What is equitable about equitable resilience? Dynamic risks and subjectivities in Nepal

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Abstract

Equitable resilience is an increasing focus of development policy, but there is still insufficient attention to how the framings of equity itself shape what, and who, is targeted through development efforts. Universalistic assumptions about climate risk or social marginalization can define equity in ways that hide dynamic and intersectional influences on what constitutes risk to whom under different circumstances. This paper investigates the implications of two different equity framings for resilience in Jumla District, western Nepal. Drawing on more than one hundred household surveys plus in-depth qualitative interviews in six villages, we find that state-led efforts to present post-civil war development as the "equal distribution" of roads and infrastructure, agricultural commercialization, and protection against systemic climate risk fail to reflect local experiences of risk, which are often expressed in terms of social exclusion rather than vulnerability to climate change. Yet, simultaneously, other efforts at building resilience that use caste and gender as indicators of social marginalization overlook how transitions in livelihoods and individual agency have changed vulnerability contexts for many people, or the increasing vulnerability to climate change of more landed farmers. The paper urges more critical attention to how normative framings of equity shape what, and for whom is considered equitable resilience, including assumptions about transformative change from analysts themselves. Representing risks and vulnerability in terms of socially marginalized groups alone might deny the dynamic, intersectional, and contextual interconnection of risks and social agency; and might impose unhelpful subjectivities of their own.

KEYWORDS: equitable resilience, climate change, social marginalization, Nepal

1. Introduction

For some years, development policies have highlighted the need for resilience, which is generally understood as the ability to withstand shocks and risks arising from social, economic, or environmental causes (Brown, 2016; UNDP, 2014). Increasingly, analysts now call for equitable resilience, which "takes into account issues of social vulnerability and differential access to power, knowledge, and resources" (Matin *et al.*, 2018, p. 202). This addition of equity to resilience, analysts argue, calls for the recognition of social subjectivities, social diversity and intersectionality, and the connections between challenges at different scales. Unlike more apolitical understandings of resilience, ideas of equitable resilience also relate to the transformative change of existing institutions and power structures to overcome inequalities and achieve fairer and more sustainable societies (Béné *et al.*, 2014; Mackinnon & Derickson, 2013; Matin *et al.*, 2018, p. 202).

In this paper we welcome the focus on social inequalities within resilience but argue that more attention needs to be given to the politicized and contested nature of equity itself within equitable resilience. Frameworks of equity, or just distribution, reflect norms of social justice, as well as implicit ideas of what is to be allocated, and to whom (Rawls, 1971; Sen, 2009). "Equitable" resilience, therefore, is based on what are deemed appropriate responses to what is understood to constitute risk and who requires interventions. Yet, these ideas also influence representations of the agency and identity of social groups as well as the presumed universality of the risks they face in potentially reductionist ways. This paper seeks to expand understandings of equitable resilience by investigating how different approaches to equity can influence who and what are targeted, and how these can become more inclusive. By so doing, this paper forms part of growing concerns within social sciences that existing approaches within social and ecological systems need to become more sensitive to normative, political

and economic influences on the understanding of environmental and social risk (Blythe *et al.*, 2018; Cote & Nightingale, 2012; European Environment Agency, 2019; Harris *et al.*, 2018; Lövbrand *et al.*, 2015).

The paper illustrates this analysis by presenting research from Nepal, and especially the western district of Jumla, which is one of Nepal's poorest zones and increasingly a focus for poverty alleviation and climate resilience (Pandey et al., 2014; Parajuli & Upadhya, 2016; Shresthra, 2016). First, the paper provides an overview linking academic debates over equitable resilience to evolving theories of equity. It then contrasts two different framings of equity: state-led approaches to national development based on allocating infrastructure, commercialized agriculture, and protection against systemic climate risk equally to all (Lewison, 2019); and then approaches to equitable resilience that specifically address inequalities in caste and gender (Jones & Boyd, 2011; Sherpa *et al.*, 2015). This analysis draws on more than a hundred household surveys plus interviews in Jumla, as well as reference to other research in western Nepal.

The paper concludes by reflecting on ways to make equitable resilience more transparent and inclusive. In particular, the paper calls for more critical awareness of how normative framings of equity shape "what" and "who" is targeted by equitable resilience. This finding applies both to the post-civil war development agenda of Nepal, as well as to normative framings of transformative change adopted by analysts themselves. While there is a need to recognize the structural inequalities between groups on the basis of categories such as caste and gender, it is important to avoid representing their risks or agencies in terms of these categories alone because it simplifies the dynamic, intersectional, and contextual ways in which different people face different types of risks. Trying to understand how risks affect different people in dynamic ways is a more equitable form of resilience than defining transformative change in terms of predefined ideas of risk and social agency.

2. What is equitable about equitable resilience?

There is increasing recognition within the resilience literature of the importance of political, institutional and macro-economic factors in driving different forms of resilience (Béné *et al.*, 2014; Ensor *et al.*, 2018; Haller, 2020), and the ways in which definitions of resilience themselves reflect and uphold particular political systems and values (Cote & Nightingale, 2012; Folke *et al.*, 2005, p. 462). Various analysts have therefore sought to reflect the social and political drivers of vulnerability within interventions to enhance resilience, rather than focus on technical objectives alone such as building or strengthening infrastructure (Brown, 2016; Garcia *et al.*, 2021; Nightingale *et al.*, 2020; Olsson *et al.*, 2015). Many analysts have also urged that resilience needs to engage with "the question of social transformation" (Weichselgartner & Kelman, 2015, p. 262) as a means to disrupt inequitable development pathways and exclusionary planning processes (Chandler & Reid, 2016; Felli, 2019; Manuel-Navarrete & Pelling, 2015: Rigg & Oven, 2015).

The phrase "equitable resilience" (Dekker, 2020; Goldin, 2019; Logan & Guikema, 2020; Meerow *et al.*, 2019) attempts to encapsulate a range of arguments and efforts to make resilience more sensitive to questions of inequality, justice, and transformative change within society (Béné *et al.*, 2016; Béné *et al.*, 2014; Carr, 2019, 2020; Levine, 2014). Based on a systematic review of papers examining both resilience and equity or related concepts (e.g. justice, power, rights), Matin et al (2018, p. 202) propose a collective definition of equitable resilience as:

> *"… that form of resilience which is increasingly likely when resilience practice takes into account issues of social vulnerability and differential access to power, knowledge, and resources; it requires starting from people's own perception of their position within their human-environmental system, and it accounts for their realities and for their need for a change of circumstance to avoid imbalances of power into the future."*

This definition does not, however, engage with the potential for conflict between people's perceptions of what is fair or equitable, nor indeed how "people" might be identifiable as groups linked to different perceptions. It is similarly silent on who, among researchers, practitioners, governments, local communities and other actors, might influence which knowledge and people are highlighted, or act as arbiters of whose equity framing matters, in what context. To engage more critically with the concept of what is "equitable" in resilience, it is necessary to embed these discussions in much longer-standing debates about the nature of equity itself.

(i) "What" are we being equitable about?

Equity is a contested concept and depends on understandings of justice and fairness (e.g. Bronfenbrenner, 1973). Rather than argue for any one notion of equity, this paper is more concerned with how different equity framings are used by diverse actors within varied scales and contexts, and how and in what contexts the macro and micro politics embedded in those arguments do, or do not, support transformative social change.

