

WOLTS Project Mongolia

Tsenkher Soum Report

February 2019

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Acronyms

BI	Biographic interview
CPR	Center for Policy Research
CFM	Community feedback meeting
FGD	Focus group discussion
FUG	Forest User Group
FHH	Female-headed household
GIZ	German Technical Cooperation
MHH	Male-headed household
MNT	Mongolian Tugrik
MSIS	Mongolian Statistical Information Service
NTFP	Non-timber forest product
PCC	People Centered Conservation
PUG	Pasture User Group
USD	United States Dollar
WOLTS	Women's Land Tenure Security Project
SDC	Swiss Agency for Development and Cooperation

Glossary of Mongolian Terms

aimag	Region or province
buleg	Organised community group such as a FUG
bagh	Administrative sub-division within a soum
dzud	Extremely severe winter weather that leads to catastrophic livestock loss
ger	Traditional portable Mongolian housing, typically round and made of timber and felt
khashaa	Housing plot (in a soum centre or other urban area), also used to mean the fences around the plot (so it also covers campsites) and the fences around livestock shelters
khot ail	Informal administrative sub-division of a rural bagh
khural	Parliament
negdel	Agricultural or livestock collective in the socialist period
ninja	Illegal artisanal miner (so-called after the Teenage Mutant Ninja Turtles whose shells resemble the baskets that these miners carry on their backs)
nukhurlul	Local community group or association
otor	A special case of short or long-term seasonal migration with livestock, usually in the summer, but always out of regular seasonal pastures
soum	Administrative sub-division within an aimag outside of the capital city

Currency Conversions

Currency conversions in the text were calculated at the rate of USD 1 = MNT 2,426, which was the average of the exchange rate that prevailed at the time data were collected, thus February 2018 for data from the baseline survey and August 2018 for data from the participatory fieldwork phase.

Introduction – the WOLTS research and methodology

Mokoro's practical and action-oriented long-term strategic research project, the Women's Land Tenure Security Project (WOLTS), is piloting its methodology through a 'Study on the threats to women's land tenure security in Mongolia and Tanzania'. Working with our NGO/CSO partners – People Centered Conservation (PCC) in Mongolia and HakiMadini in Tanzania – we have been investigating the state of women's land tenure security in pastoral areas affected by mining investments, through both participatory qualitative and quantitative research to identify the main threats to the land rights of women and vulnerable groups. The WOLTS project's aim is to assess possible means to improve gender equity in land tenure governance and secure the land rights of vulnerable people within communities, as well as to support communities as a whole to withstand threats to their land and natural resources. (See our website for more about WOLTS: www.mokoro.co.uk/wolts.)

This Soum Report shares our findings from our research in Tsenkher between October 2017 and August 2018, including initial field visits, a baseline survey and a participatory fieldwork phase, which have been shared and validated during a follow-up visit in December 2018.

Our baseline survey was conducted in February and March 2018 with 10% of households in all baghs of Tsenkher. It included 170 households, of whom 137 were randomly sampled, 24 were additional female-headed households and nine were additional single adult male-headed households. Thus 81% of the total survey sample was randomly sampled (including 117 male- and 20 female-headed households) while 19% comprised deliberately targeted vulnerable female- and male-headed households. This was done to boost the total number of vulnerable households surveyed so as to help uncover critical gender issues for vulnerable groups. Data from the 33 deliberately targeted households have only been included in comparative analysis of male- and female-headed households, and of male and female respondents, not in all the general baseline analysis.

Our participatory fieldwork phase took place in August 2018 and included 12 focus group discussions (FGDs) and 19 individual biographic interviews (BIs), involving some 124 people. Different types of social groups and individuals were specifically sought out for these discussions and interviews, so as to reflect different characteristics and issues that we considered worth exploring further after analysing our baseline results (e.g. widows, miners, married men and women, etc.). FGDs were structured around standard participatory exercises (including natural resource and migration mapping, seasonal labour analysis, and stakeholder analysis and institution mapping). BIs followed structured question guides that were tailored to the circumstances of the individual being interviewed in order to help us learn about people's lives and livelihoods and the way both gender relations and access to different resources have changed since their childhoods. All FGDs and BIs included free-ranging discussions too.

Our analysis also draws on interviews with other stakeholders, including local government officials (at soum and aimag level) and representatives of some of the mining and tourism companies operating in Tsenkher, as well as on data from five participatory community feedback meetings (CFMs) and a feedback meeting with soum and bagh officials during our follow-up visit in December 2018, in which some 60 people took part.

We are deeply grateful for the engagement and hospitality of all the people of Tsenkher during our research so far. We particularly acknowledge and thank all those whom we have interviewed and shared discussions with – for their willingness to participate and their invaluable contributions to helping us learn about gender, land, pastoralism and mining in Tsenkher today.

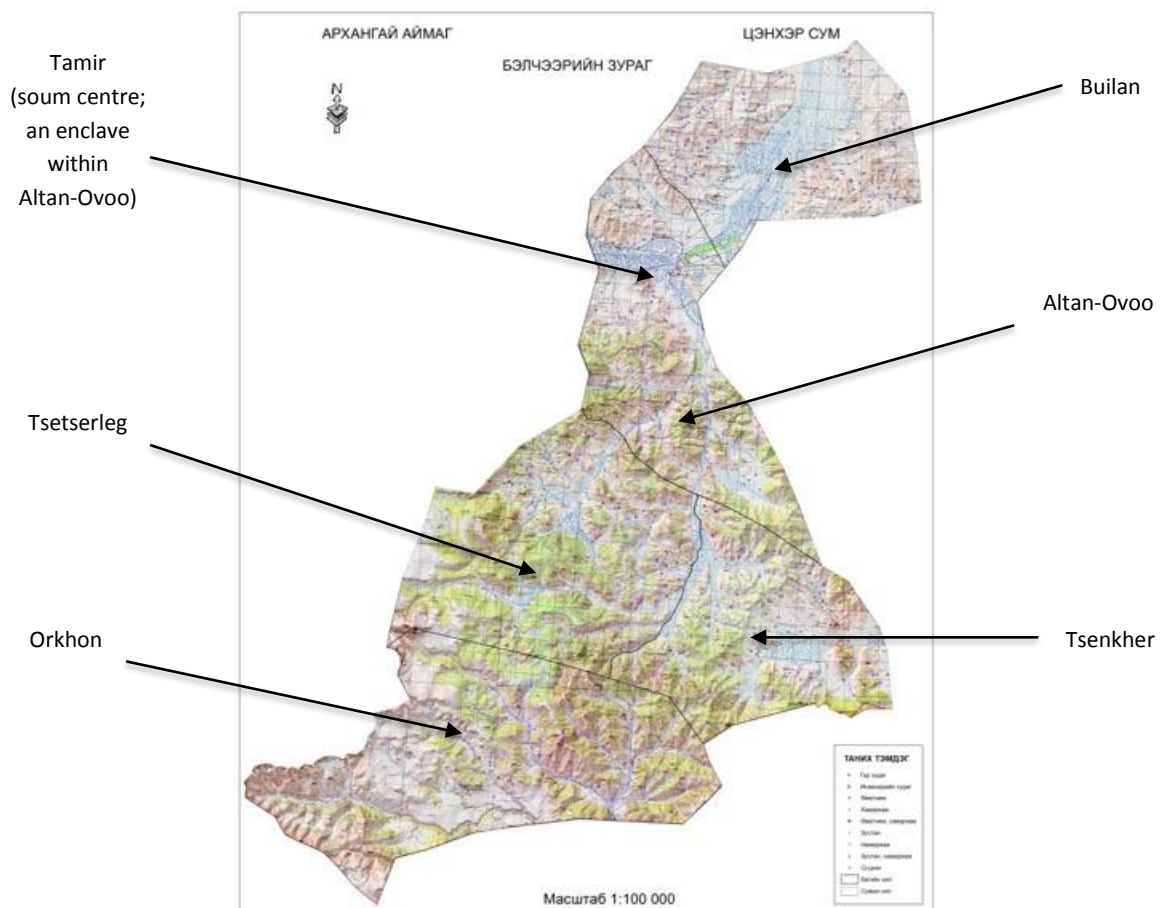
The WOLTS Mongolia Team includes Daley, E., Narangerel, Y., Driscoll, Z., Lanz, K., Lkhamdulam, N., Munkhtuvshin, B., Suvd, B., Grabham, J., Erdenebat, R. and Lister, P. This Soum Report is the result of all our combined efforts.

