Making sense of Climate Change, Gender, and Rural Development in the

Shivalik Hills

Abstract

The article provides insight into how the consequences of climate change, seen both as a global

process of global warming affecting local seasons and environments (Hijioka, Y. et al., 2014;

Hock, 2019), as well as a global discourse affecting local policy making (Dubash, 2012; Foyer et

al., 2017; Swarnakar, 2019) exacerbates issues of contemporary rural coping strategies by

intensifying prevalent gendered practices. The lower Shivalik Hills of North India is a region

that is experiencing rapid socio-environmental challenges from interrelated changes in climate,

market, and society. From a vantage point in a village of predominantly smallholders, joint

households strive to become resilient in the wake of unpredictable changes in seasonal weather

and market. One traditional coping-strategy has been to rely on male outmigration, with women

left behind to shoulder the extra burden. This article argues that this gender disparity is

compounded by the increasing precarity of labour, agriculture and subsistence, but also that this

affects women differentially depending on class, landownership and caste, exemplified by three

empirical cases. It promotes the argument that climate change policy and research must address

both nitty-gritty realities of social life, as well as larger structural processes that continue to

influence women's capabilities for social mobility in a time of accelerating change.

Keywords: anthropology, climate change, rural development, gender, caste, sustainability

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Introduction

In 2013¹, I lived in a Shivalik hill village at the border of the North Indian states of Haryana and Himachal Pradesh to study the socio-cultural implications of climate change. As the Himalayan glaciers, now melting at increasing speed, (currently measured at 0.3 °C per decade according to the IPCC, see Hock et al., 2019) provide more runoff water, filling rills, streams, rivers, and dams with sudden discharge, the water traverse the denuded hillsides creating smaller or larger and more devastating floods. Erratic and more intensified monsoon rain on the one hand, and strong variations to the predictability of crop-yields due to changes in soil composition, pests, and extreme temperatures on the other, is seen to affect the small-scale farming communities of the Shivalik Hills in the negative. In this lower lying region, around 60 per cent of land is under agriculture (ICAR-IISWC² 2015). Irrespectively of landholding or caste identity, the majority of households here rely on a relatively predictable environment for sustainability. It is a source of grave concern that these issues are seen to exacerbate with an unmitigated process of global climate change (Hijjoka, Y. et al., 2014; Hock, 2019).

Simultaneously as the effect on climate change on the Shivalik Hills' seasonal rhythms, temperature, precipitation and biological composition is experienced by those living of the land, climate change as a discursive concept that entwines with cultural traditions (Hulme, 2009, 2015) thus become intricately interwoven with the concrete and mundane practices of everyday life (Kvanneid, 2021). One such arena is on policies on rural socio-economic development and efforts for environmental conservation (Dubash, 2012; Foyer et al., 2017; Swarnakar, 2019).

¹ With a second, shorter field visit in 2016, both conducted as part of a PhD dissertation in Social Anthropology at the University of Bergen, Norway.

² ICAR-IISWC is the official abbreviation for The Indian Council of Agricultural Research - Indian Institute of Soil and Water Conservation

As social issues are expected to increase as a consequence of unabated climate change (Tiwari and Joshi, 2015), the research and policy community is seen urging the need for rural communities to develop in a sustainable manner whilst adapting to the exacerbating changes (ICIMOD et al, 2015), thus agencies of both global and national character ³ intervene in these villages, sometimes directly, sometimes more discursively (see Kvanneid 2021).

As a a crisis arising from society, not humanity Goodman (2018) it is urgent to acknowledge that climate change occur in a political, cultural and historical context. Land fragmentation, poverty, and the gendered division of labour has pre-existed climate change infused, or 'climatized' policies on rural development (Foyer 2017, Kvanneid 2021). Deforestation in combination with the construction of large industrial plants, the building of roads for transport, logging for construction and fuel, mining for copper, limestone, and gravel, and finally the construction of dams for controlling water-flow and hydro-power production in the name of 'development' has left the Shivalik hills highly vulnerable to the continued pace of resource extraction and economic development under the current market and climate conditions (see for example Chopra, 2013; ICIMOD et al, 2015; Knudsen, 2011; Sambandam, 2010; Yadav et al., 2008). The increased attention to socio-economic 'underdevelopment' of the hill's region by the national and local government have brought numerous schemes and programmes into being. Whilst the efforts have improved rural access to education, electrification and highway infrastructure in the lower Shivalik hills, the national census⁴ still show persisting and low levels of socio-economic

³ In the small village of Rani Mājri, there were diverse campaigns and schemes orchestrated both through local and national governmental agencies (The Indian Council of Agricultural Research, the regional Development Board, the local Rural Department, Forest Department etc.) as well as more international actors such as the UN (see Kvanneid 2021).