Indeed, the question of whether equity is culturally relative, or can be defined through universal principles and/or democratic institutions, is a topic of much ongoing debate. Within the realm of western liberal philosophy, the seminal work of John Rawls has framed justice as a mode of allocation that offers equal opportunities for all (Rawls, 1971, p. 12; Rawls & Kelly, 2001). As a means to assess equity, Rawls employed a thought experiment called the "veil of ignorance," where benefits are distributed among stakeholders who do not know about their own current advantages, and where no party can influence the process of distribution (Rawls, 1971, p. 13). Fairness, therefore, is a perceived equality and transparency of allocation. But this form of justice pays little attention to "what" is being allocated. Indeed, critics have argued it only works in a "narrow, distributive sense," rather than being "a moral theory" or "a general theory of right conduct" (Finlayson & Freyenhagen, 2011, p. 3). In contrast, later theorists of justice such as Amartya Sen (2009) have argued that a workable definition of justice should also consider what is being allocated, and the social inclusiveness of how this is defined.

These questions are important for understanding development and climate change policy. For example, various analysts have argued that climate change impacts should not just be understood in terms of atmospheric greenhouse gas concentrations, but also consider more localized distributions of vulnerability (Burton, 2009). Local vulnerabilities, in turn, are embedded in externally driven macro-economic processes such as agricultural commercialization; the concentration of land ownership, including through so-called "land grabs;" decreased access to common pool resources; labor migration, and expansion of state control; with varied effects on different social groups (Haller, 2020; Pradhan & Valentin, 2019) Accordingly, questions of climate justice should not just refer to universal indicators or risk and response, such as allocations of greenhouse gases or protection against their impacts, but also consider more diverse ways in which climate change impacts on different activities and objectives (Ensor *et al.*, 2019, p. 227; Forsyth, 2014). This more open-ended approach to allocation reflects insights from participatory and capabilities approaches to development, which seek to avoid focusing on singular definitions of development or risk, such as per capita income or greenhouse gases alone (Robeyns, 2005; Schischka *et al.*, 2008).

It is also reasonable to ask how universal visions of risk and resilience become fixed in public debate. Both Rawls and Sen discussed different pathways to deliberative public reason as a manner of achieving frameworks of justice and equity (Gilardone, 2015; Peter, 2007). Yet such public reasoning is itself a political act, and may be precluded altogether under authoritarianism or embroiled in partisan conflicts over land and resources (Nightingale et al. 2019). This also undertheorizes how deliberation occurs within science or formal expertise that often sets the ground rules for what constitutes risk, what needs to be allocated, and how appropriate allocation will be measured and assessed (Fukuda-Parr & McNeill, 2019). Seeing global climate change in terms of physical systems, for example, encourages analysts to see challenges for resilience in terms of balances and flows of gases, rather than contextual distributions

of vulnerability (Ayers, 2011; Cote & Nightingale, 2012). As Levine (2014, p. 15) noted, "it is much easier to measure 'objective' events such as rainfall than it is to 'measure' the circumstances which deprive some people of access to irrigation" (see also Béné *et al.*, 2014; Tschakert *et al.*, 2013). Hence there is often a close association of scientific authority with materialist, state-led objectives, such as infrastructure development and agricultural commercialization. Achieving a full discussion of "what" one should be resilient to might therefore also depend on how different institutions emerge that can define risk and resilience in different ways, and how far social participation can reshape the objectives of climate change and development policy (Nightingale *et al*, 2020).

(ii) "Who" is resilience intended for?

Frameworks of equity also cannot exist without reflecting or reinforcing ideas about social identity and agency. For example, Rawls' classic work about justice as fairness also argued for a second principle of "equality" to allow "free and rational persons" the liberty to "further their own interests" (Rawls, 1971, p. 12). Various critics have pointed out that these views reflect a belief that individualistic rationality is a universal human trait; or that government's main role is to facilitate it (Dagan & Dorfman, 2018; Gilardone, 2015). Gauthier (1974, p. 25) for example, argued that freedom and rationality are not "natural endowments" but "social creations." Indeed, Sen's early work on capabilities proposed that equity was shapeable and improvable by building equality, freedom, and welfare simultaneously through the framework of capabilities, rather than allowing individual agency to proceed unreformed (Sen, 1980). Accordingly, different visions of equity can employ competing understandings of human agency, including whether this agency is universal, or can be shaped through normative debates (Akehurst, 1976; Kluegel & Mason, 2004).

"Who" is served by equity can also be influenced by assumptions about "what" we are being equitable about. Research in Science and Technology Studies (STS) has argued that physical scientific representations of problems such as environmental risks simultaneously create particular understandings of environmental publics, or the people that either cause, are vulnerable to, or who might be able to resolve risks (Eden, 2017). In the United Kingdom for example, Wynne (1996) proposed that state expertise about radioactive fallout led experts to predefine who might be at risk, and how their behavior can be managed, without realizing these interpretations did not reflect local experience or actions. Similarly, other work has criticized tacit gender roles in climate change policies concerning forest policies (Arora-Jonsson, 2011), or how models of climate risk can reduce pathways to adaptation (Forsyth, 2018; Lemos & Boyd, 2010).

Much recent discussion about transformative justice within climate change policy has emphasized the need to represent socially marginalized groups as a way to overcome entrenched social inequalities, including in systems of justice themselves (Agyeman *et al.*, 2016; Newell *et al.*, 2021; Shi *et al.*, 2016). Yet the attention to social categories such as caste, indigeneity, and gender has to be tempered with a critical awareness of how far these categories actually imply single identities and agencies; or how other actors might wish to invoke these groups in order to achieve other, unquestioned, objectives (Beck & Forsyth, 2020). For example, the attention to caste and gender as markers of social inequality also has to acknowledge intersectionality, as well as how far these identities co-exist with other factors driving risk and resilience, such as access to land and resources (Arora, 2022; Nightingale, 2011). The expansion of agribusiness onto former commons land might disproportionately affect those whose ethnicity, class and gender have shaped their greater dependence on common pool resources (Chhatre & Fischer, 2016; Haller *et al.*, 2008; Nightingale, 2006, p. 174). The implication of these findings is that fixed frameworks of risk imply a commonality of experience that over-simplifies how environmental changes are considered risks, and the social identities of groups who experience them.

Accordingly, there is a risk that some attempts to achieve recognition justice – or the full acknowledgement of the existence, voice, and knowledge of marginalized people – might also adopt aspects of essentialism in how these people are represented (Bulkeley *et al.*, 2014; Schlosberg, 2012). A more participatory form of equity, therefore, requires the ability to question how far the categorization

of voices into specific social groups might also reflect outsiders' perspectives rather than marginalized people (Fraser, 2003).

(iii) Implications for equitable resilience

The challenges of defining "what" and "whom" resilience is for, raises some difficult questions for equitable resilience. First, equitable resilience is not simply applying predefined ideas of resilience to predefined recipients, but instead seeking a more transparent and inclusive understanding of both what, and for whom, equity applies to. But framings of equity can sometimes be hidden, or tacitly implied in environmental assessments and policymaking. For example, Matin *et al* (2018, 203) write that "equitable resilience needs to be embedded in a system approach" that takes into account different levels of authority and different subjectivities. Yet, a focus on systems can often imply assumed linkages between cause-and-effect that can obscure who defined these links, and how far systems also project common understandings of risk or social identity onto diverse contexts (Scoones *et al.*, 2020, p. 2). Equitable approaches to resilience therefore need to consider how far systems thinking might close down important questions about the making of equity, and to ask what possible risks or other social identities might be lost when this systems thinking is applied.

