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Land Redistribution and Reutilization in the Context of Migration in Rural Nepal

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Abstract: Land is an integral part of people's culture, economy, and livelihoods. Social and temporal mobility of people affect land acquisition, distribution, and utilization, which consequently impacts on food security and human wellbeing. Using the data collected by means of household survey, focus group discussions, in-depth interviews, and participant observation, this paper examines the dynamics of land-people relationships, mainly acquisition, redistribution, and reutilization of land, in the context of human migration. The study reveals that food self-sufficiency, household size, age of household head, household asset, total income from non-agricultural sources, and migration status, affect the acquisition or size of landholding in a household. Moreover, land appears to be mobile within and across villages through changes in labour availability, changing access to land, and ethnic interactions caused partly by migration of people. We conclude that mobility of land appears to be an inseparable component of land-people relationships, especially in the context of human migration that offers redistribution and reutilization of land.

Keywords: land use; land distribution; livelihoods; labour migration; Nepal

1. Introduction

Land is an integral part of people's culture, economy, and livelihoods. Social and temporal mobility of people affect land acquisition, distribution, and utilization, which consequently impacts on food security and human wellbeing. When people find better opportunities in a new place than their current location, they tend to relocate in a hope of attaining better life. This results in trade-off between forest protection and farmland expansion as people clear forests for settlements and farmlands [1,2]. Trade-off is also observed between settlement expansion and farmland protection, especially in urban areas, as people build houses in the farmlands they buy [3]. Moreover, in areas lacking employment opportunities, temporary labour out-migration becomes an everyday reality and forms the integral part of livelihood. Labour shortage resulting from migration and remittance obtained from the migrants influence the decisions of acquiring and using land. De Haan *et al.* [4] argue: "Migration is not an atomistic reaction to economic or environmental pressure, but is embedded in societal rules and norms". While a number of studies are conducted on human-environment interactions in the context of urban sprawl [3,5,6] and policies formulated to protect productive farmlands [7–11], very little is examined for developing countries, especially in the context of rural settings.

Nepal experiences a continuous exodus of people from hills and high hills to the plain *terai* region, from rural to urban area, and very recently from the country to abroad with an aspiration of better lifestyle. *Terai* is one of the three physiographic regions (mountain, hills, and the *terai*) of Nepal. Mobility of people has altered the land-people nexus; it has changed the demand and value of land and reshaped the decision of people on acquisition, distribution and utilization of land. The existing literature mainly focuses on the drivers and process of migration, changing household consumption, transfer and use of remittances, and socioeconomic implications of migration [12–16]. However, the studies on how labour out-migration has played a role in acquisition, distribution, and utilization of land are still lacking.

In this paper, we assess the adaptation of actors in their various social networks that have encouraged them to migrate into the *terai* of Nepal in the mid-twentieth century, and to migrate out of this area in more recent times, especially after the 1990s, mainly in search of jobs both within and outside country. Taking the *terai* as an example, focussing on the land-people interfaces in different forms, the paper will help describe how land and migration are intertwined in the constitution of people's livelihood, and how land appears to be an integral part of the processes of mobility and mobilization of people in time and space. We recognize the active role of land to create, reshape and redefine social relationships and redistribution and changing use of land within and outside the village as a result of the social mobility of people through in-and out-migration.

In the Nepal's *terai*, we cannot properly understand the social movements of people into the area or outside of it without accepting the key role of the shifting social-cultural value of land. Therefore, the empirical part of this paper will begin with a historical account of the meaning of land, showing how the abundance of unoccupied forestland first attracted migrants from the north-eastern hills, and how more recently the scarcity of the land is driving people out to look for alternative livelihoods in a globalizing environment. We also analyse how exodus of people from the villages is affecting land acquisition, redistribution, and reutilization.

2. Methodology

2.1. The Research Area and the History of Land

The fieldwork was conducted in Maharani Jhoda Village Development Committee (VDC) of Jhapa district, in the *terai* region of Eastern Nepal. The VDC is the lowest unit of the political structure of Nepal that comprises a number of villages organized in nine wards of 1–2 hamlets. The research area is located at a distance of 56 km west from the district headquarters, Chandragadhi, and 550 km southeast from the country's capital of Kathmandu.