Location and population

Tsenkher soum is located in Arkhangai aimag, 452 km north-west of Ulaanbaatar. Its total land area is 332,803.1 ha, of which agricultural land (pastureland, haymaking areas and a 320.4 ha abandoned crop farming area) takes up 149,042.9 ha in total, 73,720 ha is forest, 89,226 ha lies within the Khangai Nuruu National Park, and 9,636.81 ha is urban settlement land in the soum centre. During the 1990s, two mining production licences were granted in the soum, but according to information obtained from the aimag office of the State Specialised Inspection Agency, the number stood at five by 2017. Tsenkher’s main mineral resource is gold and the area that has been officially designated for mining, since 1996, lies in the mountainous southernmost part of the soum, taking up approximately 5% of its total land.

Tsenkher is made up of six baghs; one is more urbanised – the soum centre, Tamir – while in all the other baghs – Builan, Tsenkher, Tsetserleg, Orkhon and Altan-Ovoo – pastoral herding is the dominant land use.

Map 1. Tsenkher soum showing approximate bagh boundaries and locations



Source: Center for Policy Research (CPR), Mongolia

According to Mongolian national government statistics, the total official population of the soum as at December 2017 was 5,892 people, living in 1,685 households (MSIS 2017). By the start of our baseline survey, in February 2018, soum officials and bagh governors reported that the total number of households had fallen to 1,680. The distribution of households across Tsenkher’s six baghs at that time is given in Table 1 below. Average population density for the soum as a whole was 0.005 households per ha, or 0.18 people per ha based on the national statistics from December 2017. Whilst geographically the six baghs differ in size, as Map 1 indicates above, it was not possible to calculate their individual population densities due to lack of data on the bagh areas.

Table 1. Number of households in each bagh, Tsenkher

Bagh	Total number of households	Number of single-headed (vulnerable) households	Number of single adult male-headed households	Number of female-headed households
Tsenkher	209	25	4	21
Altan-Ovoo	306	64	15	49
Orkhon	293	54	10	44
Tamir	289	47	10	37
Builan	258	51	7	44
Tsetserleg	325	76	33	43
Total in Tsenkher Soum	1680	317	79	238

Source: Official data from Tsenkher Soum Government, as at 25 February 2018.

A total of 44 female-headed households were included in our baseline survey, of whom 20 fell within the 137 randomly sampled households, equivalent to 14.6% of the random sample. Extrapolating from this to the soum as a whole would suggest that some 245 households in Tsenkher were female-headed at the time of our survey, which compares very closely to the figure of 238 female-headed households noted in Table 1. With regard to single adult male-headed households, a total of 13 widowed male-headed households were included in our baseline survey, of whom 8 fell within the 137 randomly sampled households, equivalent to 5.8% of the random sample. Extrapolating from this to the soum as a whole would suggest that some 97 households in Tsenkher were headed by widowers at the time of our survey, which is somewhat higher than the 79 single adult male-headed households, noted in Table 1, that were reported as vulnerable households by soum officials at the start of our baseline survey.

Households in Tsenkher soum were generally organised within khot ail – an informal administrative sub-division of a rural bagh, and the common term for the customary form of nomadic pastoralist organisation in Mongolia, often based on kinship relations, whereby on average 5-6 households share everyday herding tasks, migrate with their livestock as a group and generally lend each other economic support (Narangerel 2010). The most frequent number of households per khot ail among those interviewed during our baseline survey was two (in the case of 48 of the 137 randomly sampled households). However, there were six households where we found 10 households within a khot ail: three in Tsetserleg, two in Tsenkher, and one in Orkhon. There was also one household in Tsetserleg that reported to have nine households within their khot ail.

The average size of the randomly sampled households across Tsenkher soum was 4.07 people. The average size of all 44 female-headed households was 3.77; the average size of all 126 male-headed households was 4.30. There were a total of 558 people (284 females and 274 males) living in the randomly sampled households, with their age breakdown as summarised in Table 2.

Table 2. Age distribution of people living in 137 randomly sampled Tsenkher households

Age (in years)	Number of people	Percentage of total people in each age group
5 or under	78	14%
6-12	57	10%
13-18	78	14%
19-24	63	11%
25-34	80	14%
35-44	79	14%
45-54	62	11%
55-64	44	8%
65-74	14	3%
75 and over	3	1%
Total	558	100%

Source: WOLTS Mongolia baseline survey, 2018. N = 558.

The data in Table 2 suggest by extrapolation that 38% of the soum's population were children (aged 18 or under), 3% of the population were elderly (aged 65 or older), and 59% of the population were

working age adults (aged 19 to 64). The youthfulness of Tsenkher's population is underscored by the number of younger adults (aged 19-24 and 25-34), who made up 44% of the working age population in our randomly sampled households, and by the fact that in total some 64% of people in these 137 households were aged 35 or under. This is in line with national statistical data, which indicates that, as of December 2017, 34% of the total population of Mongolia was aged 15 to 34 (MSIS 2017).

The population of Tsenkher is largely Khalkh, with 100% of the heads of randomly sampled households in our baseline survey identifying as Khalkh. Buddhism is the predominant religion – attributed to 96% (132) of the heads of randomly sampled households. Four per cent (5) of the heads of randomly sampled households were reported to have no religion. The soum is thus a relatively homogenous and traditional community, as we discuss further in historical context below.

Tsenkher's six baghs

As a whole, Tsenkher soum is very rich in natural resources. It comprises mountainous and largely forest-steppe terrain, with many rivers and streams running through all six of its baghs. Pastureland remains plentiful and mostly of relatively good quality, and most people seemed to have access to what they considered to be a sufficient quantity of water and forest resources, including timber, firewood and a diverse range of non-timber forest products (NTFPs). Participants in our FGDs and BIs reported that most people in the soum were still mainly engaged in the traditional herding lifestyle. It appeared that pastureland was largely managed in accordance with customary rules and regulations, whereby there is little long-distance seasonal movement of people or livestock and negotiations and dispute resolution over pasture use and grazing rights tend to take place at the local level, between different khot ail, as we elaborate further below. There was no good road network connecting Tsenkher's six baghs at the time of our research and, outside of the soum centre, many people lived clustered in their different khot ail in valleys with perhaps 10 to 15 households each, separated by mountains and rivers. As a result, there appeared to be little exchange between people from different baghs and many people we spoke with were unaware of things happening in their neighbouring baghs.

The northernmost bagh is Builan, a relatively flat and riverine area that is the lowest altitude part of the soum, with no forests. Crop farming was developed here during the socialist period, consuming over 300 ha of the bagh's land, but by the time of our research only a few households were still growing vegetables in the soum and the majority of Builan's former cropland had been abandoned. We observed in this flat land with its good pasture for sheep and goats that local herders had more of these types of livestock and used animal dung (instead of coal or firewood) for fuel, as a result of which local leaders claimed a higher life expectancy for the people of their bagh. Additionally, as Builan households tended to keep larger numbers of smaller animals, they also tended to live one by one, keeping greater distances from each other so as to have more individual access to larger areas of pastureland.

South of Builan lies Altan-Ovoo, where tourism has developed around its natural spa and hot springs. At the time of our research there were five tourist companies operating in Altan-Ovoo, receiving some thousands of foreign and domestic tourists seasonally from June to November each year. Participants in our research shared that local herders in Altan-Ovoo were increasingly becoming involved in tourism, with many setting up additional gers for visitors next to their own ger, and selling meat and milk products from their livestock to the tourist companies to support their livelihoods; some households in Altan-Ovoo also had small fodder plantations for their livestock.

Tsenkher soum centre lies in Tamir bagh, inside Altan-Ovoo, where the government offices, public hospital, secondary school and kindergarten are all located. We observed that roughly 30% of people living in Tamir worked for the soum government, a further 15-20% had their own small businesses, such as shops and restaurants, while the remaining half of Tamir's population appeared either to keep livestock or to have no occupation at all. Alcoholism was very visible in the soum

centre, with some drunk people around all the time we were there, and we encountered at least one household that seemed to host a gambling den.

The settlements in the soum centre are mainly permanent houses built on plots (khashaa) held either under formal ownership or customary rights. Members of many herder families from other baghs come and spend the whole school year in Tamir, to enable their children to get an education. Compared to Tsenkher's other baghs, Tamir also appeared to contain a higher proportion of elderly people, aged 70 or more, reflecting a nationally observed trend that as herders get older, they often prefer to have few livestock and to live closer to the various medical and social services that are usually only available in soum centres.