Second, what is meant by subjectivities, and how does this help achieve equitable resilience? Matin *et al* (2018, p. 200) argue that "subjectivities are often grounded in individuals' cultural, racial, ethnic, gender and other social attributes," and cite that "inclusion" is critical (Matin *et al,* 2018, p.201). In a different paper, Ensor *et al* (2021, p. 3) state "full political capability is achieved when hitherto marginalized groups gain full and equal partnership in decision-making processes." Yet, as discussed above, it does not always follow that fixed classifications of identity and risk should be used to indicate equity, or other characteristics such as agency or vulnerability. Moreover, this use of the word "subjectivity" seems to imply the same meaning as "agency," rather than the more Foucaultian understanding of subjectivity as how other people's perceptions position specific groups into allegedly coherent "subjects" with expected agencies in often restrictive ways (Butler, 1997; Garcia *et al.*, 2021; Nightingale & Ojha, 2013). It is therefore important to ensure that attempts to democratize ideas of resilience do not employ simple social categories that can hide intersectional or contextual expressions of agency and identity.

And thirdly, how far is equitable resilience shaped by underlying beliefs and values about transformative change? Matin *et al* (2018, p. 202) note that equitable resilience might include "whole-scale transformation" if it is to avoid reproducing development failures and inequitable outcomes. Yet, the assumptions and implicit causal pathways within transformative change are often left unexamined. Matin et al, for example, cite the work of Manuel-Navarette & Pelling (2015, p. 558), who attribute predefined subjectivities to three different themes: "development," as a trajectory of individual improvement; "adaptation," as belonging (or not) to adapting systems; and "transformation," as seeking "emancipatory subjectivities" outside of development or adaptation. These interpretations reflect what the authors call the tension between individual and subject formation within capital's creative destruction of social-ecological systems (Manuel-Navarrete & Pelling, 2015, p. 559). Statements like these add to the preceding concerns that the word "subjectivity" is used to imply a known agency rather than an indication that assumptions about how specific social groups might be contestable. Moreover, they raise questions about how far system-wide reallocations might be based on common ideas of risk and identity that might fail to acknowledge more diverse experiences, or indeed the potential shortcomings of representing risk in such universal ways. Matin *et al* (2018, p. 203) seem to acknowledge this challenge, writing, "equitable resilience is therefore inevitably context-specific. It is also a system outcome… attention to the interlinkages… facilitates the inter-linking of context and system." Yet, their discussion does not explain which social processes have defined the "system;" nor how an awareness of context might redefine what and who are invoked by the term equitable resilience.

This paper now illustrates these challenges by examining how contestations over equity have unfolded in one district in Nepal.

3. The study

The study's objective was to identify how different framings of equity impacted on what aspects of risk and which social identities were invoked when building resilience in Jumla District, Nepal. In particular, the study contrasted state-led approaches to resilience that aimed to provide infrastructure and development opportunities on the basis of equal distribution to all without reference to caste and gender, with other approaches to equitable resilience that focused on differences between caste and gender. Both of these approaches included resilience to climate risks such as flooding, storms, and extreme temperatures, as well as opportunities for economic development including agriculture.

Three questions were asked:

- "What" aspects of risk were resilience interventions meant to be equitable about?
- "Who" is targeted by resilience interventions, with implications for how social groups are represented and understood as coherent actors?
- What are the implications for understanding equitable resilience as an inclusive concept and policy approach?

The district of Jumla was selected because it is among Nepal's poorest districts, and is characterized by significant inequalities between caste and gender: indeed, Nepal's 2011 census indicated that some 56% of women in Jumla were illiterate (Chaudhary Foundation, 2019). It has also been a target for development aid for decades, and provided supporter for Maoist struggles during Nepal's civil war (1996-2006), which has attracted specific post-war assistance from the Nepali government (S. Sharma, 2016). The district is therefore an appropriate location to consider development interventions and the significance of social divisions.

Fieldwork in Jumla was conducted in 2018-19 in six villages purposively selected to reflect differences in caste composition, access to roads and markets, and levels of agricultural commercialization (see Figure 1 and Table 1). A total of 111 household surveys were completed (based on a target of 10-20% of each village selected randomly), plus some 30 semi-structured interviews with key informants including Dalit (low caste) and non-Dalit men and women respondents. Interviews were conducted in Nepalese in collaboration with a Nepalese research team, including a female interviewer. The research indicated that only some 8% of our randomly selected household survey respondents were ethnic minorities, or "Janajati" – of which most were recent arrivals living in Talichaur, near Jumla's District center. These respondents reported levels of land ownership and access similar to the high caste Brahmin/Chhetri (referred to as "Hill Jat" in census data). Janati respondents were therefore included as "non-Dalit" in research. Additional research would be needed to explore Janajati experiences and understandings of equity more fully.

[FIGURE 1 HERE, MAP]

[TABLE 1 HERE, CASE STUDY VILLAGES]

4. Framing equity and resilience in Nepal

The social and environmental diversity of Nepal offer various ways to frame questions of fair distribution of resilience. In turn, these factors also offer opportunities for the so-called "socio-environmental state" (Nightingale, 2018) to represent socio-economic and environmental change in

ways that reflect, or justify, political visions for appropriate development (also see Nightingale, 2017; Gyawali & Thompson, 2016).

In terms of social diversity, Nepal has a long history of inequality and contestation around caste, ethnicity, and gender (Paudel, 2016). These, in turn, both mediate, and are mediated by, access to land, labor and resources, as also shown by work in Humla and Mugu Districts close to Jumla (Cameron, 1995; Nightingale 2011). Non-Hindu ethnic minorities, or so-called Janajati, constitute some 35.6% of Nepal's population (Adhikari & Gellner, 2016; Jha, 2019). Within the Hindu caste system, high caste Brahmin and Chettri historically dominated social power. The term "Dalit" emerged in recent years, to refer to the lowest castes classified as "untouchable" within Nepal's national law code of 1854 (Adhikari & Gellner, 2016). Their untouchability pivots around Hindu notions of "purity" and the historical roles of the low caste as laborers and sharecroppers of high caste landholdings (Onta & Resurreccion, 2011). These factors contributed to a general lack of access to land (and especially irrigated "khet" land) among Dalits, and the emergence of social institutions such as the *lagi mane* (or *balighare*) tradition, which required Dalits to provide indentured service to high-caste patron households in exchange for grain (Fortier, 1993, 1995). While caste-based discrimination has been outlawed since 1963, there are still lingering inequalities, and Dalit subcastes still are associated with particular trades such as metalwork, tailoring and shoe-making, music, and waste removal.

The social strictures of caste and religious purity also interplay with gendered identities. For example, strict rules regarding caste endogamy and village exogamy historically entrenched patriarchal control over women's mobility and economic dependence on male family members (Panta & Resurreccion, 2014). For Dalit women in particular, the intersection of gender with caste-based discrimination and high rates of poverty can enhance vulnerability (Arora, 2022).

Social divisions have also been invoked within the discussion of environmental problems. In the 1970s and 1980s, for example, "the ignorant and fecund peasant" of Nepal's Middle Hills (Thompson, 1998, p. 118) was often portrayed as driving deforestation and population growth, leading in turn to landslides and downstream flooding (Ives & Messerli, 1989). Today, such simple explanations of these problems are widely criticized (Blaikie *et al.*, 2002; Metz, 1991; Mishra et al, 2019), not least because they overlook the complexity of underlying biophysical changes occurring simultaneously with socio-economic transitions. For example, various reports have linked climate change to the drying up of wells in Nepal's Middle Hills, forcing vulnerable groups such as women and children to walk further for water (GoN, 2010; S. Sharma, 2016; Sherpa et al., 2015, p. 108). Critics, however, have proposed these representations avoid evidence that water shortages might also be driven by extending PVC pipes and electric pumps in the Middle Hills, or the gradual replacement of dryland maize and millet with water-intensive marketable vegetables (B. Sharma et al., 2016). Indeed, some have argued that the gradual replacement of water buffaloes, plus anti-malaria policies, have combined to lower water tables by reducing the number of ponds (Gyawali & Thompson, 2016, p. 182). These arguments add more complexity to the influence of climate change alone, and indicate that universal responses to climate change might not address locally-defined concerns (Clement & Sugden, 2021; Nightingale, 2017, 2018, p. 703).

