clothing during migration?

41) What are the major challenges you face?
  a. In transhumance—migration
  b. Food procurement
  c. Health maintenance (both human and livestock)
  d. Grassland availability and quality
  e. Weather conditions
  f. Wildlife
  g. Settled communities
  h. Development related
     - Education
     - Infrastructure (dams, roads)
     - Tourism

42) How do you decide when to leave from home for summer/winter grazing?
  a. Is it fixed or flexible?
  b. Any ritual that take place before leaving
  c. How is it decided that who all will accompany the herds?
  d. Preparations before leaving

43) Are there any handicrafts/ food products produced at home?
  a. Do they sell these products in market?
  b. Are there any small help groups or co-operatives functional in the region?

44) How is wool sheared and utilised?
  a. Govt. help
  b. Marketing
  c. Products made at home—
     - who makes them,
     - what is the procedure (technology used- new or old)?
     - what are they used for?
     - is the substitute for those products available in the market?
     - significance of those products

45) Do you practice agriculture as well?
  a. What all crops are grown and when?
  b. Are they for self-subsistence or are sold in the market?

c. What difficulty is faced to grow crops?

d. How much will be the annual produce?

e. Who works in the field—sowing, reaping etc?

f. What all food material is bought from the market?

g. How have the food patterns changed over years?

h. What are the food products obtained from livestock—milk, cheese, meat?

i. How often the meat is consumed?

j. Do they buy meat from the butcher or slaughter the livestock themselves?

k. Any ritualistic significance of livestock in food?

**46)** What do the women of the household do mainly?

a. Labour Contributions – livestock rearing, agriculture household work etc

b. Economic contribution

**47)** Are the girls sent out for education?

**48)** Are there any female herders as well?

**49)** Do the women also travel during migration? What are their roles during the journey?

**50)** What do you think about weather conditions?

a. How are the seasons classified? (hindi calendar)

b. Do the seasons match the calendric months as they used to before?

c. How long are the seasons-?
  - Summers
  - Rains
  - Winters

d. Is there any change in the duration of seasons? (timeline)
  - Snowfall      -rains        -hot days

e. Is there any change in the crop cycles or varieties?

f. Is there any change in the transhumance patterns?

g. Is there any change in the availability of grasses, water sources, and medicinal herbs in the grassland?

h. How often do they encounter a landslide?

i. Are there any weather extremities experienced? (storms, excessive snowfall, rains, summer heat etc.)

j. What are the probable reasons for the climate changes?

k. Are these changes new and unusual or they used to happen in the past as well?

l. How do they deal with the weather changes?
  - Crop production
  - Livestock
  - Migration

**51)** What do they think about the continuity of pastoral profession?

a. Should it be carried forward by the youth
   - How is the experiential-practical knowledge about pastoralism and herding passed on in generations?
b. Will it end soon and why?
c. What are the major steps that *Gaddi* community is doing to protect and preserve their traditional occupation?
d. Are they getting any help from the government to continue their pastoral practices?
e. Is development becoming an obstacle for the pastoral activities?
f. How can *Gaddi* pastoralism be strengthened to ensure its survival?
g. What do they think pastoralism contribute to—socially and ecologically?
   - What is the importance of pastoral activities in the region?
   - If there won't be any pastoralists around, will it affect the socio-ecological setup?
h. What is the development according to the *Gaddis*?
   - Particular sectors and domains
   - What are their strategic and practical needs?
   - Is there any difference in government offerings and people's needs?

52) Do you own land?
   - What type of land is it? (agricultural, house, grasslands etc)
   - When was the land purchased or obtained? (under which settlement)
   - How is land inherited?
   - Do you know about forest rights act? If yes, then what do you understand from the act?
   - Have you made any claim under the act?

53) What all natural resources are mainly important for the *Gaddi* livelihood?
   a. Does it create any kind of resource conflict with the settled community and FD?

54) How has the profession pastoralism changed over years?
   a. Changes in routes,
   b. Interactions within community and with others
   c. places *Gaddis* visit,
   d. livestock they keep
   e. Earnings
   f. Livelihood options
   g. Political representation
   h. What are the possible reasons for such changes?

55) What all electronic gadgets do you have?
   a. Mobile (with/without internet)
   b. TV
   c. Computer etc

d. What do you use these gadgets for?

e. Do these gadgets play any role in facilitating pastoralism?

f. Do you think there can be any technology or a way that could make a *Gaddi* pastoral's life easier when he is migrating with herds?