The settlement in the research area started in 1912–1913. Earlier, people from Bihar and North Bengal states of India and some indigenous people settled in the northern and western part of the VDC, the rest was still forestland. Not only the research area, but also the areas including the surrounding villages was covered by sal (*Shorea* spp.) forest. According to early settlers, out of the 4000 ha of forestland that belonged to the then royal family, 2000 ha was located in Maharani Jhoda. Its history is also evident from the name of VDC, which is derived from the word Maharani (meaning the great queen) and Jhoda (meaning settlement after deforestation).

Local history shows that none of the ethnic groups is native to this place; some came earlier, others later in the twentieth century. The government has classified a number of ethnic groups as Janajatis considering them as native to a particular place. Janajatis are generally non-Hindu ethnic groups with their distinct identities regarding religious beliefs, social practices, and cultural values [17,18]. The National Foundation for Development of Indigenous Nationalities (NFDIN) has identified a total of 59 Janajatis in Nepal. They are grouped into four categories based on their origin: from the mountains (17 ethnic groups), from the hills (24 ethnic groups), the inner *terai* (7 ethnic groups), and the *terai* (11 ethnic groups). The Brahmin-Chhetri groups are considered the upper caste people, while the Dalit groups who are also considered untouchable caste groups, are lower caste people in Nepal comprising kami (literally blacksmiths), damai (tailors), and sarki (cobblers). This ethnic description is warranted to explain the social mobility of land among the ethnic groups prevailing in the area. It is also important to note that the Hill Brahmin-Chhetri and Hill Dalit look similar, as well as the Terai Janajati and other Terai settlers. They differ in terms of the caste system. In this research, we focused on the socioeconomic differences between the groups, their differential access to resources and their involvement in labour out-migration. Caste or ethnic differences were not tackled. Furthermore, like other scholars, we use the terms caste and ethnic group interchangeably.

2.2. Data Collection and Analysis

We used a mixed research design that combines the qualitative and quantitative research methods. The qualitative methods of data collection comprise six key informant interviews, three focus group discussions and 21 in-depth interviews. The quantitative data were collected using a household survey involving 277 randomly selected households.

In addition to descriptive analysis and Analysis of Variance (ANOVA), a linear regression analysis was performed to determine the effect of socioeconomic factors on average landholding size among the survey households. In calculation, we included agricultural landholding as dependent variable rather than the total landholding because the total landholding also includes residential holding,

especially the plots bought in town. It is important to exclude this residential landholding from calculation as it might blur our understanding of what happens in the rural areas because of the high price differences between land in town and in rural areas. A focus on agricultural land also allows us to observe people’s shifting priority from agricultural to non-agricultural land use, especially in migrant households. Independent variables include food self-sufficiency, household size, age of household head, household asset, income from non-agricultural sources, and migration status of the household. Table 1 presents the definitions of each of these variables.

We used the General Linear Model (GLM) to analyse the data and draw models (equation below). Since the presence of multi-collinearity diminishes the quality of model and merits a further investigation, we calculated Variance Inflation Factor (VIF) to understand whether multi-collinearity exists. A VIF greater than 10 indicates multi-collinearity and merits further investigation, but some studies use as low as 4 as the threshold for multi-collinearity.

In the first model, six variables were found contributing significantly to the model with R-square of 0.434, but heteroscedasticity was present. Therefore, we transformed the dependent variable to remove heteroscedasticity. Then, we reanalysed the data using the independent variables that were significant in Model 1. This corrected the heteroscedasticity, but three out of previously significant six independent variables showed significant and other three showed non-significant contribution to the model, with an r-square value of 0.433. We again analysed the transformed data by including only the variables seen significant in Model 2, which reduced the R-square and showed only three variables as significant [19]. All three models are shown in the result section.

$$Y = \beta_0 + \beta_1X_1 - \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + e_1 \tag{1}$$

where,

- Y = Natural log of Agricultural land holding size.
- X₁ = Household size.
- X₂ = Migrant household.
- X₃ = Food self-sufficiency.
- X₄ = Age of household head.
- X₅ = Total income from non-agricultural sources.
- X₆ = Total household asset score.
- e₁, e₂, e₃ = Disturbance terms.

Table 1. Definitions of explanatory (independent) and response (dependent) variables.