Indeed, some analysts have argued that there is a new environmental crisis based on the emerging vulnerability and livelihood fragility of Nepal's increasingly globalized rural economy, expressed through out-migration, abandonment of productive mountain lands and unregulated remittance economies (Satyal *et al.*, 2017). Selective migration of household members to cities in Nepal, India, or elsewhere have changed contexts of risk by reducing overall dependency on traditional rice farming, yet have also left remaining family members still engaged with local economies (Sunam & McCarthy, 2016). Likewise, Spangler and Christie (2020) found that the feminization of agriculture resulting from the out-migration of male workers had differing effects on women's empowerment across different regions and social groups. One study in western Nepal observed how the combination of a shift to a cash economy and the feminization of agriculture was replacing the *lagi mane* patron client system with one where higher caste women hire Dalit women as agricultural laborers (Cameron 1995, p. 239). These

transitions have allowed some Dalit women to use cash revenue to raise their socio-economic status, for example by offering loans to non-Dalit in exchange for additional farmland held as collateral – a practice known as "*maate*" – or by entering new cash-based markets such as timber trading (Nightingale, 2011). These socio-economic transitions show that equitable solutions might focus on the agency and opportunities faced by affected groups in specific contexts, rather than assuming environmental or economic change affects all in the same way.

Against this background of rapid change and inequality, it is possible to identify two contrasting visions of equity that have influenced resilience interventions in Nepal. The first emphasizes national unity, without distinction between caste, ethnicity, and gender. The second focuses on these groups as a means to overcome social marginalization within development policy. These different perspectives on equity have origins in Nepali politics, and in different general approaches to climate change policy.

Within Nepal, competing visions of national unity versus social differentiation have their roots in the origins and aftermath of Nepal's civil war (1996-2006). Initially a Maoist revolt against the government, the civil war expanded through alignment with caste, ethnic and gendered identities, united by a common discourse of overthrowing hegemonic social structures and advancing social equality (Bownas, 2015; Braithwaite, 2015). The conflict especially gained support in relatively remote mid- and upper-hill regions, such as Districts like Jumla with high rates of income poverty and land inequality (Hatlebakk, 2010; Shrestha-Schipper, 2009). Following the end of the war, the Maoist ruling party sought to resolve inequalities through a new constitution and polices that sought to achieve decentralized governance to new, sub-national provinces based on ethnicity (Adhikari & Gellner, 2016, p. 112), and to allow greater access to civil service and administrative positions for Dalit, women, and Janajati (Shneiderman *et al.*, 2016). Different groups, however, disagreed about the demarcation and responsibilities of provinces, leading to a period of political instability, and new calls for "national unity" by the (higher caste) Brahmin Samaj Nepal (BSN) coalition, as opposed to acknowledging social difference (Adhikari & Gellner, 2016). In addition, a new form of Hindu nationalism emerged that identified international finance and development as the driver of political unrest, and part of a colonial Christian conspiracy to disrupt a previously peaceful and harmonious Hindu order (Wagner, 2018).

After years of debating Nepal's new federalism, the Maoists lost their majority in 2013 and a new Nepali Constitution was ratified in 2015. The new Constitution divided Nepal into seven provinces that included lowlands, highlands and ethnicities in ways that largely denied any one ethnic group a popular majority. These new cadastral units were based on a framing of "equity as unity," in contrast to the Maoists and minority groups hoping for deep structural reform to address caste and ethnic differences (Adhikari & Gellner, 2016; Shneiderman & Tillin, 2014). The language of the new Constitution also reflected more universalist equity framings, with the removal of much of the proposed text addressing the rights of women and marginalized groups (Nightingale *et al.*, 2019).

These different framings of equity have also been reflected in debates about climate change and resilience. As discussed above, systemic understandings of climate change emphasize the role of additional greenhouse gas concentrations as drivers of risk at the global scale (Ayers, 2011; Burton, 2009; Lemos & Boyd, 2010). These frameworks have influenced various interventions against climate change in Nepal. For example, the Food and Agriculture Organization of the United Nations adopted a universalistic approach to climate risk and economic solutions in Nepal by arguing that agricultural commercialization can reduce the likely impacts of more extreme weather on food production (Selvaraju *et al.*, 2014, pp. 109-110; Thakur, 2017). Similarly, the World Bank Pilot Program for Climate Resilience (PPCR) in Nepal has supported climate-proof infrastructure such as stronger roads and bridges to allow trade to continue in the event of storms and floods (Ojha *et al.*, 2016; World Bank, 2010). Road construction in Nepal has been noted for increasing opportunities for migration and trade, but also allowing other regions to import goods and labor to replace local sources (Beazley & Lassoie, 2017; Charlery *et al.*, 2016), or even to allow military access (Rankin *et al.*, 2019).

In contrast, however, other analysts have proposed greater attention to social inequalities and targeted interventions. One study of the PPCR in Nepal, for example, argued that its projects did not address local concerns about resilience such as access to family and medical assistance during climatic events; meanwhile engineers and World Bank representatives did not see these social concerns as relevant to their task (Ayers et al., 2011). In Humla, in western Nepal, other research found that successful adaptation to climate change depended on overcoming the various conscious or subconscious behaviors that exclude Dalits or Janajati from local planning and markets (Jones & Boyd, 2011).

These tensions have also been seen in discussions about Nepal's formal attempts at locally sensitive climate change policy, such as its National Adaptation Plan of Action (NAPA) and Local Adaptation Plans of Action (LAPAs). Some analysts describe these initiatives as good examples of local participation (Chaudhury et al., 2014; Penniston, 2013). Yet, it has also been claimed that political party debates about social division in Nepal were explicitly sidelined in favor of more technical solutions to adaptation (Darjee *et al.*, 2021; Nagoda & Nightingale, 2017, p. 87). Accordingly, critics have said that the NAPA offers "one-dimensional technocratic solutions that ignore the drivers of local vulnerability" (Nagoda, 2015, p. 570), or combines "techno-managerial" representatives of Nepal's developmental state alongside the IPCC's "bias" towards "epistemic tools emerging from reductionist, constituent ideologies" using the nation state as a spatial unit (Chakraborty & Sherpa, 2021, p. 7).

5. Equitable resilience in Jumla

This section now presents research from Jumla District on how different framings of equity influence "what" and "who" are affected by resilience interventions. In particular, the section considers state-led initiatives justified on "equality of distribution" with reference to divisions such as caste and gender; and approaches that specifically refer to these categories as a way to achieve transformative change through equitable resilience.

"What" does equitable resilience involve?

Jumla is located in the Karnali region, in the mid to high hills of Northwestern Nepal. It has a cold, dry climate and rugged topography, and is renowned for growing irrigated rice, wheat and barley at altitudes above 2000 meters (Gyawali & Thompson, 2016, p. 188). Unsurprisingly, much research on climate change policy in Jumla has focused on predicted changes to temperature and rainfall and their likely impacts agricultural productivity (Pandey et al., 2014; Parajuli & Upadhya, 2016; The Rising Nepal, 2019).