**56)** Do you have any *Gaddi* representative who is politically active?

**57)** Do you think being politically active facilitate your profession or related aspects?

# APPENDIX V

## <u>Sample Checklist of Questions for Forest Officials</u>

**Name of the official**            **Designation:**        **Approx. Age:**

**Tenure in the region and department<u>:</u>**

**Region he/she belongs to:**            **Cultural Background:**

1) How is the land classified under the system adopted by forest department?

2) What all land and areas are accessible/ restricted for the pastorals for the purpose of grazing and migration?

3) Major Land use pattern adopted in the region.

4) How the access to the pastures is governed and regulated? (Distribution of land, inheritance, regulation, conflicts etc.)

5) Is there any difference in the customary regulation and formal regulation by FD?

6) Has the procedure of vesting grazing rights remained same over years or have there been any reforms? (trace the timeline)

7) Views of the condition of pastures in the region. (Degrading/ same/ better)

8) Any measures to promote pasture conditions and proper grazing.

9) Importance of pastures in the region

10) Major flora and fauna in the region

11) Are there any community participatory programmes where FD takes help or suggestions from the local pastoralists to improve the condition of forest and natural resources in the region?

12) Forest department's role in pastoralism.

     a. For what all the pastoralists are dependent on FD?

13) How do you see the interaction of pastoral animals and wildlife?

     a. Is it a co-dependent system or it causes inconvenience to FD/ pastoralists?

14) Does pastoralism interfere with the success of any forest related activity?

15) What measures do the forest officials and department take to facilitate or restrict the pastoral activities in the region?

**16)** Does any kind of resource conflict exist in between FD and *Gaddi* Pastoral community?

**17)** How are the migratory routes and time period decided? (considering there are *Gaddis* and gujjars )

**18)** Are there any changes in migratory routes and timeline of migration because of recent climatic changes (rains, snow), development activities (dams, road construction) and natural disasters (landslides, floods) in the region?

**19)** What are the main natural resources that the pastoralists procure from the forests and pastures?

**20)** Does FD facilitate the natural products (NTFP's) collection and marketing in any manner? (typically for *Gaddi* population)

**21)** Considering the traditional nature of Pastoralism, what is the forest departments stance regarding the activity in ecological context?

**22)** Has the pastoral dependency on pastures remained same in past decade?
  - And if the occupation has declined has it improved the conditions of grasslands available in the region, as the pressure has decreased?

**23)** How do you see pastoralism for the existence of forests and other natural resources?

**24)** Can there be any way to make pastoralism a sustainable activity that co-ordinates well with forest departments functions?

**25)** What do you know about the Forest rights act, 2006?

**26)** When did the implementation start and what are the major tasks undertaken under FRA?

**27)** What kind of FRA related committees are formed in the region?

**28)** What kind of claims are entertained under FRA?

**29)** How do you see FRA helping the forest dependent communities? specially pastorals

**30)** Is FRA a good or a bad move? Personal opinions

**31)** Has FRA changed anything in the functioning of Forest department?

## Sample checklist of questions for women respondents

Name:                        Age:

Marrrital status                    Education level:

Primary occupation

1) What all activities do you perform for the whole day?  (Create a timeline)
2) Do you participate in these two activities-?
    a. Agriculture
    b. Livestock rearing
3) How did you learn the skills?
4) At what age did you start participating in these activities?
5) Apart from it, do you also make some handicrafts?
    a. What type?
    b. From where do you procure the material?
    c. What are the uses of the item produced?
    d. Where did you learn making it?
    e. Do you make it for home use or also sell it in the market or informally?
    f. Do you make it as a hobby or it is a requirement?
6) Do you earn any money separately from that of your husband and family?
7) Do you think the process of socialisation for girls has changed over years?
    a. Was it same for you as it is for your daughter?
8) What are the major resources you need for daily household chores?
    a. Where do you get these? (fuel, drinking water, food supply etc.)
    b. Do you get any government help in procuring these resources?
    c. What all is bought from market and what is produced at home?
9) What is your role/possession in the pastoral system?
10) Do you ever go with the men on migration for grazing?
    a. If yes, how often?
        i. What is the journey like?
        ii. What is your role during migration?
        iii. How do you manage personal hygiene on the move?

iv. What do you feel about the pastoral journeys?

    b. If no, then where do you stay when men of the house go for migration?

        i. Who heads the household during that time?

        ii. How is your routine during this period?