⁴ Census of India Website: Office of the Registrar General & Census Commissioner, India (2021)

development, illiteracy, a severely eschewed sex ratio, and continuing gender, caste and class disparities also within the village itself. As landholdings decreases due to traditional patterns of inheritance,⁵ which again affects an already unequal access to water, seeds, farming chemicals and organic fertilizers (Shivalik Development Agency 2017, Yadav et al. 2008, Sarv Shiksha Abhiyan 2015), most smallholders cannot achieve surplus yields for sale to local markets, where they also report to meet declining prices for their produce.

These challenges are met with an increase in male out-village migration, which arguably has a number of outcomes, one of which is on the issue of gender equality (as the capacity of equal opportunities for self-determination and upward social mobility irrespectively of gender). My own empirical material show how household responsibility, animal husbandry and manual, agricultural in-village labour continues to be maintained by women in a process well documented as the "feminisation of agriculture" (Indian Ministry of Finance, 2018:104; Vepa, 2005). In the village of Rani Mājri, from where the three cases in this article is drawn, the additional responsibility for livestock and food production increased the total workload to the extent that women, by choice or not, individually shouldered the burden for their family's potential collective upward mobility, despite a growing number of women completing 12 years of public education, even starting college degrees. I argue that the current situation captures the women in a predicament growing from a rapidly changing social-cultural environment in the rural Shivalik Hills which is neither sustainable nor just. It is however part of a systemic change

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⁵ Traditionally sons inherit land from their fathers in this region. In the case of multiple sons, the farmland is continuously fractured, which promotes lineage cooperation but weakens the individual in the current economic system.

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that increases the burden on the individual as well as on the village as community, however socially stratified. I thus acknowledge the need for explicitly addressing issues of climate and environmental justice in the context of social sustainability⁶, and see my discussion as a contribution of such.

Current state of Out-Migration in the Shivalik Hills

Male out-village migration for labour in the region of the Shivalik Hills is part of what is called 'diversifying practices', a concept that refers to a practice of multi-tasking farm work with other, profitable side-occupations to sustain the family and homestead. The practice itself is not new, and has characterized labour practices for small holders in the Shivalik Hills at least since the 1960s (Berreman, 1978).

However, recent studies indicates that the degree and kind of male out-migration is currently intensifying dialogically with climate and societal changes, and that despite development efforts, out-migration of men from the villages is seen to be on the rise in the Shivalik Hills (Joshi, 2018; Mamgain & Reddy, 2017; Negi, 2016). The local consequences of male out-migration indicates both positive and negative effects of the practice, notably on women. To understand them fully, however, it might be useful to see the process of male out-village migration for labour through a historical view. As the deteriorating environment and the seasonal instability caused by climate change increase agricultural instability and insecurity, the market where the workers compete for occupations has changed considerably since Berreman's recounts of out-migration in the 1960s,

⁶ I take 'social sustainability as given if "...the normative claims of social justice, human dignity and participation are fulfilled" (Griessler & Littig, 2005:11).

so has the kind of occupations and the qualifications required to attain them. The out-migration is thus currently marked by male, especially high-caste villagers leaving in the hope of white-collar opportunities that might offer a steady income potential in contrast to the low earnings in agriculture. Increasingly, young males with the network able to provide them the necessary contacts also seek what appears as lucrative, though often precarious occupations as labourers, drivers and servants abroad, as we know characterizes other higher lying hill regions and nations in the vicinity, as Uttarakhand and Nepal (Mamgain & Reddy, 2017; Holmelin, 2020). The next section will elaborate on the current situation of out-village migration in the village of Rani Mājri.