Yet, historically, Jumla's economy has relied more on trade than agriculture. For centuries, Jumla lay at the center of the Karnali salt trail, where sheep and goat caravans carried salt and other goods from Tibet to the lowlands to trade for grain and other produce. This trade once supported a large and powerful Hindu Khas kingdom, and a social system based on the dominance of the Khas Chhetri (78% of the population) over the low-caste Dalit (21% of the population) (Shrestha-Schipper, 2010). During the 1980-90s Jumla also became known for poverty and famine, also prompting support for Maoists during the civil war (Saxer, 2013). Jumla was only connected to Nepal's national road network in 2009. Accordingly, any challenges of climate co-exist with deep-set social inequalities and declines in traditional trading livelihoods.

Universalist framings of development as "equality of distribution" were highly visible during our field work in Jumla for items such as household infrastructure, roads, and encouragement of agricultural commercialization. These universalist framings were perhaps most clearly exemplified in ubiquitous signs, leaflets, and posters distributed by the government urging the provision of "one" good or service per household or village. For example: "one village, one road," "one house, one tap (faucet)," "one house, one toilet," "one house, one employment," or "one house, one orchard."

These "one–one" slogans comprise part of the Nepali government's attempts to build national unity after the civil war, reflecting the vision of "Prosperous Nepal, Happy Nepali" adopted by as part of the country's climate change policy (Darjee et al., 2021, p. 10; GoN, 2019, p. 5). They also reflect a conventional focus on climate resilience by providing stronger roads, and access to water and markets. What social divisions might exist within users?

As discussed above, caste is often used as an indication of social marginalization, although using these categories alone can hide transitions in livelihoods and the agency of individual people (Nightingale, 2011; Spangler & Christie, 2020). Predictably, however, evidence showed that there were noticeable differences in access to land between Dalits and non-Dalits across the six villages studied (see Figures 2 and 3). While there is notable variation across all castes, a relatively large number of Dalit have access to only 0.1 ha or less (including land for their houses), and on average Dalit landholdings are smaller in size than those of non-Dalit. Furthermore, and consistent with Mary Cameron's (1995) previous research in western Nepal, Dalit land is generally less fertile and less accessible. Only two Dalit respondents (6% of all Dalit surveyed), held land title to irrigated khet land, with a maximum khet size of 0.15 hectares. This compares to 56% of non-Dalit holding titled khet land.

[FIGURE 2 HERE]

[FIGURE 3 HERE]

The statistics about land imply that non-Dalit farmers are more likely to benefit from activities to enhance agricultural commercialization. Indeed, the research showed that the lack of access to land was associated with a higher level of income from foreign remittances. For all of the six villages, some 42% of Dalit households received remittances, compared with some 38% for non-Dalit households. In some villages such as Gora and Lihi (both located in valleys some distance from the administrative center of Jumla in Talichaur), the percentages were much higher: between 64-72% of Dalit households compared with 54-62% for non-Dalits. These statistics indicate, unsurprisingly, that non-Dalit households were more engaged with agricultural production (especially on the irrigated khet land), while Dalits were more engaged with working for labor or non-agricultural trading. But it also shows that the main delivery of items related to resilience under the government "equality of distribution" scheme were more likely to favor non-Dalits.

These findings support the objectives of using "equitable" resilience as a means to transform rather than reinforce social inequalities. Interviews with Dalits reflected a strong sense of unfairness in their relative land poverty, as well as the perception that universalizing "one–one" approaches were being exploited by the higher castes to further entrench inequality. For example, one Dalit schoolteacher in the urban municipality of Talichaur poured scorn on the ideas of "one house, one toilet" and "one house, one tap (faucet)" because they do not acknowledge other shortages:

> *[Many Dalit] even don't have land to build a toilet. The government is focusing on health and sanitation but in our settlement there is no drinking water. There are only two public taps for 84 households. There is no water for washing clothes and bathing. We have to go to a stream to wash our clothes. And the question is, how could we clean our toilet, and without water does having a toilet make any difference or not?*
>
> *Dalit, teacher, Talichaur, ID #3*

Indeed, during the fieldwork, the researchers found on newly-built toilet in an outhouse in a Dalit ward in Talichaur had been converted to a Dalit woman's sleeping quarters for "chhaupadi," a now outlawed practice still observed in western Nepal of isolating women due to their ritual impurity during

menstruation (Thakuri *et al.*, 2021). This stark example shows how the allocation of items under the principle of equal access might fail to have impacts on pre-existing social structures and exclusions.

Similar concerns about inequality were expressed about the "one house, one orchard" program. Apple production has been identified as suitable for Jumla's cool climate (Lewison, 2019), and other zones, such as India's Himachal Pradesh have successfully promoted apples in the early 1980s before climate change forced a shift to other crops (Sahu *et al.*, 2020). But various comments collected in Jumla suggested that apples were seen to be an activity where Dalits were employed as laborers and non-Dalits gained the profits. This is one comment about a Red Cross project:

> *While building the apple orchard we Dalit people dig the field and plant apple tree on their land. For doing this the Red Cross provided 4 kg rice and Rs. 200-250 as wages. Now, non-Dalit people start selling the apples from that orchard and we Dalit people are just looking at it. We just get rice and wages on that program and non-Dalits are now getting everything.*
>
> *Dalit, local hotel owner, Lihi, ID #6*

Further comments also questioned the wisdom of providing infrastructure in the form of irrigation canals: "We people don't have any land, what is the use of building an irrigation canal?" (Dalit, Lihi, ID #8). These statements support other research that have questioned the appropriateness of resilience or adaptation interventions in western Nepal without acknowledging local definitions of problems. For example, in neighboring Mugu District, other researchers found that interventions building irrigation did little to address the immediate problems of invasive caterpillars, and reinforced inequalities in access to commercial crops (Nightingale *et al.*, 2021, p. 8). These kinds of challenges have reinforced the desire to ask about the wisdom of "what" is being allocated for adaptation or resilience projects, and instead to allocate what matters to people's lives rather than to focus on presumed impacts of climate change (Ensor *et al.*, 2019, p. 227).

Economic change, however, is apparently also changing the options available to Dalit people in Jumla. Various Dalit interviewees reported that the traditional patron client *lagi mane* of indentured labor was increasingly replaced by cash payments (a trend also identified in other work, such as Cameron (1995) and Nightingale (2011)). Respondents pointed out how some local Dalit tailors and ironworkers have started their own businesses. Yet, respondent also reported concerns, such as a frequently repeated phrase, *roadlay lahdkhayo*, roughly translated as "the road ate my livelihood," which was meant to imply that Jumla's new roads brought costs and economic competition as well as possible opportunities.

> *We don't have land, we don't produce or sell anything and so we have to buy everything. The road has not brought us money. Instead it snatches our rupaiya (cash) out of our pocket.*
>
> *Dalit iron worker, Talichaur, ID#2*

One example of these risks was how jobs for Dalit men as porters at the Jumla airport in Talichaur were now apparently lost with the arrival of the national road network. The research asked women in particular about their perceptions of responsibilities arising from road construction and commercialization (Figure 4). Results suggested that most Dalit women experienced moderate to significant increases in workloads, while most non-Dalit women reported decreased workloads. In interviews, Dalit women in Talichaur explained that they used their new cash income from labor to offer loans to non-Dalits as a means of gaining access to land to grow vegetables. The offering of loans in proxy of payments (the practice of *maate*) was more common among Dalit than non-Dalit. These findings indicate that, on the whole, Dalit men and women have found the items provided by the government and other interventions for resilience to be either onerous or irrelevant to their needs. Some Dalit women have been able to benefit indirectly from new opportunities. But the main items required

for greater resilience are not the roads, toilets, taps, and orchards themselves, but greater access to land, commodity, and labor markets.