11) Where do you stay all year long? Do you have any particular timing when you move out to your native village or other house?

12) Does your routine/workload change when the men are out for transhumance?

13) Is there any extra work load that you have to bear during this time?

    a. What kind of work?

    b. How do you deal with it?

14) What is the role of *Gaddi* women in Suhi mata fair?

15) Who takes the decision in the household regarding economic and political matters?

16) Do you attend local political meetings?

17) Are you a part of any self-help group or women's co-operative?

18) What is the usual age for girl's marriage?

19) Are there any places or rituals where only men go and take part?

20) Are women allowed to visit all temples, conduct poojas and attend political meetings?

21) What do you think about the changes in weather patterns?

    a. Is there any difference in snowfall, rains or summers?

    b. Is there any change in the way you used to cultivate before and now—timings, crops, fertilizers/supplements used for crop growth etc?

    c. Have the changes affected your labour and workload?

    d. Are you aware of climate change happening globally?

    e. What do you think are probable reasons for this?

    f. How are weather changes affecting your resources and environment around you?

    g. How do you cope with such weather fluctuations?

22) What role do they play in rearing of animals?

    a. Sheep and goats

    b. Dogs

c. Horses

23) How often do you go out of the village?

    a. Where do you go?

    b. Do you attend any community activities?

24) Do you teach your children the handicraft and other skills?

25) Do you have any assets on your name? (Land, house, jewellery etc.)

26) Have you inherited anything from your parental side?

27) Are girls generally given the land rights?

28) Do you feel that women should also have some of the assets on their name? (what and why)

29) Do you know about forest rights act?

30) How would you react if you get to know that government it providing women the right to land in addition to the name of their husband?

    Do you think it will make any difference in the status and daily life of women?

31) What language do you preferably use? Are you comfortable in talking to outsiders in Hindi language?

32) Do you also perform the roles and tasks that are usually done by men, when they are not around or have gone for migration?

33) How do you interpret the changes in pastoral practices?

34) With the decline in pastoralism, do you think there has been any change in life of women from the community?