Tamir also contained several working sawmills at the time of our research. Logging itself is carried out in Tsetserleg, which lies to the south-west of the soum centre and Altan-Ovoo. Tsetserleg is rich in forest, which also serves as pastureland. Different types of berries and nuts are collected by locals and outsiders from neighbouring soums, with the collection and sale of berries and nuts particularly undertaken by people with few livestock. Seven Forest User Groups (FUGs) had been established in Tsetserleg by the time of our research, out of a total of 23 in the soum as a whole. However, participants in our research reported that no conservation activities had as yet been carried out by the registered FUGs in this bagh. Approximately 10% of Tsetserleg's territory falls within the Khangain Nuruu National Park, a mountainous national park totalling 897,840 ha that also includes much of the land in neighbouring and nearby soums (BirdLife International 2019).

To the east of Tsetserleg, and south-east of the soum centre and Altan-Ovoo, lies Tsenkher bagh, with its beautiful valleys and mountains. This bagh is also rich in forests and has natural spas and hot springs in two different areas of its territory. However, established tourism had not yet developed here and the spas and springs only seemed to be visited by domestic tourists travelling on their own rather than with tour companies. There were seven more FUGs in Tsenkher, but, as in Tsetserleg, we were informed that no regular activities or initiatives had yet been organised by those FUGs, although each had a volunteer ranger designated by its members.

Gold deposits have been found in Tsetserleg's territory, although mining only operated there in 2005, but the main mining area in Tsenkher soum is Orkhon, which lies in the southernmost part of the soum and is geographically the furthest bagh from the soum centre, some 100 km away. Almost 30-40% of Orkhon bagh's territory was under active placer gold mining at the time of our research. Orkhon's mining site – known locally as the Deed Nuur – took off from the mid-1990s, when land was first licensed to two big mining companies. By 2017, some 30 small-scale mining companies were officially active at the mining site, operating in both official and unofficial ways, as we elaborate further below. However, participants in our FGDs and BIs claimed that around 50 small-scale mining companies were in fact operating in the Deed Nuur, together with many other (wholly illegal) individual and small groups of artisanal miners known as 'ninjas'. Many households living in or near the Deed Nuur were visibly poorer than households elsewhere in the soum, with fewer livestock and more reliance on casual mining to generate cash income, but some wealthy people also lived there to pursue big profits from mining.

Aside from the mining site, the remaining 60-70% of Orkhon's territory is more suitable for yak herding and falls within the Khangain Nuruu National Park. It seemed that Orkhon overall has a lot of potential to develop tourism, with its unique mountain landscape and endangered wildlife such as red deer, musk deer and argali (wild sheep).

Recent history of economic and population change

Modern day Tsenkher soum was established during the major administrative changes that took place in Mongolia at the start of the socialist period. Arkhangai aimag was created in 1931 from parts of the former Tsetserleg Mandal Uul aimag, which itself was established after the People's

Revolution of 1921 within the previous Sain Noyon Khan aimag; Tsenkher soum was created within Arkhangai aimag and was named Tsenkher after the main river that runs through the soum.

During the socialist period, Tsenkher was very much a typical Mongolian soum. Traditional livestock husbandry was the main focus of socialist development policy, as in many other parts of Mongolia, and, as noted above, crop farming was only developed in Builan, in the flattest part of the soum.

With the emphasis on collective state production from the 1950s, the vast majority of households in Tsenkher had to herd and milk state-owned livestock and the products of their labours went to the state. As elsewhere in Mongolia, pastureland management came under the responsibility of the state at this time, with the negdel (collective) playing a major role in formally organising what had previously been regulated by local people following age-old customary practice. Regular seasonal movement of people and livestock was supported by the negdel through the provision of transportation to herder households, as well as veterinary and other services. Individual herder households were only allowed to own a few animals privately – no more than about 30-40 head of livestock – and the negdel had full rights to confiscate livestock in the name of the state from any households that had larger herds than this. As a result, many participants in our FGDs and BIs looked back on the socialist days as a period of hard times and few freedoms, when everyone had to work hard but with no opportunities for wealth accumulation. However some people mentioned that nature used to be more beautiful in those days, with good quality pasture and clean rivers, and no mining in the soum.

“Now we are free to do what we want with our livestock. It is not easy now, but we are independent...The way land was used back then was similar [to now], under customary rights.” (BI 11, elderly widow)

After the 1990 democratic transition, the state collectives disintegrated and livestock were privatised in Tsenkher, like elsewhere in the country. This privatisation allowed local herders to own more livestock again and it appeared that this freedom to increase herd sizes from the 1990s contributed to current (relative) pastureland degradation in the soum, when compared to the perceived high quality pastureland of the socialist period and before. According to the national government’s livestock census records, the total livestock population of Tsenkher soum dropped from 73,180 animals in 1978 to 66,380 in 1988, shortly before the democratic transition, before rising to 107,160 animals in 1998 and 152,540 animals in 2008; by the time of the December 2018 census, and despite an outbreak of foot and mouth disease in the soum in the spring of 2018, there had been a further increase in the total livestock population of Tsenkher to 331,680 (MSIS 2018).

During the initial post-socialist days of the early 1990s, the number of school dropouts in Tsenkher soum also increased. This was especially the case for boys, who could help their families with the physical tasks of herding once livestock were privatised and the collapse of the wider Mongolian economy caused many people to return to – or take up – herding as a way to survive. This resulted in relatively lower education levels, and consequent social issues, among the sub-group of local male herders aged in their mid-to-late 30s by the time of our research, as we discuss further below.

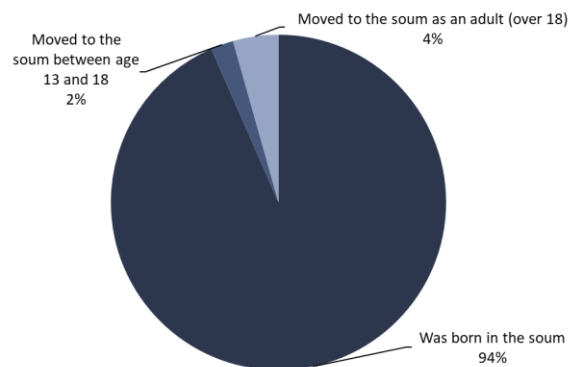
As noted above, mining only got properly under way from the mid-to-late-1990s in Orkhon bagh, but it actually began earlier in the decade as local herders gradually started to work as ninjas in order to generate cash incomes to supplement their herding activities in those economically difficult times.

Today most citizens of Tsenkher soum were born locally. Moreover, the soum’s total population has changed relatively very little since the democratic transition, with national statistics indicating only a 13.3% increase over the last 28 years (MSIS 2017). According to the soum government’s official records at the time of our research, those moving out of the soum numbered more than twice those moving into the soum 10 years or so ago, whereas by 2017 the numbers of people moving in and out of the soum had roughly equalised, to make for current annual net migration of close to zero. During our FGDs and BIs, several elderly people explained that, because there was very little crop farming

or intensive livestock production developed during the socialist period in Tsenkher soum, as noted above, there was little inwards migration of the kind that happened elsewhere in Mongolia as people moved around and settled in different places under the dictates of the socialist development regime.

Data from our baseline survey confirm what we learned in our FGDs and BIs about the history of economic and population change in the local area. As Figure 1 illustrates, 93% (128) of the heads of all randomly sampled households in our baseline survey were born in Tsenkher soum. Just 2% (3) of the heads of all randomly sampled households had moved to Tsenkher between the ages of 13 to 18 and 4% (6) had moved as adults. There were few gender differences here: 93% (41) of all female household heads were born in the soum, as were 94% (118) of all male household heads.

Figure 1. Age of household head when they moved to Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. N=137.

The reasons given for moving to Tsenkher as an adult among our randomly sampled household heads included getting married, in the case of two household heads from Tamir, for livestock herding, in the case of one household head each from Builan and Orkhon, for gold mining, in the case of a second household head from Orkhon, and because they had moved with their parents, in the case of a third household head from Orkhon. There were no randomly sampled households in Altan-Ovoo, Tsenkher and Tsetserleg whose household head was not born in the soum. Among the 33 additionally sampled vulnerable households, there was a female household head from Tsenkher bagh who had moved to the soum as a teenager with her family and a female household head from Tsetserleg who had moved to the soum as an adult after marrying a local man, but the heads of all other additionally sampled households were also all born in the soum, including all the single adult male household heads. Participants in our FGDs and BIs nevertheless expressed the view that things were gradually changing, particularly with the development of mining.