[FIGURE 4 HERE]

"Who" is equitable resilience for?

The question of "what" is distributed for resilience also needs to be considered alongside "for whom?" This question can refer to which specific beneficiaries benefit from interventions, plus how interventions project subjectivities, or presumed identities and agencies, onto different people. For example, past discussions of climate resilience in Jumla have often invoked images of social identity and agency based on the District's image as remote and traditional. One national study on climate risks called upon Jumla to continue its history of building carved wooden bridges across mountain streams as a traditional and community-based technology against climate change (GoN, 2017, p. 141). Such representations of Jumla conceal the diversity and change of local people, and focus only on the direct impacts of climate change (see also Sherpa et al., 2015). Our research investigated different beneficiaries from resilience interventions, but also how discussions of "equitable" resilience might project subjectivities (or implied agencies and identities) onto social groups. What agencies and vulnerabilities are overlooked when looking at caste and gender alone as markers of social marginalization?

Figure 5 shows the range of development challenges prioritized by households in the six villages surveyed, divided between caste. The most common top challenge listed was socio-economic in nature, namely a "lack of livelihood options in general," accounting for 36% of all respondents, comprising 47% of Dalit respondents, but 34% of non-Dalit. This ratio is unsurprising given the relative lack of land and economic opportunities generally relating to Dalits and non-Dalits. Yet, Figure 5 also shows a striking number of non-Dalit households prioritizing physical aspects of climate change as their most important development challenge. These challenges, such as drought, water scarcity, landslides, and flooding seem to reflect the tendency for non-Dalits to have greater access to land than Dalits, and consequently the relative importance of agriculture to non-Dalit livelihoods.

[FIGURE 5 HERE]

Among Dalit respondents, "social issues" were the second most frequently selected challenge (selected by 11% of Dalit respondents versus none of the non-Dalit respondents). Labor markets, trade, and government services such as education and health also prominent as Dalit concerns. To a large extent, these findings reflect the observed greater access to quality farming land by non-Dalits, and consequently the higher engagement in labor markets by Dalits. As discussed in the preceding section, this distribution also means that items distributed to achieve resilience might have different levels of meaning to different beneficiaries. In particular, infrastructure and agricultural commercialization is more likely to benefit non-Dalits because they are more engaged in agriculture.

But at the same time, these findings also indicate two challenges of using caste to indicate social marginalization. First, it is still clear that the larger landholders have a higher exposure to climatic events than lower-caste communities. These risks faced by these groups should not be overlooked in the search for a more equitable form of resilience. Second, it is important not to link the risks listed in Figure 5 with caste too essentially: it might be more effective to describe the people who experience these challenges in terms of their status as farmers, traders, or laboring mothers, for example, as these, rather than caste itself, are the reasons these challenges are considered as risks. In this sense, the ability to achieve transformative social change through equitable resilience might depend more upon understanding the factors that assist or obstruct mobility between different livelihoods and life options, rather than seeing caste alone as an indication of marginalization or vulnerability.

Intersectional and contextual influences on agency are therefore more likely to explain the ability of marginalized people to transcend social structures to gain resilience. Yet, the research also found various examples where these same factors can impede progress. For example, one Chhetri woman from the remote village of Marphan described how she lacked enough land to gain collateral for loans. When one government for poverty relief (the Poverty Alleviation Fund) gave all members of her local savings group a greenhouse, she was unable to benefit because she had no spare land to put a greenhouse on (Single woman, Marphan, ID#37). Another Chhetri woman in Talichaur (ID #27) reported how she took up vegetable farming in the mid-2000s with help from World Vision. This work allowed her to earn cash, which she spent without her husband's permission. Yet as she grew older, she became increasingly caught in a cycle of declining work because of ill health, leading to a lack of funds to hire labor, and hence she was unable to produce as many vegetables. On top of this, the improved roads have increased competition from cheap vegetables imported from Nepal's Terai (lowlands). For both of these women, interventions aimed at increasing their commercial agricultural production appeared to ignore the key challenges they face. But these challenges were not explained simply by their gender or caste.

These observations illustrate this paper's argument. Transformative social change through "equitable" resilience is not simply achieved through targeting predefined socially marginalized groups, but instead in focusing on the contextual and intersectional factors that produce vulnerability. This argument has been made before by Mary Cameron (1995, p. 239) who emphasized how labor and land transformations were helping to free up low-caste women's labor and hence contribute to changes to caste hierarchies. Moreover, Andrea Nightingale (2006, p. 179; 2011) has also highlighted the ability of low-caste women to use the subjectivities assumed on them within bargaining strategies as a *de facto* expression of negotiating power with other castes. The ability to gain access to valued outcomes is crucial for achieving equitable resilience, but this is not simply explained by social categorizations alone.

The research in Jumla showed various occasions when Dalit respondents discussed opportunities for negotiating greater agency. Many comments referred to the conflict during and after the civil war to achieve equity for different social categories, but also disappointment at the weakening of the Maoist objectives.

> *At the time of Maoist [control] non-Dalit were forced to eat the food that we touch and they took us into their home also. In marriage ceremonies we could eat together with non-Dalit. The Maoists punished people if they heard something related to discrimination. They have raised our voice. They said that there should be equality and justice to us. Community and society should throw away the ill practice of the caste system.*
>
> *Dalit iron worker, Talichaur, ID#2*

But also:

> *Now, the Maoist party is not strong, they all are engaged in their personal benefits they don't care for us. We don't have strong party or even local people to speak for us, for equality.*
>
> *Dalit tailor, Tila, ID#7*

And sometimes respondents also criticized national "equity as unity" sentiments:

> *Last year one non-Dalit ... called one of my friends Dum [a derogatory word for Dalit akin to the N-word]. We told our Ward Officer and filed a written letter of complaint, but the ward officer said that we have to compromise and move forward*

on this issue. He gave a speech about the importance of peace and harmony. There was no police report and no action taken against him. Even if we file a case of discrimination nobody really cares about it, we don't get justice.

Dalit tailor, Tila, ID#7

Conversations like this suggest that framings of equity as "equal distribution" and "harmony" are being challenged. But this seems to be occurring under a more dynamic and shifting sense of social identity and agency rather than on the basis of fixed interests and actions from specific social groups.

6. Conclusion: how to understand equitable resilience?

Debates about equitable resilience need to pay more attention to the implications of tacit framings of equity itself. This statement applies to political actors such as the nationalist government of Nepal that employs "equity" as a means to achieve its imagination of post-civil war identity. Yet, it can also apply to analysts of equitable resilience themselves. There is a common assumption that equitable resilience means empowering marginalized groups in order to achieve transformative social change (Ensor *et al.*, 2021; Manuel-Navarrete & Pelling, 2015; Matin *et al.*, 2018). But these positive intentions need to be examined for how far they adopt fixed subjectivities or assumptions of shared physical risks that can conceal the dynamic nature of risks, and the changing constitution of who experiences them.

A key part of this examination is to consider how far "what" is distributed as equitable resilience might also shape "who" gets to receive it – and vice versa. Plus, how does describing these factors in terms of systems hide the specific ways in which norms of equity have been made or applied to social groups for different outcomes? An important challenge here is that the word "subjectivity" is often used interchangeably with agency without acknowledging the social science understanding of the term as projected assumptions about a social group (a point also made by Garcia *et al.*, 2021, p. 191). Seeking to achieve equitable resilience based on predefined ideas of "what" is needed by "whom" can therefore risk imposing subjectivities of its own, and avoiding the interdependent ways in which what and who are linked.