Variables	Explanation	H ₀
Dependent		
Landholding	Size of agricultural land owned by the household	
Independent		
Household size	Number of family members	+
Migration status	Whether anyone from the family has temporarily migrated (migrated = 1; not migrated = 0)	–
Food self-sufficiency	Food sufficiency means enough food produced by family for 12 or more months; (self-sufficient = 1, not self-sufficient = 0)	+

Table 1. Cont.

Variables	Explanation	H ₀
Age of household head	Age of household head at the time of interview (years)	+
Income from non-agricultural sources	Income obtained from sources other than agricultural activities in dollar	+
Household asset	Ownership of household assets including bicycle, motor bike, radio, television, mobile phone, water pump, grass chopper, cylinder gas, biogas plant, CD/cassette player, camera, electric fan, and sewing machine (0–13)	+
Caste/Ethnicity	Whether the household belongs to Brahmin-Chhetri or other caste groups (Brahmin-Chhetri = 1, Others = 0)	+
Livestock ownership	Number of large ruminants owned by the household	+
Education of household head	Whether the household head is literate or illiterate (Literate = 1, Illiterate = 0)	+

The quantitative data were analysed using SPSS Statistics 19.0, while qualitative data were analysed manually, using qualitative content analysis technique [20].

3. Migration into the *Terai*: In Search of Fertile Land

In the history of Nepal, the whole *terai* region including the research area was covered by dense rain forests. Few settlements were found in and around urban centres and most of the land in the *terai* was either under forest coverage or as unoccupied fallow land [21]. Land use in most of the *terai* was forest oriented. Before the 1950s, only small numbers of indigenous people who had developed some resistance against malaria lived in the *terai*, practicing hunting, gathering and shifting cultivation. Following the eradication of malaria in the late 1950s, migration from the hills to the *terai* and from across the border of Nepal and India resulted in a dramatic rise in lowland population [22,23].

In the early 1950s, Nepalese government invested in roads and initiated resettlement programs, and started logging the dense forestland of the *terai* to open the area for settlement and agriculture. In 1953, for example, the government initiated a planned resettlement program in Chitwan, one of the *terai* districts. The improved road networks opened this once remote region to the outsiders and the dense sal (*Shorea* spp.) and teak (*Tectona grandis*) forests of the *terai* came under intense pressure from migrant farmers from the hills of Nepal and surrounding India [24]. Shrestha *et al.* [25] report comparable policies: “State attempts to utilise the frontier's land resources frequently have been promoted as a policy of population redistribution and agrarian development”. In other words, while mountains and the majority of hills were not appropriate for agricultural operations due to uneven topography and steep slopes, the fertile and plain *terai* land was good enough to attract hill migrants for easy and productive agricultural operations, especially for rice cultivation, which is the staple food in Nepal.

Data on the population structure of the country also show an increased in-migration to the *terai* after the 1950s, supporting the above statements. While the average annual population growth rate for the country during the period 1952/54–1981 was 2.2 percent, the *terai* experienced a growth rate of 3.34 percent compared to 1.22 percent in the mountains and hills. Hence, the *terai* share of the total population of Nepal increased from 34.7 percent in 1952/54 to 48.7 percent in 1981. During the period

of 1961–1981, the *terai* experienced a 2.5 times increase in population and a 6.4 times increase in net migration, whereas the hill region was experiencing negative net migration and had a lower population growth [26]. In 2001 nearly half of the country's population lived here [27], while the *terai* covers only 17 percent of the total land area of Nepal.

4. Landholding and Its Distribution

The household survey data on ethnic composition revealed that the majority of sampled households in the research area were Hill Brahmin-Chhetri (56.7%), followed by Hill Janajati (21.3%), Terai Janajati (12.3%), Other Terai (5.8%), and Hill Dalit (4.0%). The survey indicates high in-migration into the area, as more than three quarters of the sampled households were found to have originated from the hills. As mentioned earlier, especially after the eradication of malaria in the 1950s, people from the hills migrated to the *terai* to look for a better living, to get access to fertile land for rice production and for intensive agriculture, as they could cultivate two to three crops a year, to escape the hardships of life in the hills, and to search for easy mobility due to plain topography and better infra-structure for transportation. However, they often did not move downhill directly, but searched for land around the Nepal-Indian border. Later on, they settled on the fertile land in the *terai* plains, as the following interview fragment shows:

“People came to this place in search of food. They did not have enough food (rice) in the hills. Agriculture was not so developed. Most of them did not come to this place directly, but went to Manipur, Assam of India. Later on, they stopped going there and those who had already been there returned to Nepal, but did not go back to the hills. Instead they came to the terai regions like here where agriculture was good and land was fertile.”