“It used to be that everyone in this soum was originally from the local area. Now, due to mining, outsiders are coming from the aimag and soum centres and also from different aimags such as Bayankhongor and Uvurkhangai.” (BI 15, elderly widower)

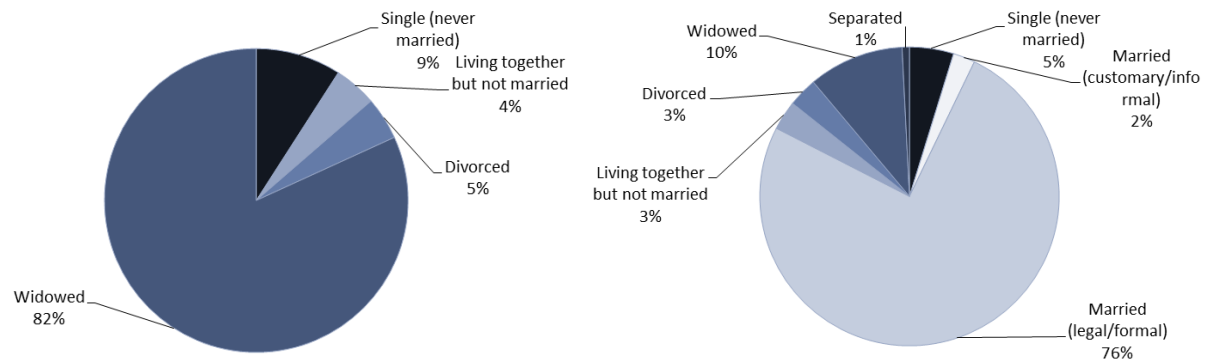
Livelihoods and gender relations

Marriage and family situation

Our baseline survey data suggest that the majority of adults in Tsenkher were legally married. As noted above, almost 15% (20) of the randomly sampled households in our survey were female-headed; 85% (117) of the randomly sampled households were male-headed. Sixty-nine per cent (95) of all randomly sampled household heads were legally married, all male, and 18% (24) of all randomly sampled households were headed by widows or widowers. As Figure 2 below illustrates,

there was a very high number of widowed female household heads in Tsenkher; 82% (36) of all 44 female-headed households included in our baseline survey were headed by widows, compared to just 10% (13) of all 126 male-headed households being headed by widowers.

Figure 2. Marriage status of female- (left) and male- (right) headed households, Tsenkher

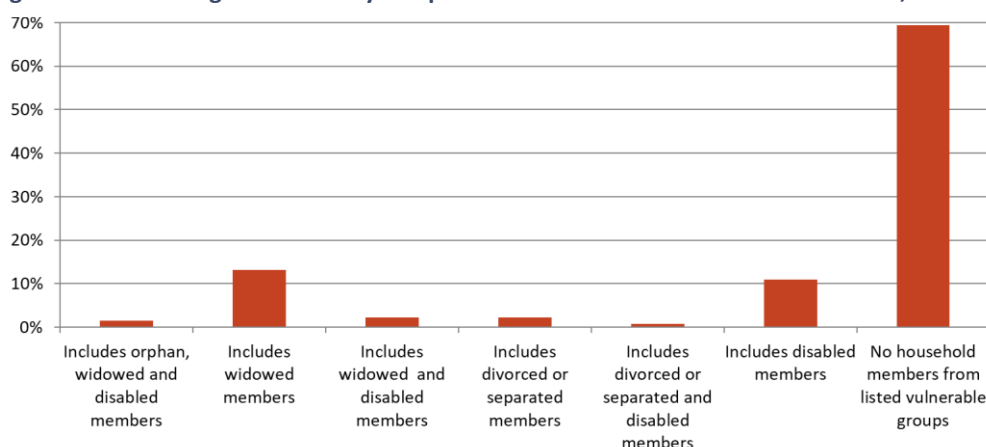


Source: WOLTS Mongolia baseline survey, 2018. Both charts include additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

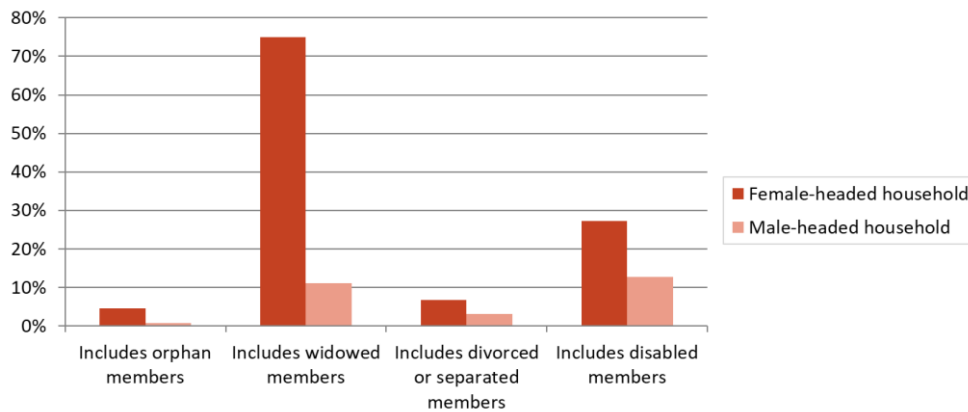
Participants in our FGDs and BIs revealed that the high number of widows in the soum was a consequence of alcoholism. Another consequence was that separation and divorce rates – although appearing to be low, with just 5% (4) of all randomly sampled households reported to have divorced household heads, two female and two male, and just one male household head reported to be separated – actually seemed relatively high for a socially quite traditional part of Mongolia. Moreover, as Figure 2 also shows, 9% (4) of the heads of all female-headed households were single and never married, as were 5% (6) of all male-headed households. The household head was in a customary marriage in just 2% (3) of all randomly sampled households, all male-headed, while 5% (2) of all female-headed and 3% (4) of all male-headed households had co-habiting household heads.

Thirty-three per cent (45) of all randomly sampled households in our baseline survey reported to have at least one member who was disabled, widowed or divorced. One per cent (2) of randomly sampled households included orphaned members, 19% (26) widowed members, and 12% (21) disabled members. However, many of these households contained people of multiple vulnerabilities, as Figure 3 shows. Comparing by gender, as Figure 4 then shows, 27% (12) of all female-headed and 13% (16) of all male-headed households reported having at least one disabled member. Participants in our FGDs and BIs spoke of the difficulties facing vulnerable households such as these, including inadequate medical services in the soum centre and a lack of doctors in each bagh with access to transport for making home visits when needed, especially in remote areas.

Figure 3. Percentage of randomly sampled households with vulnerable members, Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. N = 137.

Figure 4. Percentage of female- and male-headed households with vulnerable members, Tsenkher

Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

During our FGDs and BIs, participants shared that widows in Tsenkher soum often lived with their unmarried adult children, particularly their sons. However, we also observed that older widows and some widowers, particularly those over 65 years old, tended either to live next to their married children, on the same khashaa but in their own separate ger, or to move to the soum centre to take care of their school-aged grandchildren.

“For us it is difficult herding, preparing firewood and going for otor. But we have older [adult] sons who often help us a lot. When they get married we have to prepare ger for them and give them livestock for their own livelihood. That is also hard to prepare. After they get married we want to live near them, but sometimes they live with their parents-in-law and move away. But often they still care about us.” (FGD 14, widowed, divorced and separated women and men)

At the time of our survey, 12% (20) of all randomly sampled households had at least one other person living in the house with them who was not part of their household. Seven of these were households with extended family members who were living on the same khashaa with them to help with herding and a further two were households with (unrelated) assistant herders living with them, an arrangement we discuss further below. There were also four households where grandchildren and other relatives lived with them to attend a nearby school. The remaining seven randomly sampled households who had people living in the house with them who were not part of their immediate household had elderly, disabled, or very young extended family members living with them, and they were the carers of these people. As just mentioned above, during our participatory fieldwork phase we observed that young and middle-aged married people often lived on the same khashaa as their parents, to support them with herding. We also found that widows with young children would tend to live very near their relatives, particularly those with more male household members, to get their support with herding.