## Appendix VII

## MAP OF ITDP'S IN HIMACHAL PRADESH
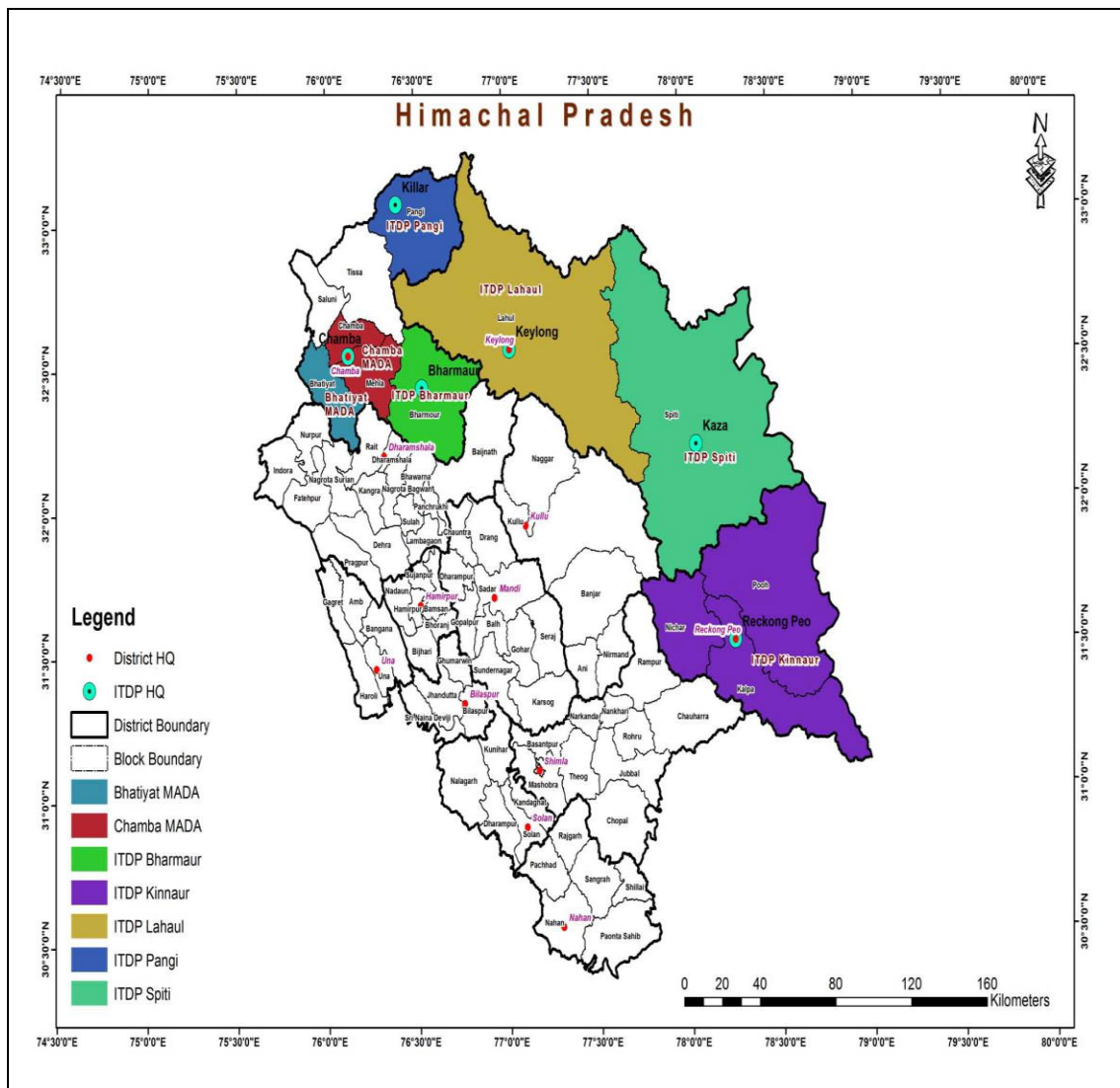


(Sourced from Annual Administrative Report 2017-2018, Tribal Development Department, Government of Himachal Pradesh)

## GLOSSARY

*Revad-* A livestock herd

*Jungle-* Common grazing resources in the forest areas utilized during the winter season

*Chugaan/charran-* Grazing of livestock

*Samudaya-* A community

*Mool vyavsaya-* Traditional occupation

*Route-* A migration route or trail followed by the pastoralists

*Maal/dhan -* Livestock

*Sajhi maal-* Group ownership of the livestock/a collective livestock herd with several owners

*Chelu-* A lamb

*Uun-* Wool

*Chor bazari-* Black marketing or thefts of livestock

*Gaddiyali-* A local Gaddi dialect

*Nuala-* An auspicious gaddi ritual

*Shareek-* Extended family and kin network

*Dhar-* A grazing ground/pasture on the mountain

*Vyapari-* A businessman or a livestock buyer

*Mail –* Livestock droppings

*Chulah-* Hearth

*Gaddan-* A female member of the Gaddi community

*Gauchars-* Village grazing grounds

# List of Publications

- **Malhotra, A.,** Nandigama, S., & Bhattacharya, K. S. (2022). Puhals: Outlining the Dynamics of Labour and Hired Herding among the *Gaddi* Pastoralists of India. *Pastoralism*, *12*(1), 30. https://doi.org/10.1186/s13570-022-00237-5

- **Malhotra, A**., Nandigama, S., & Bhattacharya, K. S. (2022). Women's Agency and Pastoral Livelihoods in India: A Review. *Journal of International Women's Studies*, *24*(2). https://vc.bridgew.edu/jiws/vol24/iss2/10

- **Malhotra, A**., & Nandigama, S. (2022). Revisiting the Reciprocity of Human-Ecological Systems: Integrating Extensive Agriculture and Transhumant Pastoralism in the Northern States of India. In J. G. Mureithi, M. M. Nyangito, J. W. Wamuongo, J. Njoka, E. M. Nyambati, D. Miano, S. Mbuku, M. Okoti, & F. Maritim (Eds.), *Sustainable Use of Grassland and Rangeland Resources for Improved Livelihoods*. (p. 6). Kenya Agricultural and Livestock Research Organization (KALRO). https://uknowledge.uky.edu/igc/24/3/7