—DKP, 10 August 2008

Thus, both hill migrants and local *terai* people found their ways of living in a relatively pristine environment. The earlier settlers from before the 1950s (mostly Terai Janajati) brought abundant land under cultivation, while later migrants (Hill Brahmin-Chhetri, Hill Janajati, and Hill Dalit) could not do so anymore. Those classified as Other Terai did not show a specific mobility pattern, but mostly they also migrated after the 1950s. The ethnic-historical differentiation implies that the Terai Janajati group originally owned large acreages of land. DKP recalls: “I remember that the father of Jia Tajpuriya had 105 *bigha* (1 *bigha* is equivalent to about 0.67 ha) of land before” (DKP, 10 August 2008). Another key informant narrates: “Many Tajpuriyas had bigger tracts of land. Some had even more than 100 *bigha*. My father used to have more than 55 *bigha*” (BCT, 15 August 2008).

Evidently, the later migrants could not acquire as much land as the earlier migrants because their land acquisition largely depended on economic, social and political accessibility rather than the availability of land itself. Land acquisition after the 1960s was also limited by the government's land policy that allowed only restricted land ownership. It is difficult to find official land distribution records of the area, but the Land Reform Act of 1964 put a ceiling of a maximum of 17 ha of land per household for the *terai*. However, according to the early settlers this provision made little difference in the research area as not many people had more land. On 31 January 1962, the then King Mahendra came to Dudhali (a place nearby Maharani Jhoda) for a royal safari. The local leaders

submitted their petition for land distribution (actually they wanted to legitimise the land they had already occupied). The king then ordered to distribute land in units ranging from three to five *bigha*, depending on the family size. RKP explains how he had to give back the land he had acquired before:

“I had about 11 bigha before. As I was involved in the land distribution process, I had reserved more land for myself. However, later on the system did not allow me to keep more than five bigha so I had to give back the excess land.”

—RKP, 6 August 2008

At present, the average total landholding size of the sample households is 0.8 ha per household with a maximum of four hectares (Table 2). Almost 71.8 percent of the surveyed households have land for both agriculture and residential purposes, while 22.7 percent have only residential land and 5.4 percent have no land at all.

Table 2. Average landholding size among ethnic groups. Source: Household survey 2009.

Ethnicity	Total Land (ha)			
	Mean	SD	N	<i>p</i> -Value †
Hill Brahmin-Chhetri	0.97	0.80	152	
Hill Janajati	0.82	0.67	55	0.704
Hill Dalit	0.09	0.15	10	0.002 **
Terai Janajati	0.46	0.64	32	0.003 **
Other Terai	0.08	0.09	13	<0.001 ***
Total	0.80	0.76	262	
<i>F</i> -ratio	9.62			

† Inter group differences were analysed with the help of a Tukey’s HSD *Post hoc* test; **, *** identify effects that are significant at 5% and 1% levels respectively.

Table 2 shows the ANOVA results on the average landholding size per ethnic/caste group. Hill Brahmin-Chhetri and Hill Janajati groups hold more land than other groups ($p < 0.01$). This is particularly remarkable in view of the area’s settlement history where the Terai Janajatis were the bigger landowners and the in-migrants from the hills subsequently bought land from them. In order to determine whether the ethnic/caste groups differ from each other in landholding size we performed Tukey’s HSD *Post hoc* test after ANOVA [28], which compared the landholding size of Hill Brahmin-Chhetri group with other caste/ethnic groups. The results show that the average landholding size of the Hill Brahmin-Chhetri group is not statistically different from that of the Hill Janajati group, but is significantly larger than the other groups. In other words, over the past 50 years, the landholding size of the early *terai* settlers (Terai Janajati group) was significantly reduced, which are mainly acquired by the hill migrants (the Hill Brahmin-Chhetri and Hill Janajati groups). The reasons behind these ethnic differences on landholding might be cultural, social, economic, or political. The political reasons could be interesting, but are out of scope of this paper; we have mainly analysed the economic, social, and cultural factors of this process of change.