“It is difficult for single-headed households to herd livestock. When school starts we have only few of us in one family left with the livestock. But we live near our relatives who have bigger families and more [male] family members.” (FGD 14, widowed, divorced and separated women and men)

From among all 558 members of the randomly sampled households, only 72% (401 people) were reported to live at the household’s main residence for the majority of their time. Nine people (2%) were reported to often live elsewhere (temporarily for the year), and a further 22 people (4%) were reported to usually live elsewhere in the medium to longer term. These 31 people who were not living permanently in their household’s main residence were distributed across 27 households (20% of all randomly sampled households). They included school children and students studying in Ulaanbaatar or overseas, people working in the aimag centre (Tsetserleg town) or elsewhere in Mongolia in professional and service industries, and a few people who were unemployed but

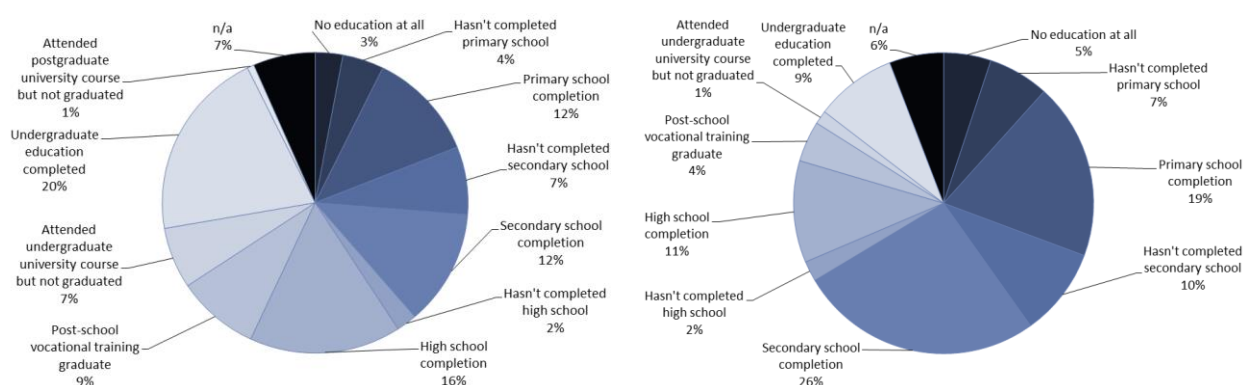
seeking work elsewhere. Four of these 31 people were household heads; the remainder were sons and daughters of the household head.

There were then a further 23% (126 people) from among all 558 members of the randomly sampled households that were reported to sometimes live elsewhere for the season. These people were spread across 52% (71) of all randomly sampled households. The vast majority of them temporarily went away for school or to look after children going to school in the aimag or soum centre. Only eight people, from eight different households, were reported to move away from the rest of the household temporarily for herding in the summer months. These data suggest first, that year-round educational policy has a bigger impact on family co-residence (and stability) in Tsenkher soum than does seasonal movement with livestock, and second, that where seasonal movement takes place it tends to be done by households as whole units rather than by individual household members on their own, both of which issues we discuss further below. Furthermore, our baseline data suggest that temporary seasonal migration by members of different households across the soum was driven almost wholly by these educational and pastoralist considerations, and not for other reasons, such as to pursue seasonal cash incomes in the soum's gold mining site.

Education

As illustrated in Figure 5 below, only 20% (26) of all randomly sampled households in our baseline survey in Tsenkher did not have at least one female adult member whose education had progressed to secondary school or beyond, while 36% (50) of all randomly sampled households had at least one female adult member who had progressed to some form of tertiary education (vocational training or university). In contrast, 31% (42) of all randomly sampled households did not have at least one male adult member who had progressed to secondary school or beyond, while only 15% (20) of all randomly sampled households had at least one adult male member who had progressed to some form of tertiary education. As Figure 5 also shows, for female adult members across all randomly sampled households, the top three responses for highest level of education were 'undergraduate education completion' (20%; in 28 households), 'high school completion' (16%; 22 households), and 'secondary school completion' (12%; 17 households). For male adult household members the top three responses were 'secondary school completion' (26%; 36 households), 'primary school completion' (19%; 26 households), and 'high school completion' (11%; 15 households).

Figure 5. Highest education level of adult females (left) and adult males (right) in Tsenkher households



Source: WOLTS Mongolia baseline survey, 2018. N = 137. N/A = no adults of that gender in the household.

These data highlight a disparity in educational attainment between women and men in Tsenkher soum which reflects broad national trends. During our FGDs and BIs, elderly people in particular confirmed that, as is relatively common across Mongolia's rural soums, families in Tsenkher tended to send their daughters away to school and university while preferring to keep their sons at home to help with herding. Participants in our FGDs revealed that many of these young women then did not come back to the rural area, making it increasingly difficult for young male herders to find wives. In addition, elderly participants in some of our BIs confirmed that this was a particular issue for young

men in their mid-to-late 30s, many of whom have only primary education or no education at all as a consequence of the high school drop out rate in the early 1990s noted above, when male children in many local families began to stay at home to help with looking after the new household herds after livestock were privatised.

Young girl: “I want to stay in Ulaanbaatar and become a make-up artist. I would not want to marry a herder, because life as a herder is too hard – milking, making dairy products etc.” Her brother is laughing as she says that. He says he wants to stay in the rural area. (FGD 7, married male herders – casual talk with host family members in their ger after the FGD)

There was no clear trend discernible from our baseline results in education levels between the different baghs, with the exception of Tamir, the soum centre, where more adult household members had progressed to higher levels of education. Our baseline survey data did indicate that adult household members of both sexes in male-headed households tended to have progressed to higher levels of education than either adult females or adult males in female-headed households. For example, among all 44 female-headed households in our survey, just 14% (6 households) reported ‘undergraduate education completion’ as the highest level of education of adult female members, compared to 21% (26) of all 126 male-headed households. Likewise, the highest reported education level of adult male members was ‘primary school completion’ in 14% (6) of all female-headed households and ‘secondary school completion’ in 11% (5 households), while the highest reported education level of adult male members in all male-headed households was ‘secondary school completion’ in 33% (41 households) and ‘primary school completion’ in 17% (22 households).

We also detected a general feeling among herder households who had sent their children to Ulaanbaatar for higher education that even though they had spent a lot of money investing in that education, the results were often not as they had expected or hoped, with participants in our FGDs and BIs reporting that many local children who had graduated in Ulaanbaatar had ended up either with no jobs at all or working in service industries and small businesses.

“The herders spend all their money to send their children to university in Ulaanbaatar, but when they come back the women just become shopkeepers and the men become alcoholics. So all of them end up in poverty.” (BI 12, married male saw mill owner)

“There are so many universities and private schools, but they just take our money. Even if you have a diploma, mostly all you can do is become a waitress or a shopkeeper.” (FGD 7, married male herders, casual talk with host family members in their ger after the FGD)

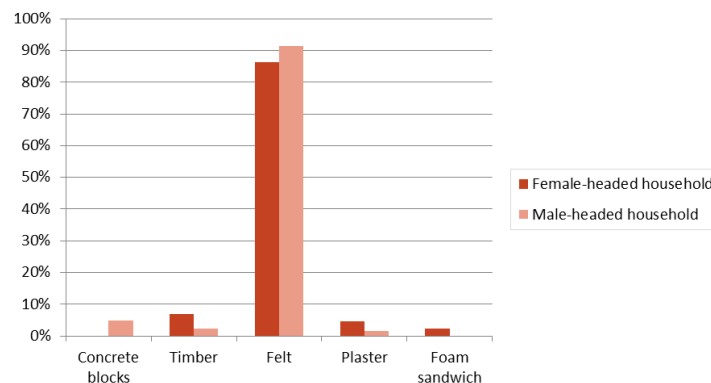
Relative wealth and poverty

Housing

Ninety-one per cent (125) of all randomly sampled households in Tsenkher had a ger, 6% (8) had a house, and 3% (4) had both. All gers in Tsenkher were reported as having five walls. Figure 6 and Figure 7 below illustrate our data on housing type and materials, where we recorded the highest-order wall and roof materials of the household’s residence where the survey took place; because the survey took place in winter, this was usually a winter camp and therefore also the household’s main residence (where most household members lived for most of the year). As the two figures show, and as was to be expected given the high number of gers in Tsenkher, ‘felt’ was the most common housing material in both female- and male-headed households. Overall, 90% (123) of the randomly sampled households in our baseline survey reported having walls constructed from ‘felt’. The remainder had walls made from concrete blocks, timber or plaster, while one additionally sampled female-headed household had foam sandwich walls. The main gender difference was that no female-headed households reported having walls made out of concrete blocks, whereas 5% of male-headed households did. There was also little significant difference by gender as regards roof

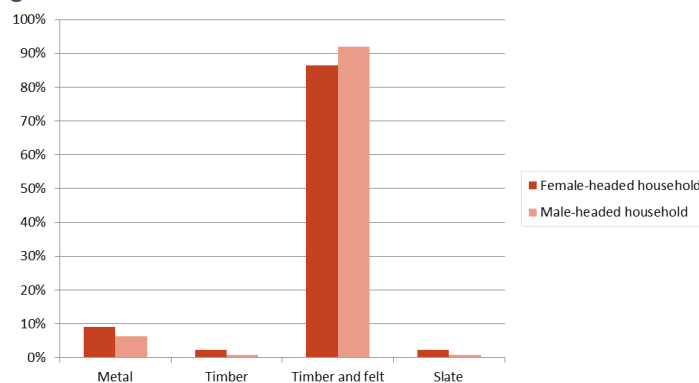
materials; roofs made out of ‘timber and felt’ were most common in both male- and female-headed households and, overall, 91% (124) of randomly sampled households had ‘timber and felt’ roofs.