- **Malhotra, A**., Nandigama, S., & Bhattacharya, K. S. (2021). Food, fields and forage: A socio-ecological account of cultural transitions among the *Gaddis* of Himachal Pradesh in India. *Heliyon*, 7(7). https://doi.org/10.1016/j.heliyon.2021.e07569

- **Malhotra, A**., Nandigama, S., & Pushp Lata. (2021). The cornered talks: Discussing gendered communication in relevance to the tribal development in India. In D. K. Yogi (Ed.), *Indian Tribes and Development Issues*. Book Enclave. Jaipur

# Conferences and Seminar Presentations

- Presented a paper at the International Seminar on Ethnicity, Livelihood and Cultural Change among Himalayan Tribal Communities organized by Department of Anthropology, Rajiv Gandhi University in Collaboration with IGRMS, Bhopal at Rajiv Gandhi University, Itanagar, Arunachal Pradesh during 23rd-24th September 2019

- Presented a paper titled "Declining Traditional Food Systems- A holistic study of cultural change among the *Gaddis* of Himachal Pradesh" at the International Conference on "Anthropology of Food and Health" organized by the Department of Anthropology, University of Delhi, India on 27th-29th February 2020

- Presented a paper "Political Contours of Livelihood Diversification- A case of Agro- pastoral community in India" at the 2nd Journal of Peasant Studies Writeshop- workshop in July 2020

- Presented a paper titled "Re-examining Gender within Research, Policy and Practice: Gender Dynamics in the *Gaddi* Pastoralist Community of India" at the annual conference of Development Studies Association hosted by the University of East Anglia from 21st June to 2nd July 2021

- Presented a paper "Revisiting the mutual reciprocity of pastoral and agricultural systems in the Northern region of India- A holistic socio-ecological approach" at The Joint International Grassland and International Rangeland Congress, October 2021 organized at Kenyatta International Convention Centre, Nairobi, Kenya [Online]

- Presented a paper "Mountains, Livestock, and Mobility- Construing Himalayan Pastoral Heritage" at the International Union of Anthropological and Ethnological Sciences (IUAES) 2021 Yucatan Congress: Heritages, global interconnections in a possible world during November 9-13, 2021

- Presented a paper titled 'Hired Herding and the Future of Pastoralism- A case from the Western Himalayas' at the Himalayan Studies Conference at the University of Toronto, Canada during October 13-16, 2022

# Workshops

- "Participatory Digital Methodologies and Ethnographic Filmmaking", ICSSR Research Methodology Course organized during 14-24 January 2019 at the Department of Anthropology, University of Delhi, Delhi, India

- Two-day Workshop on Research Methodology jointly organized by Department of Humanities and Social Sciences, and Economics, Finance and Management, BITS PILANI, India from 23rd-24th February 2019

- A workshop on 'Researching with the Pastoralists in India- What, why and How?' organized by Indian Pastoral Network in collaboration with Centre for Pastoralism and Sahjeevan at Institute of Development Studies, Jaipur, India from 8th-10th December 2019

- 2nd Writeshop-Workshop in Critical Agrarian Studies and Scholar-Activism 2020, jointly organized by The Journal of Peasant Studies (JPS), College of Humanities and Development Studies (COHD) of China Agricultural University (Beijing), Institute for Poverty, Land and Agrarian Studies at the University of the Western Cape (PLAAS), Young African Researchers in Agriculture (YARA), Future Agricultures Consortium (FAC), and the Global South Young Critical Agrarian Studies Scholars

- Summer Field School [Online] on Mountain Ecosystems & Resource Management organized during 19-28 September 2021 co-organized by The Grassroots Institute, Canada

# Brief Biography



Aayushi Malhotra is a UGC-NET(SRF) PhD candidate at the Department of Humanities and Social Sciences, BITS PILANI, Pilani Campus, India. She obtained her master's degree in Anthropology from the Department of Anthropology, University of Delhi and has interest in the areas including environment anthropology, nature-culture debates, systems thinking, sustainable transitions, and pathways.



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Prof. Kumar Sankar Bhattacharya is an Associate Professor at the Department of Humanities and Social Sciences BITS PILANI, Pilani Campus, India. He is an alumnus of Drew University, Madison, NJ, USA. He works in areas of Cultural Studies, Ecology and Environment, Postcolonial Theory, Trans-national and Global Literature.