This distribution is remarkable given the historical process of accessing land. Today, the Hill Brahmin-Chhetri are better positioned in terms of landholding size, as almost twice as many (7.2%) of their households own more than two hectares of land, compared to 3.6 percent of Hill Janajati, and

3.1 percent of Terai Janajati. None of Hill Dalit and Other Terai groups has more than two hectares of land. Thus, in a period of 50 years the landowning first settlers sold large tracts of their land.

For the reasons behind this variation of landholding size among ethnic groups, Upreti [29] argues that Dalits and Janajatis were marginalized in land ownership as a result of the political and historical dominance of the Hill Brahmins and Chhetris in the state machinery after the geographical unification of Nepal by Shah rulers that started in eighteenth century.

Locally, people suggested that because the Terai Janajatis have a rich cultural life, they had to sell part of their land in order to cover the costs of many rituals and festivities they frequently organized. In addition to the richness in cultural activities, we also observed that they could not make a sustainable use of the resources they had. They could not grapple with the negative impacts of expenses without having a regular income and depend on land rather than on its production. BCT explains how their culture made the Tajpuriyas poor:

“Tajpuriyas were rich before. There was a jimdari system where jimdars had huge tracts of land and mostly Tajpuriyas were jimdars. The land size declined due to our internal problems. Just think like how the forest of Maharani Jhoda was destroyed so the land size of Tajpuriyas also decreased. There used to be high expenses in wedding ceremonies. We used to spend a lot of money on Aghani (dance festival) organized after the rice harvest. The market price of rice and other agricultural products was not good. If one got indebted for two or four thousand rupees, one had to sell land. The land was so cheap, you can imagine I sold some of my land at 3500 rupees per bigha. Now, it costs more than 350,000 rupees. Not only in this area, if you look at the situation of Tajpuriyas in other areas, you can see a similar situation.”

—BCT, 15 October 2008

Apart from these social and cultural conditions, the land-people relationship has also changed due to processes of land fragmentation and socioeconomic modernization. Land fragmentation has increased because of the combined effect of inheritance, increased land price and population growth. “The existing social system of equal inheritance of land amongst all sons has created fragmentation and increased sub-division of household plots to the extent that land sizes are progressively decreased and become insufficient to provide subsistence” [30].

5. Socioeconomic Determinants of Landholding

The linear regression analysis shows that food self-sufficiency, household size, age of the household head, household asset endowment and non-agricultural income positively correlate to agricultural landholding (Table 3). It means that the larger the household, the higher the age of the household head, the non-agricultural income and the household assets endowment, and the higher the tendency to have more agricultural land. Migration, on the other hand, negatively correlates to acquiring more agricultural land as migrants tend to buy residential plots in town rather than investing in the expansion of agricultural land. Interestingly, in the current situation, ethnicity does not seem to play a significant role anymore in whether or not a household invests in acquiring (more) agricultural land.

Table 3. Determinants of agricultural landholding (n = 131). Source: Household survey 2009.

Variables	Model 1 (Before Transformation)		Model 2 (After Transformation)		Model 3 (After Transformation)	
	Coefficients	<i>p</i>	Coefficients	<i>p</i>	Coefficients	<i>p</i>
(Constant)	−0.509 **	0.022	−2.19	0.000	−2.176	0.000
Household size	0.075 **	0.004	0.048	0.120		
Migrant household	−0.241 **	0.042	−0.184	0.201		
Food self-sufficiency	0.404 **	0.000	0.595 **	0.000	0.634 **	0.000
Age household head	0.009 **	0.013	0.014 **	0.003	0.017 **	0.000
Total income from non-agric. Sector	5.18×10^{-7} **	0.009	4.62×10^{-7}	0.057		
Total household asset score	0.039 **	0.034	0.06 **	0.008	0.068 **	0.003
R-Square	0.434		0.433		0.399	
Adjusted R-Square	0.406		0.405		0.385	

Dependent Variable: Model 1: Agricultural land holding size; Model 2 and 3: Natural log of Agricultural land holding size; ** Sig. at 0.05 level of significance.