Discussions about equitable resilience, therefore, need to include greater capabilities for how far affected people can influence ideas of resilience without being restricted by predefined ideas of risks or social identities. Some influential writings within environmental justice have called for vulnerable people to have "political capabilities" as a way to influence adaptation and climate change policies (Holland, 2017; Schlosberg, 2012). Yet, the debate about capabilities needs to acknowledge the relational nature of risks and identities further (Nightingale *et al.*, 2019; Nightingale *et al.*, 2021). This does not mean disregarding the significant marginalization of social groups such as people of low caste or between genders in many locations including Nepal. Rather, it means understanding how representing people's risks and agency in terms of these social categories alone might hide dynamic changes in those risks and agencies. Moreover, it means considering how external framings about transformative change or social justice might employ or exacerbate those blindspots (Beck & Forsyth, 2020).

The analysis of Jumla in western Nepal in this paper illustrates these challenges for understanding equitable resilience. The paper contrasted two different framings of equitable resilience: the government's vision of equal distribution without reference to social difference; and approaches that use caste and gender to indicate socially marginalized groups. Evidence confirms widespread findings that Dalit and women workers in Jumla face social segregation and restricted access to livelihood opportunities. Government approaches to resilience through roads, infrastructure, and commercialization fail to overcome these barriers. But relying on caste and gender to determine "who" should get "what" also fails to capture the dynamic, intersectional, and contextual agencies that are applied by different people, or the risks arising faced by higher caste farmers who are exposed to direct

climate change impacts because of their generally higher access to land. As Regmi *et al* (2016, p. 545), note, "vulnerable people do not always conform to popular ideas of vulnerability, such as women or people of low caste." Acknowledging the dynamism by which risks and identities change – and being aware of how normative assumptions might hide these changes – is necessary to make resilience equitable.

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Table 1 Case study villages

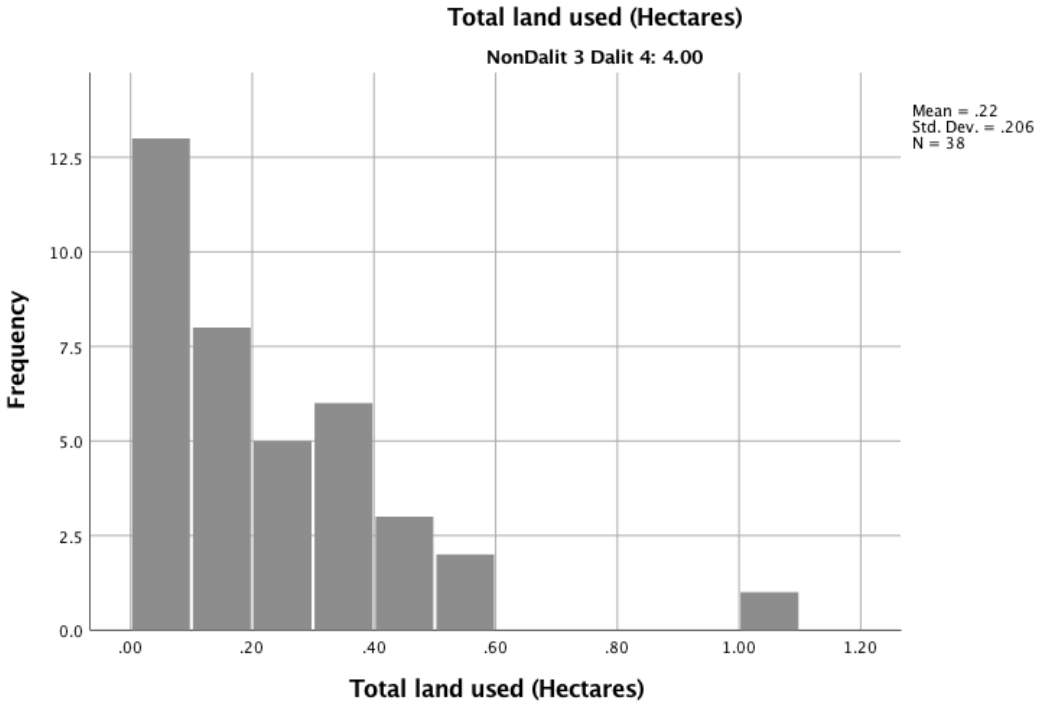
Village	Municipality	Latitude / Longitude	Altitude (meters)	# of h'holds	Accessi-bility	Commercial-ization	Caste and ethnicities*
Talichaur	Chandannath (Urban)	29° 16' 23" N 82° 11' 38" E	2,375	170	**High**	**High** - vegetables	Higher caste: 32% Dalit : 47% Janajati: 21%
Lihi	Tila (Rural)	29° 13' 58" N 81° 58' 04" E	2,236	203	**High**	Low	Higher caste: 65% Dalit : 35%
Gora	Sinja (Rural)	29° 18' 55" N 82° 0' 19" E	2,578	232	Medium	Low	Higher caste: 67% Dalit : 33%
Luma	Patarasi (Rural)	29°18'30"N 82°18'12"E	2,607	379	Medium	**High** – yarsagumba, non-timber forest products	Higher caste: 64% Dalit : 27% Janajati: 9%
Chauta	Kanaksundari (Rural)	29° 25' 52" N 82° 6' 26" E	2,800	11	Medium Low	Moderate – hotels, sheep, goats	Higher caste: 100%
Marphan	Kanaksundari (Rural)	29° 24' 59" N 82° 5' 50" E	3,120	33	Low	Moderate – sheep, goats	Higher caste: 100%

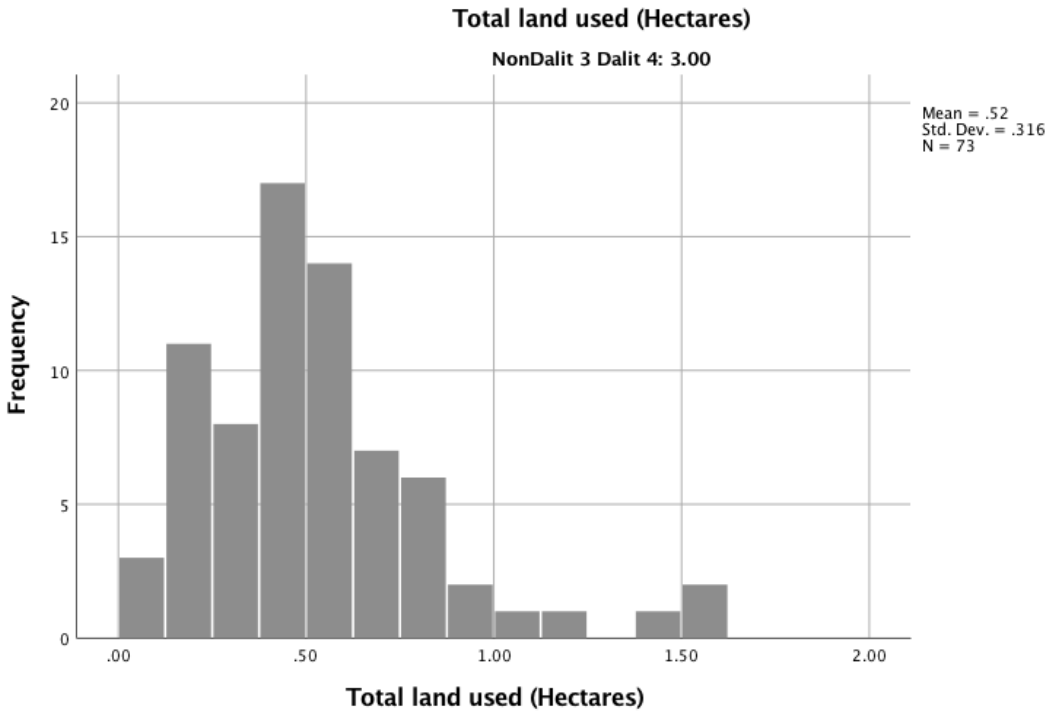
* "Janajati" refers to ethnic minority populations and "Higher caste" or "Hill Jat" to Brahmin/Chhetri