Diversified Practices as Coping Strategies in Rani Mājri

With just under 50 households, the nucleated village of Rani Mājri where I resided with my husband and baby boy for almost a year (2012/2013), was roughly organized in a caste-and lineage-based pattern of settlement. The main village was dominated by two castes: Lohar and Rajput. Rajputs were the traditional landowners and agriculturalists of the area, and households from the Rajput Caste still owned and worked the major portion of arable land. A significant part of irrigated land was also owned by households from the caste of Lohar. Lohar is traditionally a blacksmithing caste and is currently categorized as Other Backward Caste (OBC) by the state of Haryana, but like the Rajputs, the Lohars engaged in various occupations, both related and unrelated to agricultural labour. The Chāmar Caste (Scheduled Caste, hereafter S.C.) settlement lay on the peripheries of the main village as a part of the traditional order based on caste

pollution, where no members held ownership to irrigated land (although some unirrigated plots were utilized for maize and millet crops one season a year).

The size of landholdings varied from small to marginal (from 4 hectares to less than 1 hectare), and the Lohars and Rajput caste households were entitled to small, terraced fields irrigated by an intricate network of water channels (kuhl). The system of irrigation enables these landowners to grow two crops a year, predominantly food staples such as wheat, rice, maize, and millet, crops such as mustard, onion, coriander, tomatoes, chickpeas, and turmeric, as well as a rich variety of vegetables in small household gardens (such as bell pepper, bottle gourd, red chili, etc). The larger landholders also allocated substantial farmland to the production of ginger and occasionally sugar cane as cash crops (see Kvanneid 2021, Yadav et al., 2008). Livestock also played an important role in the village, for all castes. Small and larger landholders kept buffaloes for milk and manure (with a minor component of the native cow breed, the Indian humped cattle), and bullocks as draft animals. Buffaloes and bullocks were largely stall-fed with grass fodder, crop residue, and foliage, but also required extra nutrition at times of fallow, which again required finances. As goats and the humped cattle could graze in the adjacent forests and on harvested farmlands respectively, small to marginal landholders and the landless predominantly relied on goats and humped cattle for their subsistence. These animals require less resourceintensive fodder, but also produce less milk and manure. All villagers, irrespective of caste and landholding, were also dependent on the adjacent village forest for firewood and forages. In 2009, the use of the forested area was strictly regulated by the state government to ensure 'ecologically sound' development (Haryana Forest Department, 2016) and encompassed as part of an Eco-Sensitive Zone. Logging and lopping of certain trees such as the khair was managed

through regular visits by the forest guard (Kvanneid 2021), whose surveillance would restrict the villagers' access to grazing, fodder and firewood collection. This affected all villagers, but perhaps the S. Cs the most. With little access to forest and no access to irrigated land, S.Cs worked during the harvest season for food grains as part of traditional *jajmāni* relationship with the dominant castes (Dumont, 1980; Raheja, 1988b), but was increasingly seen coping by way of males working as manual labourers in the industrial belt to cover expenses associated with their household's need for medical treatments, food grains etc.

The dependency on cash income has however risen cross-caste, and out-village occupations had come to form a central economic support for most marginal and smallholder families.

Occupations available to subsidize the household economy varied greatly from engaging in local small trade of agricultural produce, taking on small part-time jobs as drivers, mechanics, or seasonal manual labourers. Their accessibility was mediated by their proximity to markets, industrial areas or cities, but also governed by a set of norms related to caste notions of purity and impurity, traditional norms on gender roles, the level of education and economic flexibility, as well as the strength and extent of the social network. Occupations occupied by mainly Rajputs, were government jobs such as primary and middle-school janitor, primary or middle school cook, and for one women: government anganwadi (short-time day-care) caretaker. A few Rajput males from the landowning castes also studied to be a policeman or fireman. Some occupations were caste-specific to the Lohars (blacksmiths, carpenters), however others engaged in trade (local goods and wares) as well as driving rickshaws and lorries. Other jobs were caste-specific to the S. C's only (village sweeper, primary and middle school cleaner, tailor, skinner, hired labour (mazdūr). Labour in the factories of the industrial parks in Himachal Pradesh was