$$\text{Model 1: } Y = -0.509 + 0.075X_1 - 0.241X_2 + 0.404X_3 + 0.009X_4 + 5.18E-07X_5 + 0.039X_6 + e_1 \quad (2)$$

$$\text{Model 2: } Y = -2.19 + 0.048X_1 - 0.184X_2 + 0.595X_3 + 0.014X_4 + 4.62E-07X_5 + 0.06X_6 + e_2 \quad (3)$$

$$\text{Model 3: } Y = -2.176 + 0.634X_3 + 0.017X_4 + 0.068X_6 + e_3 \quad (4)$$

where,

Y = Natural log of Agricultural land holding size.

X₁ = Household size.

X₂ = Migrant household.

X₃ = Food self-sufficiency.

X₄ = Age of household head.

X₅ = Total income from non-agricultural sources.

X₆ = Total household asset score.

e₁, e₂, e₃ = Disturbance terms.

The results show that food sufficient, large-sized, and men-headed households are likely to have larger landholding as compared to food insufficient, small-sized, and women-headed households. Similarly, older household heads tend to own more land than younger ones. Ownership of household asset and income from non-agricultural (off farm) sources also positively correlate to landholding size of a family, indicating that well-off families (asset as a proxy indicator for richness) and those with alternative income sources have larger landholding as compared to less well-off families. Migration status is negatively correlated to landholding size suggesting that migrant families often possess smaller land compared to non-migrant households. In other words, small landholders tend to migrate for supplementing household incomes and supporting livelihoods, leading to changes in land-people relationships.

Literature also shows a changing land-people relationship. Shrestha *et al.* [25] show that in the early stages, land acquisition was primarily a function of labour investment. As long as people had access to a considerable labour force (mainly through their extended family network) the early migrants had a pre-emptive advantage. However, later migrants encountered increased land scarcity due to both continuous in-migration and a natural population increase among the early settlers. As a result of this increased pressure on land, the ability of later migrants to acquire land is largely tied to their capacity to buy land from the early occupants. Moreover, at present land acquisition is subject to other social and economic factors rather than availability of land and labour. This is what we call the social mobility of land: its changing ownership among ethnic groups. Whereas the temporal mobility of land refers to its changing ownership over time across different actors within and beyond the local community.

6. Remittance, Technology and Land-People Relationships

Land-people relationships in research area over the past 50 years present a shifting picture. During early days of the migration of hill people to the *terai*, the population was mainly composed of migrating couples and their unmarried children. Agricultural production seemed to be enough for the family. People did perhaps expect not much else, as getting into *terai* was their mission to enhance their livelihood. RKP recalls the changes in land-people relationships:

“Previously, land was fertile and the population number was small so agriculture was sufficient for the people. Nowadays, land quality is degraded due to chemical fertilizers and pesticides, but new technologies are introduced that increase the production. We used to grow rice varieties like Handiphor, Dumse, Sataraj, Doshara, Kuji; presently, the improved varieties like Radha17, Radha11, BG1445, BG1442. We do not have those traditional varieties nowadays. However, people own motor pumps, which are used for irrigation and have dramatically increased the agricultural production.”

—RKP, 6 August 2008

The above statement points to the changes in agriculture following the introduction of lift-irrigation technology in the research area. At present, there is no canal irrigation facility, but over 50 percent of the survey households own motor pumps for lifting water from underground tube-wells. Apart from the rainfall and underground tube-wells, water is also obtained from natural streams or the small irrigation channels the farmers have developed. After the start of electrification in the village in 1999/2000 and the introduction of electric water pumps, the face of agriculture in the village changed. The spring season rice is entirely the result of this new technology because underground water is used mainly for spring season rice and winter crops. Previously, only big farmers could afford petrol-driven motorized water pumps of higher capacities, but nowadays even poor people can afford small electric motor pumps. The following report from a poor household having small piece of agricultural land illustrates this:

“I have installed a tube-well and bought an electric water pump from the money I received from my husband. Because of this, now, I can grow rice twice a year, which is enough for us to eat for the whole year. As we don’t have much land (0.17 ha) we would otherwise have to borrow money from moneylenders to buy food.”