Figure 6. Percentage of female- and male-headed households with different wall materials, Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

Figure 7. Percentage of female- and male-headed households with different roof materials, Tsenkher



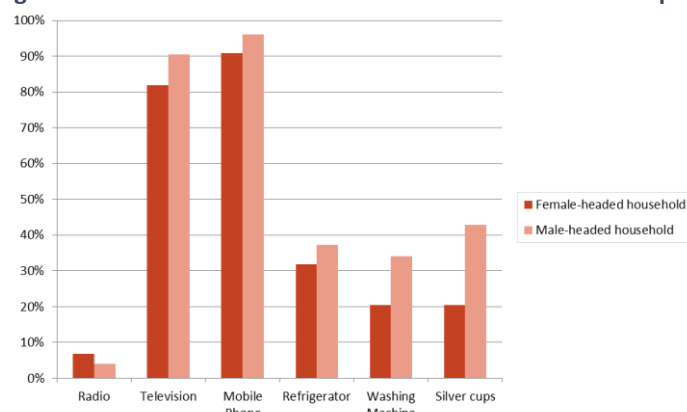
Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

Additionally, during our participatory fieldwork phase we noted a good general standard of ger maintenance, which seemed to be partly due to the proximity of forest resources making it relatively easy for local households to repair wooden parts of their gers themselves, and partly due to the soum’s various sawmills making ger parts readily available for sale.

Possessions

The vast majority of our surveyed households in Tsenkher had televisions and mobile phones; 88% (121) of all randomly sampled households had televisions and 95% (130) had mobile phones. However, less than 50% had refrigerators, washing machines, or silver cups, and only 5% (7) had a radio. There were no households in Tamir (the soum centre) that did not have a television or mobile phone, and the two bags where most of our randomly sampled households without a television lived were Orkhon and Tsenkher, where 17% (4 of 24 households) and 39% (7 of 18), respectively, did not have a television.

As Figure 8 below illustrates, across the soum as a whole a higher proportion of male-headed households possessed televisions, mobile phones, refrigerators, washing machines and silver cups, compared to female-headed households. The largest gender difference was in the possession of silver cups; 42% (54) of all male-headed households had silver cups, compared to just 20% (9) of all female-headed households. Since silver cups are mainly held by herders as a traditional store of wealth, this suggests relative poverty of female-headed herder households compared to male-headed herder households.

Figure 8. Percentage of female- and male-headed households with different possessions, Tsenkher

Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

Electricity, water and sanitation

Ninety-nine per cent (135) of all randomly sampled households in our baseline survey in Tsenkher had access to electricity. The two households without electricity were both female-headed and lived in Builan and Orkhon. The most common source of electricity was solar. Sixty-six per cent (91) of all randomly sampled households had access to solar electricity via portable solar panels, including all those who were living in their winter camps at the time our survey was carried out. The two baghs with the most solar power users were Tsenkher and Tsetserleg, where 94% (17 of 18) and 96% (26 of 27) of randomly sampled households, respectively, had solar panels, while the soum centre, Tamir, only had one household that used solar electricity and that household also used a petrol generator. Overall, 34% (46) of all randomly sampled households in Tsenkher soum used mains electricity, including two households that also used solar panels. Tamir had the highest number of randomly sampled households using mains electricity, at 96% (22 of 23). In Builan 57% of randomly sampled households used mains electricity (12 of 21), but only one randomly sampled household each in Tsenkher and Tsetserleg baghs did so.

No households in our baseline survey had access to any kind of mains (piped) water supply, or to inside or outside taps. Throughout the year, the main source of water in Tsenkher soum was instead river water, which was used in 70% (96) of all randomly sampled households throughout spring, summer and winter. Over 70% of households relied on rivers for their water supply throughout the year in Altan-Ovoo, Orkhon, Tsenkher and Tsetserleg baghs, and more male-headed households relied on river water than female-headed households; 71% (89) of all male-headed households used river water in all seasons, compared to just 52% (23) of all female-headed households.

The second most common water source was an ‘open deep well nearby – paid for access’, a type of deep well owned by the local government which was used by 17% (23) of all randomly sampled households in Tsenkher soum throughout all three seasons and 19% (26) in at least one season, as Table 3 shows. This was also the most common form of accessing water in the soum centre, Tamir, where 48% of randomly sampled households (11 of 23) accessed water in this way throughout the year. There was little difference by gender in paying to access open deep well water, with 20% (9) of all female-headed and 18% (23) of all male-headed households accessing water this way throughout the year.

Table 3. Use of different types of wells by randomly sampled households in at least one season, Tsenkher

Means of access	Open deep well	Open shallow well
Private	1% (2)	0% (0)
Nearby - Communal/shared	9% (12)	4% (6)
Nearby – Paid-for access	19% (26)	1% (1)

Source: WOLTS Mongolia baseline survey, 2018. N = 137.

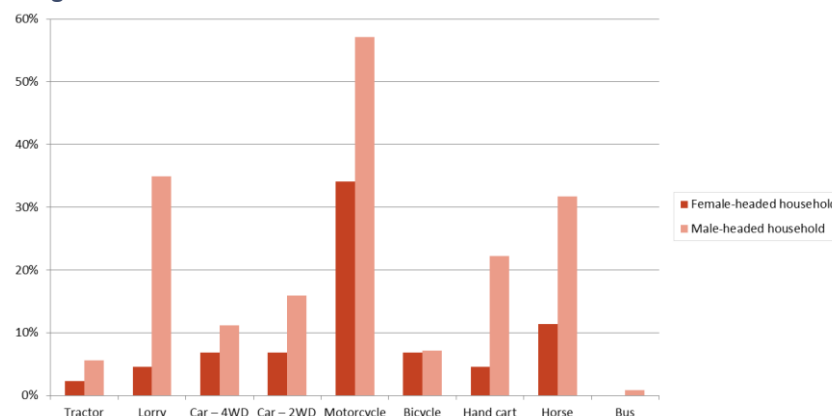
Concerning sanitation, internal toilets were very uncommon, reported by just one male-headed household in Altan-Ovoo. Eleven per cent (15) of all randomly sampled households in Tsenkher soum had no toilet facilities at all; most of these were in Orkhon, where 38% of randomly sampled households (9 of 24) had no toilet. Across the soum, 65% (89) of all randomly sampled households had an external toilet with no flush (a long- or short-drop hole with some kind of closure around it); 4% (6) had an external toilet with no flush and no privacy; and 20% (27) relied on a public toilet. Female-headed households were only slightly more likely to have no toilet facilities than male-headed ones: 14% (6) of all female-headed households, compared to 11% (14) male-headed. Male-headed households were, however, more likely to have access to a public toilet: 18% (23) of male-headed households used public toilets, compared to just 11% (5) female-headed.

Transportation

Eighty per cent (109) of all randomly sampled households in Tsenkher had access to some form of private transport. The most common form of transport was a motorcycle, which 55% (75) possessed. Eleven per cent (15) of all randomly sampled households owned a four-wheel drive car and 13% (19) owned a two-wheel drive car; only 5% (7) owned a tractor, 7% (10) a bicycle, and one household reported to own a bus. There was little difference in the possession of most mechanised modes of transport between the different baghs. However, tractors were relatively more common in Altan-Ovoo where 17% of randomly sampled households (4 of 24) had tractors. According to the natural resource maps made by participants in our FGDs, Altan-Ovoo has more haymaking areas than other baghs, and participants informed us that tractors were used for making hay; it also had more fenced areas devoted to fodder plantations. Conversely, we recorded no tractor ownership among any households in our baseline survey in Builan, Orkhon or Tsetserleg, where no haymaking took place. Altan-Ovoo was also the bagh with the highest proportion of randomly sampled households reporting that they used horses for transportation, with 54% (13 of 24) reporting this. This compares with Tsetserleg where only 7% of randomly sampled households (2 of 27) used horses. Our experience of traveling around during all our fieldwork in Tsenkher soum confirmed that local people often use horses for transportation due to the lack of proper roads for vehicles noted above. However, we also observed that local people generally seemed not to travel a lot, except for seasonal movement with their livestock, occasional otor migration, and trips to the soum centre to deal with shopping and administrative matters.

Across all modes of transport – tractors, lorries, four-wheel drive cars, two-wheel drive cars, motorcycles, bicycles, hand carts, horses and buses – more male-headed than female-headed households reported having them, as Figure 9 shows. For example, 57% (72) of all male-headed households possessed a motorcycle, compared to 34% (15) of all female-headed households, and 35% (44) of all male-headed households possessed a lorry, compared to just 5% (2) female-headed.