suitable for males with less formal education, thus comprising all three castes. The relaxed taxation rules of the Special Economic Zones here had enabled the construction of large industrial parks (Department of Commerce, Indian Govt. 2017; Mohanty and Chandran 2017) which employed skilled and unskilled labourers. Most of the village men employed in the factories around 2016 were born in the 1980s, and had 6 to 8 years of basic public-school education, irrespectively of caste. This excluded them from any managerial or office positions, and the labour was often manual, exhausting, and unreliable. Not all males had to migrate out, however. The relative availability of natural resources as fuel, fodder, and water, could for a handful of landowning families provide a certain security outside the monetary system, however, even these larger landowners were concerned about the future of farming. They were vexed about the low market prices for agricultural produce, and joined their fellow villagers in a shared a concern for a deteriorating environment – especially the access to forest, arable land and clean water - diseases that was thought to occur due to the increased dependence on chemical fertilizer and pesticides, the erratic monsoon pattern and abrupt seasonal shifts, as well as the low quality of local governmental schooling, corrupt government officials, the lack of medical services and job opportunities - the list goes on. Consequently, most young adults were highly attuned to how they could structure their lives, and their children's lives, around developing their agricultural practice alongside increasing the household's cash flow to be able to maintain – or even better, improve - their socioeconomic situation through education. Educating at least one son in the hope of remittances from lucrative out-village occupation could often be what enable certain households to close that perceived distance between the 'haves' and the 'have-nots'. Recent research also indicates that male out-migration has proven to be an important part of the village economy of rural hill regions through an increased flexibility in local resource utilization, crop

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compositions, and productive practices. The males then diffuse new knowledge and innovative ideas to their families, that in turn enable the village households to experiment with a richer diversification of crops, strategies and techniques, and that it might contribute to rural resilience against climate and market-related changes (Holmelin, 2020). Yet, my interlocuters would in 2013 often talk about how they saw themselves as being "backward" and "left behind" in a process of accelerated "progress" of the wider society, mediated to them in a distorted mirror of social media, local political campaigns, development-speak and television soap operas. Simultaneously, a gap is widening within the village itself. With rapid shifts between top-down to bottom-up rural development strategies and the increased need for productivity and efficiency in a global trade market, combined with rapid shifts in prices for produce caused by India's relatively recent economic liberalisation policies, only a few landholders - partly but not exclusively high-caste – are able to pool their resources to follow suit. Others, the landless often the S. Cs but also marginal landholders of higher castes, are caught in another web of dependency than the one that the jajmāni system left behind – debt, government aid and ration cards. Another structure of inequality that appears to be changing due to the intensification of male out-migration as well, is between gender.

Women's worlds: Converging Structures of Repression

Some research has indicated that male out-migration and the complimentary feminisation of agriculture both indicates a potential improvement of the socio-economic status for the rural communities with certain 'trickle-down effects' for women (Fakir & Abedin, 2021; Joshi, 2018). The absence of males have in some places resulted in the increased ability of females to make

independent decisions in farming and household matters and increases their mobility within the village realm (Fakir & Abedin, 2021; Holmelin, 2020; Joshi, 2018). Whilst some express concern for depopulation and the consequences of the rural loss of educated and able youth on political representation and local governance (Mamgain and Reddy, 2017), others argue that the practice to the contrary may hamper female possibilities of equal rights to decide their own futures and sustain gendered patterns of inequality (Vepa, 2005). My findings support the latter. Neither the elderly that remembered it nor the young that heard stories of it, wanted to return to the long past of strife and poverty, disconnectedness and 'backwardness', so in all families, there was a notable focus on education. However, with very different futures in mind, depending on the household's position in the local hierarchy of caste identity, lineage and landholding – and the gender of the child. Although restrictive gendered norms persist to favour household interests over individual interests for both genders, women were far more restricted in their choices. First, young women were expected to provide the household with children, especially sons. Women are also expected to be primary caretakers of children, husband, and parents-in-law, whilst tending to the livestock and the fields. With or without the assistance of males, women would cook, clean, milk, herd, forage, harvest, and refine the product. Should out of house-occupations be within reach, there are strict cultural norms for acceptable women's professions. For the landholder castes of Rani Mājri, these were in line with the female role as caretaker. School cooks, primary school teachers or caretakers at the nursery were locally considered as viable options for waged labour since these would not conflict the structures of traditional gender roles. Sales and service occupations could be considered, however, the accessibility of suitable occupations for women in the vicinity was low. Due to few schools and nurseries in the regions, as well as restrictions on women traveling (women in this area was advised against traveling