—BMS, 23 December 2009

The above transcript shows how the network of remittances and the technological innovation of lift irrigation through electric water-pumps helped make BMS's household food secure. BMS is a *de facto* female household head whose husband was working in Qatar at the time of fieldwork. The small piece of land she got from her husband's parent is not sufficient to produce enough food for her family unless she produces spring season rice or uses remittances to buy food. Another respondent also reports that the water pump has helped her to irrigate land for winter-and-spring season crops: "I bought water-pump last year, which I use to pump out water for spring season rice, wheat and for winter season green vegetables" (ANK, 23 December 2009).

Kopytoff [31] elucidates that the values and positions of a commodity can transform from one space to another or from one individual to another. Therefore, it is also important to describe other major elements contributing to the changing land-people relationships in Maharani Jhoda such as through labour out-migration at a greater depth. Then we will see how actors form networks in certain social and temporal spaces, and reshape their relationships when they move on to other spaces. The cases of BMS and ANK show a changing land-people relationship or land use in different forms of networks through the involvement of remittances or water pumps. On the one hand, the husbands who used to work on land are now absent, but still have a continuous relationship with land through remittances. On the other hand, the wives who did not have much management role before, are now involved directly in land management. This conceptual mobility of land in the research area shows the temporal and social dimensions of land-people relationships. This is visible in the shifting relationship of land with different caste/ethnic groups and also within and across the local community. At the same time, the changing land-people relationship is also visible through shifting perceptions of land across generation from its value for food production to being a commodity, yet still viewing land as a status symbol [32,33]. Likewise, the introduction of water pumps changed people's relation with the land, especially to increase agricultural production.

7. Out-Migration, and Redistribution and Reutilization of Land

The mobility of land mediated through labour out-migration has influenced people's livelihood strategies, practices and outcomes in the research area, among others. Additionally, the changing land-people relationship reshapes and redefines the livelihood practices of the actors involved. The reverse applies as well: changed livelihood practices reshape and redefine the land-people relationships.

Although the prime economic basis of the research area is still agriculture with 81 percent of survey households reported agriculture as their primary source of living, the secondary means of living are increasingly important. Out of 277 households, 136 households (49.1%) have at least one migrant member (22.1% within the country and 27% outside the country), and over 40 percent received remittances in the year prior to the survey.

Labour out-migration has caused labour reorganization, land redistribution and reutilization, and a changing valuation of agriculture and agricultural land for food security. Among the 134 migrant households that responded to the question of reorganization of labour, 70 percent reported that they hire labourers to accomplish agricultural tasks, while 16 percent exchange their labour with neighbours. The rest have enough remaining labour. In most migrant households, male labourers are hired or

exchanged with the available (female) labourers. Those who hire labour reported that it is not only difficult to find labour in time but also expensive. Consequently, people have started renting out land. Among the 21 households that gave land out for rent and sharecropping, 13 were migrant households. There was no specific pattern per ethnic group in renting in or renting out land; it is rather a matter of labour (un)availability. The following case illustrates this:

JLK (55) came to this place from Bhojpur, a hill district, in the late 1960s. She has been living as a widow for many years. She has five children: three daughters and two sons. All of her daughters are married, living with their husbands' family. Her first son lives in Kathmandu with his family and the younger son works in Dubai. JLK had been farming with the help from her (first) daughter-in-law, but for some years she has shared her land with the sharecropper because of lack of male labour. She explains:

“Yes, I have given all the land out for sharecropping. There is no one else at home to work on the farm. Till the time elder daughter-in-law was here, we cultivated the land on our own, hiring male labourers for ploughing. However, since the time she joined her husband in Kathmandu three years ago, I remained alone at home so I gave land to others for cultivation; however, this is not my choice. (...) I get half of the harvest from my sharecropper.”

—JLK, 11 November 2009

JLK's sharecropper used to be a wage labourer, but now he is cultivating JLK's land. It shows that reorganization of labour has an implication for redistribution of land. This is a form of the social mobility of land: from a single use by the landowner to shared use with sharecroppers.