Figure 9. Percentage of female- and male-headed households with different modes of transport, Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

Overall, our WOLTS baseline survey data on housing type and materials, ownership of certain possessions, and access to electricity, water and sanitation provided some indication of relatively equal living conditions among male- and female-headed households in Tsenkher soum. However, the data collected on transportation showed that female-headed households possessed fewer vehicles and horses. Our baseline data do not tell us who in the household used the transportation, but during our research we observed that most vehicles were driven by men. The apparent inequality between male- and female-headed households with regard to access to transport points both to the relative poverty of female-headed households and to underlying gender norms and related difficulties female-headed herder households in particular face. This was supported by the findings from our FGDs and BIs, which revealed that herding is hard work for female-headed households, especially if they do not have adult men in their household, as we discuss further below.

Main livelihoods

As noted above, the main livelihood of people in Tsenkher soum is traditional livestock herding based around regular seasonal movement, and its importance is clear from our baseline survey data. In the survey, 72% (98) of all randomly sampled households reported that their household included ‘herders herding their own livestock’. Reflecting the complexity of the local herding economy that we explore further below, there were also two households that included ‘large-scale herders who pay others to help them herd livestock and carry out other livestock-related activities’, five households that included ‘people herding livestock of other households or carrying out livestock-related activities for other households without being paid cash for their work’, and two households that included ‘people herding livestock of other households or carrying out livestock-related activities for other households for cash’. However, livestock herding was not the only source of livelihood in the soum. Fourteen per cent (19) of all randomly sampled households reported that they included people with formal employment; ten of these were in Tamir, where 43% of randomly sampled households (10 of 23) included people in formal employment. Just one randomly sampled household reported including ‘miners in official small-scale mining companies’ and two reported including ‘people who own artisanal mining companies’. There was also one randomly sampled household that reported including ‘large-scale commercial farmers who pay others to help them farm’ and two with ‘people farming for other households or enterprises without being paid cash for their work’.

Overall, 18% (25) of all randomly sampled households in our baseline survey had relied on only one source of cash income in the previous 12 months, 28% (38) on two sources, 28% (38) on three sources, 24% (33) on four sources and 2% (3) on five sources of cash income; no surveyed households reported having had more than five cash income sources in the preceding year. There were no major differences between male- and female-headed households, as Table 4 shows, although the only household reporting no sources of cash income at all was female-headed.

Table 4. Number of sources of cash income among all surveyed households, Tsenkher

Number of sources of cash income	None	1	2	3	4	5	Total
Female-headed households	1 (2%)	9 (20%)	12 (27%)	14 (32%)	7 (16%)	1 (2%)	44 (100%)
Male-headed households	0	19 (15%)	35 (28%)	36 (29%)	33 (26%)	3 (2%)	126 (100%)

Source: WOLTS Mongolia baseline survey, 2018. Table includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

As participants in our FGDs and BIs revealed, the soum’s rich natural resources also allowed for the seasonal collection of NTFPs such as berries and nuts to support the livelihoods of vulnerable groups of people, including female-headed households, and relatively wealthy households alike.

“The most important resources for me are firewood, pine nuts, berries and hay – some of my children make hay for sale. If it is a good year, I can make good money from selling pine nuts and berries.” (BI 10, elderly widow engaged in tourism)

Fifty-two per cent (71) of all randomly sampled households in our baseline survey reported herding as their top source of cash income in the previous 12 months, of whom 97% (69) had household heads who were born in the soum. Herding was the top cash income source for over 50% of randomly sampled households in all five rural baghs, including 78% (14) in Tsenkher bagh, but only 4% (1) in urban Tamir. Across the soum overall just 3% (4) of randomly sampled households reported mining as their top source of cash income: three in Orkhon, the other in Tsetserleg. Eight per cent (11) of all randomly sampled households reported government employment as their top source of cash income and 26% (36) reported different forms of social welfare payments as their top source of cash income, including pensions and foster care allowances paid to elderly people and disability allowances for disabled people. There were also a small number of households whose top source of cash income came from private businesses, shop work and manual labour in the timber industry and construction, but none for whom crop farming was a top source of cash income. Table 5 provides the gender breakdown in top source of cash income reported by all our surveyed households.

Table 5. Top source of cash income for all surveyed households, Tsenkher

Top cash income source	Female-headed households	Male-headed households
Herding	12 (27%)	74 (59%)
Pension and/or foster care allowance	22 (50%)	18 (14%)
Government employment	2 (5%)	11 (9%)
Private business	3 (7%)	6 (5%)
Disability allowance	2 (5%)	6 (5%)
Shop worker	0 (0%)	5 (4%)
Mining	1 (2%)	3 (2%)
Logging and processing timber and wood	1 (2%)	2 (2%)
Construction work	0 (0%)	1 (1%)
No income	1 (2%)	0 (0%)
Grand Total	44	126

Source: WOLTS Mongolia baseline survey, 2018. Table includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

As Table 5 shows, 59% (74) of all male-headed households reported herding as their top source of cash income in the previous 12 months, compared to only 27% (12) of all female-headed households. Among the 20 female-headed households that were randomly sampled, just two (10%) reported herding as their top source of cash income; extrapolating from this suggests there were at least some 54 female-headed households in Tsenkher at the time of our survey whose main livelihood and cash income source was herding.

Further, of the 284 female household members of all ages in the 137 randomly sampled households, 43% (123) had reportedly received some form of cash income in the 12 months prior to the baseline survey, compared to 47% (129) of the 274 male household members.

The full range of cash incomes earned by people across all our surveyed households in the 12 months prior to the baseline survey went from no income at all, right up to MNT 90,000,000 (USD 37,098). The top five highest cash incomes earned in the 12 months prior to our survey were all found in randomly sampled male-headed households. The household that earned MNT 90,000,000 (USD 37,098) was headed by a man aged 35-44 from Tamir, who earned this amount jointly with his wife by running a supermarket, their sole source of cash income. In another household, in Tsenkher bagh, the household head's wife brought in MNT 36,000,000 (USD 14,839) by way of a bank loan for her own business; in this household the head also earned MNT 4,050,000 (USD 1,669) through his employment in a bank. Two further households in Tsenkher bagh brought in MNT 40,000,000 (USD 16,488) and MNT 13,700,000 (USD 5,647) through the male household head selling livestock, either as whole live animals ready to be slaughtered for their meat, or by slaughtering first and selling the carcasses. Both of these households had additional sources of cash income from selling cashmere, wool and milk, adding around MNT 3,000,000 (USD 1,237) in both cases onto their total household cash incomes for the previous 12 months. The remaining top five

cash income earner was a household in Altan-Ovoo, where the husband and wife jointly earned MNT 20,000,000 (USD 8,244) from their sawmill, their only source of cash income.

Of the five households with the lowest cash incomes in the 12 months prior to our baseline survey, two were additionally sampled female-headed households from Tamir and three were randomly sampled male-headed households from Tamir, Tsenkher and Tsetserleg. One of the female-headed households reportedly received no cash income at all, while the household head of the other received MNT 400,000 (USD 165) from her work assisting in a sawmill. One male-headed household earned MNT 350,000 (USD 144) from herding someone else's livestock, another earned MNT 312,000 (USD 127) from cashmere sales, and in the third case, the household head's wife earned MNT 400,000 (USD 165) by working as a shop assistant. This kind of casual and low-income work was also not uncommon among participants in our FGDs and BIs: several individuals worked mainly as casual labourers in soum centre shops, as cleaners or general helpers, carrying out people's shopping and lifting heavy items; others worked as day labourers in the local saw mills.

"Me and my husband have five children. We were both herders but now my husband stays at home to look after the grandchildren. Sometimes he also does casual labour...Our children are between 15 and 25 years old and one son also works at the saw mill...Our main income comes from casual labour. I am paid MNT 250 (USD 0.10) per bag, so I get about MNT 12,500 (USD 5) a day. I work hard to pay for tuition fees. I also get MNT 40,000 (USD 16) children's allowance for two of my children." (BI 2, female casual saw mill labourer)

During all our fieldwork in Tsenkher we also observed that many poor households with few or no livestock appeared to live entirely or almost entirely on social welfare payments. The man running the gambling den referred to above, for example, claimed that his household was solely dependent on the disability allowance received for one of his children. Among the randomly sampled households in our baseline survey, 6% (8) reported a pension or foster care allowance as their sole source of cash income in the previous 12 months, four male- and four female-headed, as did two additionally sampled female-headed households. Likewise, 2% (3) of all randomly sampled households, two female- and one male-headed, as well as one of the additionally sampled male-headed households, reported disability allowance as their sole source of cash income. In addition, from 2006 until 2017 a monthly children's allowance of MNT 20,000 (USD 8) was paid by the state for every Mongolian child up to the age of 18, and it seemed that many poorer households had relied as much on these children's allowances as on their pensions, foster care and disability allowances. However, while many Tsenkher households did not appear to be well off in cash terms, our perception was that they nonetheless lived relatively comfortably because of their traditional pastoralist lifestyles and the rich diversity of natural resources in the soum.