alone, both due to traditional norms of conduct⁷ as well as a genuine fear for their safety⁸), even women from the more privileged segments were usually confined to house and village work. The subordinate position to males also left women with little to no say in decisions involving the household economy, even educated women with a small income from waged labour were found to lack authority in issues regarding their own life choices (marriage, child-rearing, education etc.), arenas where older women were known to have more leverage. Even older women had little to no say in issues of village development strategies, or any other political or economic issues. Their voices were largely absent from the local panchavat⁹, nor were their voices articulated in dialogue with governmental agencies. Although a female S.C member was included in the village administrative body, her presence was found to be primarily symbolic. Her participation was described by the higher caste males as easy as asking her to "sign her name with an X whenever required" (see Kvanneid 2021). Being born a female in rural Shivalik Hills is to face the same structural oppression from traditional gendered norms, the same precarious and liberalised labour market, the same pressure to reproduce and maintain the household, as well as the same pressure to contribute (or at least not burden) the household economy, despite the disparity striking disproportionally for rural high-, mid- to low-caste women. To understand this imbalance, one must both address the local intersectionality of gender, caste, and class hierarchies, but also address larger political and discursive structures. The next section will therefore present three examples drawn from my fieldnotes, illustrating the complex and converging structures of repression.

⁷ For excellent thick descriptions, see Lamb (2000); Raheja and Gold (1994).

⁸ Cases of rape and molestation of women in rural and urban areas was frequently reported of in the local and national media.

⁹ *Panchayats* were established in 1993 to 'empower and democratise India's rural representative bodies ... creating the legal conditions for local self-rule' (Johnson 2003:1).

Ethnographic case-making: three cases in point

Despite most of my PhD fieldwork being conducted amongst women, mostly the high caste from medium and marginal landholding families, I did not address issues relating to gender inequality explicitly in my thesis of which my book was based. There are two main reasons why I have hesitated, both are related to issues of representation and confidentiality. First, as women gradually opened on issues of health, politics, life experiences or future visions, they also asked me to not share their reflections in my book. They feared to be exposed and ridiculed as 'unaware' and 'uneducated', both by their own families, fellow villagers, the 'city-people' of the plains, and by a wider society. Second, sharing their stories without falling into the trapdoor of essentializing women, or speak on their behalf in a voice distorted by western (privileged) feminism (Mohanty, 2003) proved a difficult exercise of which I am still a novice. However, the issue is becoming increasingly salient to address. As a generation of rural women are now eligible or even enrolled in higher education, they are confronted with new and more independent female ideals, as well as they are enabled to take on out-village occupations on par with males. However, persistent societal and cultural structures restrain women from doing so, and prospects for women remained static or assumed a downward spiral in the form of increased workload within the household without individual gain. To refrain from elevating gendered injustice in fear of misrepresentation individuals, would be a double silencing of the subaltern. It seems necessary to draw out some of the cases revolving women's lives to explain those structures, but in a manner where individual characteristics are generalized and anonymized as much as possible without losing ethnographic precision.

The Case of Jeevitha

In a small, one room concrete house constructed in a government housing project 10 to improve living conditions for the S. Cs in Haryana, lives Jeevitha, a woman in her midtwenties with her husband Bandhu, and two children, a boy aged 8 and a girl aged 10. Her husband is a hired worker ($mazd\bar{u}r\bar{t}$), digging trenches and lifting stones wherever construction occurs, but his earnings are meagre and irregular. Her small house is tidy, but sparsely furnished. The small, earthen patio outside her house is always meticulously swept clean of debris, with a few clothes waving in the wind from a line stretched between a small tree and the house-wall. Jeevitha has no animals nor land to tend to of her own, but her parents-in-law, living in a separate and similar-looking building below, has a few goats and two cows. She cannot read nor write, so she appreciates the school nearby where both her children, her obvious pride and joy, attend. Jeevitha's children look very much like the other children in the village. Both are quite skinny, their hair's combed, their shoes a few sizes wrong, and they wear school uniforms just like the others do. However, Jeevitha's children are not quite like the others. Born into a caste that skin and bury cattle, they rank at the very bottom of the ritual hierarchy of caste purity and pollution (Dumont, 1980; Gupta, 2005; Mosse et al., 2016; Raheja, 1988a), and so their

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¹⁰ Most likely as a part of the Indira Awas Yojana

⁽I.A.Y.)programme implemented through the Rural Development Department of Haryana (Drèze & Khera, 2010:56).

presence at school was tolerated with mild discontent. Jeevitha believes her son will complete secondary school (9th and 10th grade) but aged 16 she hopes he can take a 'course', any course will do, so that he can get a job. Their financial situation is severe, but with a 'course' her son can do what the boy a few houses below did last year, he began to pack cleaning detergents in a factory when he was 17, and he earns 5000 Rupees (app. 67 USD) a month now. Jeevitha's daughter, however, will only continue schooling until 8th (age 14). For secondary school she must walk or take the bus to another village a few kilometres away, and her mother is doubtful she will let her go. A marriage for her is safer - perhaps in a joint marriage when she is turned 16, which is still common amongst the S. Cs here. If she is lucky, she will marry into a family where her husband earn money, and where they can keep their own animals, but Jeevitha knows the future to be capricious.