Source: fieldwork 2018-19

Figure 1: Map of Jumla District, with selected villages

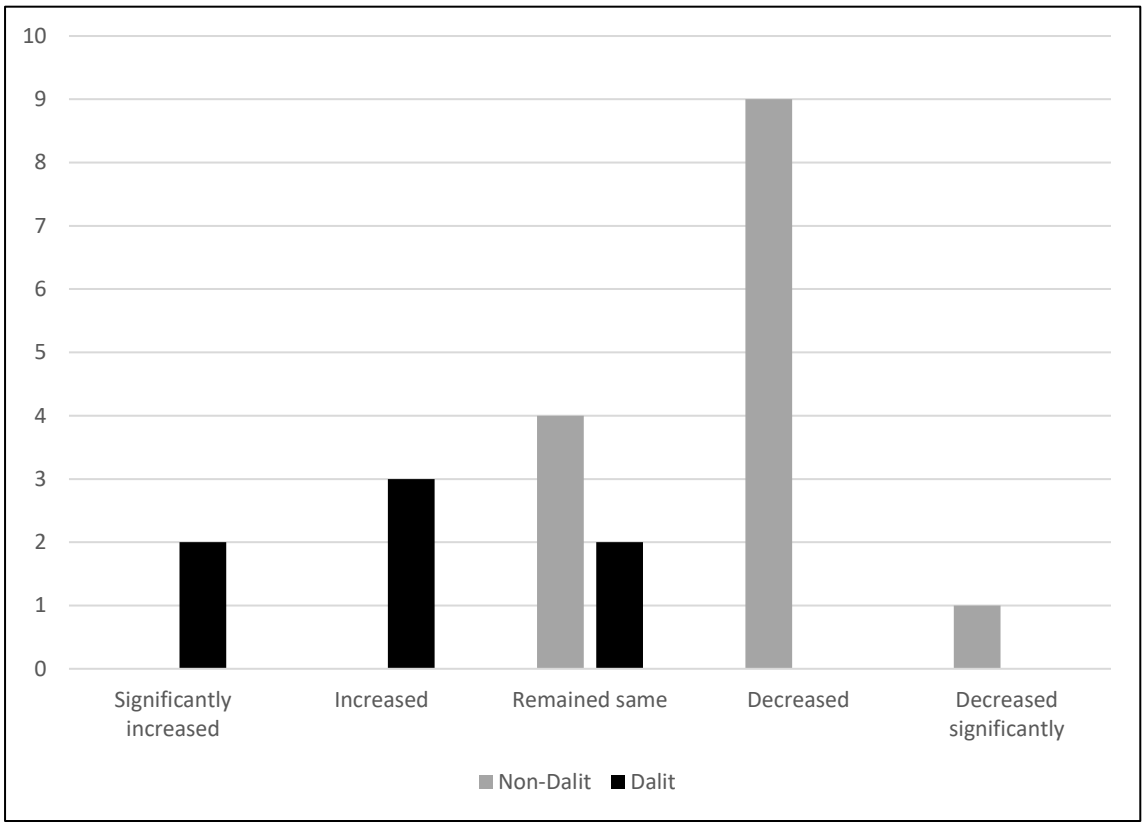
Figure 2: Size distribution, Dalit land *Figure 3: Size distribution, Non-Dalit land*





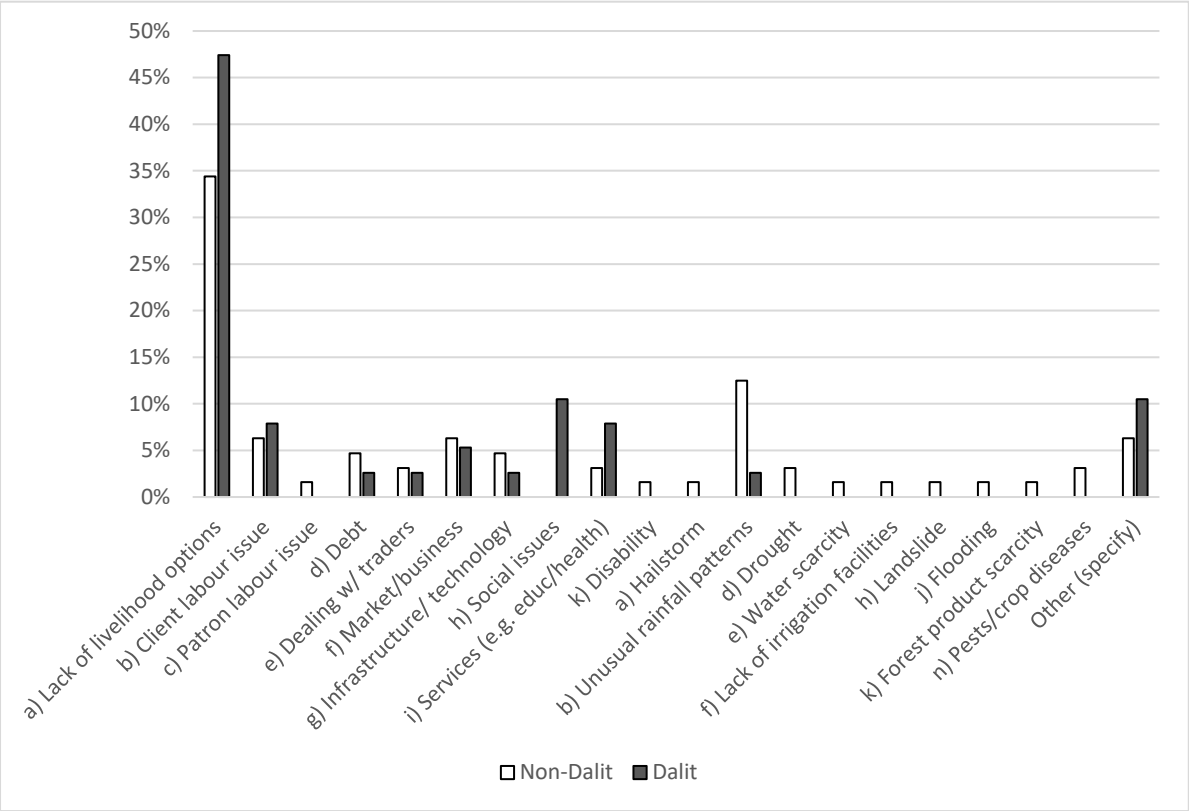
Source: Field surveys, cumulative for all sites, 2018-19

Figure 4: Women: Have roads and commercialization impacted your work responsibilities?



Source: Field surveys, cumulative for all sites, 2018-19

Figure 5: All households: Rank the biggest challenge (among all kinds of risk)



Source: field surveys, cumulative for all sites, 2018-19