Another change in the land-people relationship is the people's preference to buy residential plots from their surplus income, which in this case mostly comes from remittances. Twelve out of 21 households considered for in-depth interviews, bought residential plots in nearby towns, while only three households bought agricultural land. The remaining six households did not buy any land. The result corroborates with other studies carried out in Mexico [34] and China [35] where remittances were mainly invested in housing, which can be considered a redistribution of land from agricultural use to residential use.

BTR, a former migrant, currently working as an agent for land and manpower business, refers to migrant workers as the main buyers of residential land. According to him, labour out-migration brought an increased investment in residential plots. Especially, the young adults try to settle in nearby town so that they can leave farming behind, which they always aspired. BTR explains:

“The main buyers of the residential plots in this area are migrant workers. Those who go out for 4–5 years and come with some money amounting about 6–8 lakh rupees (1 lakh = 100 thousands). Whatever money they make abroad, they don't want to buy agricultural land; they just want to invest in residential plots. Even if they have very little agricultural land like 10 kaththa, they don't want to add agricultural land; they rather like to buy even 0.5 kaththa of residential plot. (...) People's attitude nowadays is once they return from abroad they want to buy a plot in town, put up a shop and live an easy life. If father asks for buying/adding agricultural land they reply, ‘who is going to plough?’”

—BTR, 14 October 2009

Buying residential land is not only a way to escape rural life, but also a strategy to get higher returns. The price of urban land increases at a higher rate than that of agricultural land in rural areas. Regretting the purchase of agricultural land in the village, a returned migrant explains:

“We bought this (agricultural) land for five lakh rupees five years ago, but I am not happy now. If we had bought residential plots, we would make at least three million rupees, but if I would sell this land now, I would not even get a million. As land in the neighbourhood was for sale my father wanted to buy this land. I also thought that would be fine, but now I think we did not make a good decision.”

—SBR, 21 April 2009

The above discussion reveals that though land is physically an immobile element, it has appeared as an active agent moving from one social category of people to another, from one social space to another, and from one point in time to another through changing ownership and use.

8. Conclusions

Considering land as an actor helped explain the changing value of land across the social and temporal contexts in connection to human mobility. Its history shows that land is more than a commodity in the realm of changing land-people relationships. The paper shows the dynamic interaction between migration and networks of land, labour and people, in both social and temporal contexts. Simply put, it reveals that when hill migrants settled in the study village, the issues relative to forests and agriculture mounted. As population density grew, people had to clear more forest to cultivate crops and convert cultivable lands to construct houses. Since several productive lands were converted to residential lands, productivity of crops declined as what are left for cultivation are not very productive in several cases. Similarly, due to family fission and conversion of cultivated lands to small-size residential lands, agricultural commercialization is no more suitable in many areas.

Evidently, there is no linear relationship between land and migration, but temporal and social changes seem occurring in the following direction: from one ethnic group to another, landlord to landless, non-migrant to migrant families, and from one form to another (e.g., from forest to farm and residential lands and farmland to residential land). At one point in history, fertile *terai* land attracted migrants and agricultural land was considered a major source of livelihood and a status symbol. While at another point in history, land scarcity drove people out as labour migrants, but the agricultural land still retained symbolic and cultural value. In both cases, through the interlocking of global and local forces, land as an actor became a central element in the human mobility in the historical process of shifting relationships between people and land.

We have observed the mobility of land from one social category to another not only within the village in the form of changes in the land-labour arrangements, but also beyond the village in the form of real-estate development attracting migrant workers to buy residential plots. Finally, the changing valuation of land and labour is an integral part of strategic decisions of livelihood transformation under the conditions of social change. All this testifies to changing land-people and land-labour relationships.

Various social and economic factors (household size, age of household head, total income from non-agricultural sources, possession of household assets, migration status, and household food sufficiency)

play important role in land acquisition or land holding size. Hence, social and temporal mobility of land appears to be an inseparable component of land-people relationships resulting into redistribution and reutilization of land. At the dynamic interface of land and people, land appears to be mobile within and beyond villages, through changes in labour availability, shifting access to land, ethnic interactions, and changing lifestyles, and livelihood practices.

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Author Contributions

Hom Gartaula collected data and wrote the first draft. Pashupati Chaudhary and Hom Gartaula together analysed the data. Pashupati Chaudhary, Hom Gartaula, and Kamal Khadka revised the text.

Conflicts of Interest

The authors declare no conflicts of interest.

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