Caste identities play a decisive role in explaining the diverging trajectories of women within the village. The S. Cs of Rani Mājri struggled to cover the most basic expenses. Basic grain and other foodstuffs could be acquired by using government ration cards, but piped water for drinking and cleaning had to be purchased from the government water department, which was made accessible for one hour once a day. Due to marginal landholding on unirrigated land, the S. Cs could not sustain themselves on practicing agriculture, regardless of effort women (or men) might lay in the land – without water, organic fertilizer, or bulls to plough the soil, little would thrive in the sandy soils. This made the S. Cs completely dependent on males' participation in waged labour, as well as on participation in the harvests of the landowner castes for grain, making the S. Cs indirectly dependent on the landowners continued agricultural practice. The S.

Cs were also dependent on forest foraging and grazing for fodder and firewood and were always in danger of repercussions from the forest guard for trespassing into protected area. In the case of Jeevitha, there is no surprise that gender roles are reproduced in a structure where males must undersell their labour at a young age, and where girls are married off as soon as the basic and required education level is fulfilled. Caste, then, is still a decisive structural principle mediating the 'trickle-down' effect of out-village labour on women, however it is not the only one. As the next case will show, belonging to a dominant caste may provide some relief from extreme poverty, the prospects for the next generation of females does not need to look much different.

The Case of Radha

In a small house of two rooms, sandwiched between other houses from the same lineage and made partly of brick, partly wood and earth, the Rajput couple of Radha and Harwinder lived with their two children, aged 8 and 10, and Harwinder's two elderly mothers¹¹. Married into the village as a teenager, Radha was now in her mid-twenties. Strong and tanned from hours working at the fields, Radha was seldom seen resting. As a smallholder in these lower Shivalik Hills, Radha's husband Harwinder owned less than one hectare adding up all the scattered plots, some irrigated, some not, and Radha was alone tending to them as well as their cow. As the farm gave little surplus produce for sale, Harwinder did what many men in this area did to earn money: pursued work in the factories of Parwānoo. With only 8 years of schooling, he had found work that required little more than an able body. The factories here employed villagers on short-term

11 The first wife being barren, Harwinder's father had remarried with a second wife.

contracts to move boxes of electronic equipment, pack detergents, or haul machine parts, which was heavy and manual work. He often worked night shifts and day shifts successively. Education was a high priority, and both their children attended the village, public school. Radha confessed that provided they could manage to save money, they would try to get their son into the private secondary school in a town nearby, they had heard there were computers in that school, and that they learned English properly. This could enable their son an office job, perhaps even as an engineer. For their daughter, however, the prospects were different. She, too, was expected to complete secondary school, but only the public one. College education was not considered an option for her, and around 18, 20 at the latest, she ought to marry. As Radha's two mothers-in-law were worn and tired from old age and a lifetime of hard work, one toothless and the other blind, Radha's daughter was the only help in maintaining the house, fields, and livestock when Harwinder was away. Whilst the son was encouraged to do his homework after school, Radha's daughter cooked, cleaned, and worked the fields with her mother. Her daughter needed the skills more than school, her mother argued, as her life would require her to be what all village women had to be: hard-working (meḥnatī).

Harwinder and Radha were, in the local context, managing quite well being marginal landholders. Harwinder's employment brought money for what the household needed to get by, and together with Radha's effort to maintain the house and farm they covered much of their subsistence needs. In contrast to Jeevitha and Bandhu, they also had the advantage of caste and lineage privileges to irrigated land, as well as the benefits of Harwinder's patriline of traditionally politically active Rajputs with larger landholdings, increasing the household's

adaptive capacity in times of crises. But despite the relative success of the household, Radha's hard work did not earn her money, property-rights, nor a voice in political or economic issues, neither were her daughter prospected to do so. But times are changing, also within the village. Radha's daughter will grow up, not only literate, but access to information and inspiration though media, relatives, and friends, and she will encounter female peers that envision lives with a larger degree of self-determination through waged labour. Stories of female friends or relatives from other villages who got jobs at urban beauty parlours or call-centres grew ever nearer, but so did stories of failure and broken dreams. The next case will illustrate yet another hurdle in the narrative of the 'trickle-down' effect on women's upward social mobility in the wake of male out-migration.

The Case of Deepika

A young Rajput woman, the second oldest of five siblings from a relatively large landowning family, is seated cross-legged outdoors on a rooftop in a warm evening. Early summer, the gentle breeze tugs at the pages of a worn book in her lap. Deepika's chores of the day are completed, and she is finally able to study for her forthcoming exam, completing 10 years of public education. Her older sister is about to complete a college course in teaching and is soon about to marry. The college course degree could enable her sister to take up a job as a primary school assistant at the village of her future husband, but her sister has already settled with the prospects of becoming a housewife. Like her older sister, Deepika is also well prepared for this outcome. She cooks, cleans, sows, and works the farm as any adult, but Deepika's ambitions are yet different.

London and asks me to tell her all I know about the city, whilst she tries to practice her English.

Her parents and grandparents know all about broken dreams and the toll of disappointment and so they discourage her from dreaming, but Deepika insists, she is determined to try, and she knows times are changing. She's heard of friends of friends that work in the IT-sector in Chandigarh and Panchkula, girls who have convinced their parents to wait with arranging marriage. 'If I get a job, I can pay for my own marriage', she argues.

Returning in 2016, Deepika had convinced her parents to let her apply for a degree in computer engineering at a public college. Her grandparents had been tough to convince, but after her maternal grandparents had offered to support her education with financial means, and my husband and I donated the money we got from selling our car to her parents for her education, she was allowed to try. Completing her exams well enough, Deepika did meet new challenges when applying for a job. She knew no one who could introduce her to a future employee, neither did her relatives. Without an appointment or an invitation to enter the tall, white, and when I guided her and a friend to the air-conditioned IT-centres of Panchkula during my second visit, the guards at the gates hushed her away. Her grandparents were certain – she had to cease this now and get married. Talking about the issue with Deepika, her sister and her father one evening, her father told me about his sisters' son, a few years older than Deepika. "He was the best in class, top marks in all his subjects at college, but he cannot get a job, because they don't have the money", he explained. "What do you mean, you need money to get a position?" I asked.

"Corruption", Deepika's sister said. "That's India, everything is corrupt. It makes no difference

how good you are if you have no money. Our government is really miserable ($khar\bar{a}b$), they cannot be trusted". Deepika continued to explain; "We are number one [of corrupt countries] in the whole world. We, in the general group 12, we will never get a good job without money. The other kids, the S. Cs the B.C¹³s ... they get reserved seats, but from general group...[shaking her head]". I argued the need to aid the S.Cs of the village out of poverty, but Deepika's sister interrupted my speech. "Yes, yes, but all are not poor! Some S.Cs and B.Cs are much richer than us, I met them at school!"

Despite the lack of support, Deepika, to my surprise, would not give up. With the help of friends of friends from college, she finally got a chance at a trainee position at an IT-programming business in 2017. Ready to enter the world of waged labour, she rented a room in the city with her friends, but soon enough, her manager complained she lacked the skills. Her public-school education was inadequate, her curriculum outdated¹⁴, and her English was too poor. The job lasted merely six months before she was let off and forced to return home.

In 2021, Deepika is still living in her parent's household, working the farm, and waiting for her marriage to be arranged. Despite a few, temporary positions at various call centres that arguably brought much needed money into the household, she is now older than most marriageable girls, and having enjoyed the relative freedom of waged labour outside a village realm, her parents struggle to find a family where Deepika might fit in. Not attractive on the local labour market, not attractive on the social marriage market, Deepika in her courageous attempt at deciding her

¹² Local expression, refers to the 'Forward Caste' category

¹³ B.C. refers to Other Backward Castes, and members of this community (such as the village Lohars) received various forms of positive discrimination along with the S.C.s

¹⁴ Her book on learning Windows software in 2013 was based on the 1996 operating system of Windows NT v.4.0

own future was locked in a situation that neither she nor her family could get out of. Despite her income being appreciated, she will have no more say than her siblings in the choice of partner and must adjust to her future households needs and wants. Whether Deepika's destiny will serve as inspirational or discouraging for other females of the village is yet to be seen.

Conclusive remarks

From the context of Rani Mājri, it is evident that women are still bearing the burden of a process of development that relies on favouring male participation in the public, political and economic sphere. While the males out-migrate to sustain the practice of diversified farming, the women stay behind to shoulder the family's joint effort for upward social mobility. As the cases of Jeevitha, Radha and Deepika exemplified, caste still matters in structuring social mobility within the rural village context, so do traditional gendered expectations. Poverty, which relates to caste and landholding, continue to push young males from poorer households (often marginal landholders and landless) into precarious labour conditions, which the first case of Jeevitha illustrates rather well. In the case of Radha, we saw that despite women's access to education and the technical know-how for engaging in out-village labour increased, so did their workload and responsibility at the house and homestead. While the young males from the more privileged households were encouraged to educate into white-collar labour, the young women's educational merits were still used largely as leverage in marriage negotiations.

Deepika was arguably in an ideal position for breaking the local 'glass ceiling'. Born into a family with a relatively large landholding, her mother shouldering the burden just like Radha, Deepika's father had political merits, and was the eldest of three sons who were all married with hard working wives. Not at all wealthy, the joint household still had the human and economic

resources for one girl to aspire for a life beyond the traditional norm. Further and significantly, their level of ownership of land, livestock, or other assets did not follow suit. Females with suitable education and some leeway in delaying their reproductive duties, as well as being regarded eligible for marriage, would still face a very limited job-market. The case of Deepika shows how larger structures beyond local traditions and gendered expectations constraining women to a larger degree than males, even when the economic flexibility convene with a higher caste and landholding identity. Deepika compete in the local and wider society with forms of capital (social, cultural) which rural smallholders lack.

In the span of one generation, the village of Rani Mājri went from no health or education services, no road connection, no electricity and no land-line telephones to public and private education services; public health services; electricity; water-grid access; televised entertainment; accessible markets and mobile and satellite network access. However, as people are increasingly vaccinated, educated and emancipated – from diphtheria, polio, and smallpox, from extreme poverty, repressive norms and oppressive traditions at a remarkable pace – they must also adjust to a global climate change, local environmental degradation and a globalized, liberalized market economy. As Chant and Sweetman argue; "the actual lived experience of women in poor households and communities suggests that a win-win scenario in which poverty is alleviated, economic growth is assured, and gender equality attained, is very far from the truth" (Chant and Sweetman, 2012:521). These cases serve as a stark reminder, that as long as women must take the responsibility for the house, the family, and the homestead in the absence of males, a whole generation of rural women are bound to the pattern of cheap government education, marriage, childbearing, and agricultural work. If this is to change, it has been argued that women will only

truly benefit from development when there is a genuine redistribution of land and other agrarian assets (Johnson 2003), women's participation in economic farm activity such as cash cropping is enabled (Holmelin 2020), and employment opportunities for the increasingly literate youth – both men and women – is within geographical and practical reach (cf. Barua et al. 2014). A truly sustainable and climate-adaptive development policy would thus support infrastructures that provide health and education services, local occupations, and welfare, and look into the problems emerging from the feminisation of agriculture. This has to be addressed keeping the beneficial collective local lineage and family unit in mind, both for the sake of affinity and care, but also for the ability to adapt to the changes in the climate and the market. As the effect on climate change on the Shivalik Hill seasonal rhythms, temperature, precipitation, and biological composition is real, short-sighted and reductionist climate and development-and-awareness projects based on stereotypes of women or the rural as a 'eco-noble savage' do not address how climate change is only the latest in a series of add-ons that intensifies inequity and the marginalisation of women and the poor (Kvanneid 2021). The increased liberalisation of India's economic and social system is mirroring a global mechanism of neoliberal logic, where resources for rural development must be proven economically viable, or at least hold the promise of economic growth to be funded. Rural development policies thus risk to encourage local strategies for mitigation or adaptation to climate change that essentialize and conflate larger political and systemic issues that arguably affect local practices in a possibly economic sustainable direction, even an ecologically sustainable direction, but they will hardly be social or just. As politics and policy revolving around 'sustainable development' in rural India are overly focused on the ecological and economical aspects at the cost of the social and cultural dimensions (Baviskar, 2019), we thus need to address the 'anti-politics machine' (Ferguson, 1994) of development with

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a renewed urgency under the climate crisis. In recognising that the real-felt consequences of climate change, be they phenomenological or discursive, are not independent of gendered discourses, an ambition to promote the capabilities of young women is vital to enable them to negotiate their own futures both within the village and the larger society.

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