"Basically we live on children's allowance and disabled child allowance, which is in total around MNT 100,000 (USD 41) each month. But most of the money is spent on medicine for our disabled one." (BI 20, young married man)

Only one surveyed household in total included growing crops for sale as one of their top five sources of cash income in the 12 months before the baseline: a randomly sampled male-headed household in Builan which received MNT 1,400,000 (USD 577) through the household head and his wife selling vegetables. However, this household earned more cash from selling cashmere and livestock than from vegetable sales. There was also a randomly sampled male-headed household in Orkhon that reported that all members of the household jointly earned MNT 500,000 (USD 206) through collecting and selling wild cranberries, but their primary source of cash income was gold mining, which all household members also engaged in and which had brought them MNT 3,000,000 (USD 1,237) in the previous 12 months. A further randomly sampled male-headed household, in Tsenkher bagh, reported that the household head and his wife jointly earned MNT 3,000,000 (USD 1,237) through collecting wild pine nuts for sale. However, they relied more heavily on pensions and cashmere sales for the majority of their household's cash income. These cases

illustrate that, while Tsenkher's rich natural resources allow for diverse sources of cash incomes, they are not very stable because of their seasonality and thus local households need multiple sources of cash income to thrive. For example, as participants in our FGDs and BIs explained, cash income from harvesting pine nuts can only be earned when there is good harvest year, which comes round only once every three or four years.

Just seven households in all reported that mining was among their top five sources of cash income in the 12 months before the baseline survey; four were randomly sampled male-headed households (two from Orkhon and one each from Tsetserleg and Tsenkher baghs), two were randomly sampled female-headed households from Orkhon, and one was an additionally sampled female-headed household from Orkhon. The highest earnings from mining of any of our surveyed households were reported by a male-headed household in Orkhon where the household head received MNT 10,000,000 (USD 4,122) from renting out an artisanal mining site, a practice we discuss further below. In one of the female-headed households reporting cash income from mining in the previous 12 months, the household head's son worked for a mining company and earned MNT 4,000,000 (USD 1,649). In the additionally sampled household, the female head worked at a small artisanal mining company, earning MNT 1,000,000 (USD 412). In another of the male-headed households, the household head's wife and sons were involved in gold mining and jointly earned MNT 6,000,000 (USD 2,473) over the previous 12 months, and in a third, the household head, his wife and their son all brought in cash incomes from mining. However, with these three exceptions, all those reportedly earning cash income from mining were men.

During our participatory fieldwork phase we learned that income diversification from mining by local people includes digging through the tailings leftover by mining companies (done mainly by men), washing dirt to separate out the ore (done by both men and women), and selling meat and dairy products to mining companies (done mainly by wealthy herders). We also met some women working in the kitchens of mining companies, but they were all from other parts of the country, not from Tsenkher soum. During our FGDs and BIs in Orkhon, participants shared that, as well as people from other soums and from the aimag centre, local households with relatively few livestock tended to live around the mining site in order to earn additional cash incomes to support their livelihoods, both by working as ninjas and by working in small-scale mining companies, as we elaborate further below.

"We only find daily food money by mining. We can't save money for the family." (FGD 11, men engaged in mining)

"I have earned MNT 100,000 (USD 41) in one day. That was the highest amount I got so far. There are other days where we do not earn a penny. On average we get MNT 10,000 (USD 4) a day....My wife is not involved in mining. She takes care of the housework – cooking, milking, and processing dairy products at home. I bring the money from the mining." (BI 18, young married man)

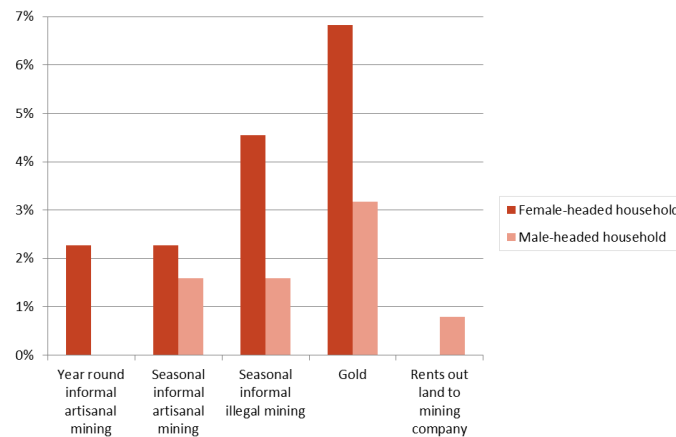
"About those ninja miners who live near the mining site: the richest one has 50 head of livestock and middle income one has between 20-30 head of livestock. There are also many households without animals, maybe around 70% of ninjas have no animals." (FGD 11, men engaged in mining)

Just 4% (6) of all randomly sampled households in our baseline survey reported that they included members who had been involved in mining in the previous two years. The majority (5 households) were involved in either informal artisanal or totally illegal gold mining; the sixth household was renting out a small area of land to a small-scale mining company, as noted above. Among all surveyed households, there were three female-headed and five male-headed households that reported including members who were involved in mining in the previous two years, although one of the female-headed households had not earned any cash income from this in the preceding year.

Figure 10 below sets out the different types of involvement in mining that were reported by all female- and male-headed households in our baseline survey, showing that 7% of all female-headed households reported having at least one member involved in gold mining (3 of 44), compared to 3%

(4 or 126) of male-headed households. In line with these data, only 15% of all female respondents in our baseline survey (12 of 81) and just 8% of all male respondents (7 of 89) said they agreed with the statement that: “The majority of people in this community depend on mining for their survival”. It was not clear why female respondents, and female-headed households, were more likely to see mining as an important source of cash income, but during our FGDs with male and female miners the women seemed better informed and more knowledgeable about local mining than the men.

Figure 10. Types of involvement in mining by all surveyed households, Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

Herding

During our FGDs and BIs, elderly participants explicitly told us that traditional herding practices and techniques were being lost, as they are not being picked up by young herders and handed on down to the next generation. At the same time, however, people often told us how difficult it was nowadays for young people to become successful herders, as they needed to accumulate a lot of livestock in order to be able to meet all their expenses and make a living from herding.

“Since I became a herder, I looked up to my cousin who is now about 60 years old. She is a wise herder and she teaches about herding...She is a 1000+ livestock herder and her husband was a state honoured horse trainer who teaches how to train horses. We asked so many things from them. Nowadays we do not have so many people to look up to...The issue of today is that young people have to learn how to herd livestock. Because they hardly have anybody to look up to. It would take about 10 years to become a herder. Herding is not easy work, as you have to know how to treat the animals when they are sick. Basically you have to become a veterinarian yourself.” (BI 7, married herder couple, husband speaking)

“Comparing to our time, now the younger generation has got lazy. They do not listen to the elderly herders about how to herd their livestock. They even do not train their horses; instead they ride motorbikes and drive cars. Then they cause accidents!” (BI 19, elderly male herder)

“There are very few good young herders here. In the Gobi area it is different. In our area, it takes about 10 years for a young man to become a good herder. He needs a lot of livestock, but our bagh is so narrow that it is not possible...we only have one young herder of 30 years old. Nobody who graduated from 12th grade is herding here...Herding should be honoured as a good job, we need a government policy for that. We honour 1000+ head livestock herders, but it would be nice if these wealthy herders would hire some young people. In our bagh we have no wealthy herder who could hire somebody.” (FGD 7, married male herders)

“It is very hard these days for young people. They find it difficult to have many animals. They consume more, so they have to slaughter animals regularly to get money. So they become poorer.” (BI 11, elderly widow)

Table 6 below sets out the different types of cash income from herding and livestock farming received by all 92 households within our random sample who reported that earnings from these

activities fell within their top five cash income sources in the 12 months prior to our baseline survey; many of them reported more than one specific cash income source from herding. Among this 67% of all randomly sampled households that received some form of cash income from herding or livestock farming in the 12 months prior to the baseline survey, 83% (76) sold cashmere, 57% (52) sold dairy products, and 46% (42) sold live animals. Taking into account two households that did not own their own livestock but instead earned cash income from herding another household's livestock for a living, just 66% (90) of all randomly sampled households in Tsenkher both had their own livestock and had made money out of them in the last 12 months.

Table 6. Cash income from herding and livestock farming among randomly sampled households, Tsenkher

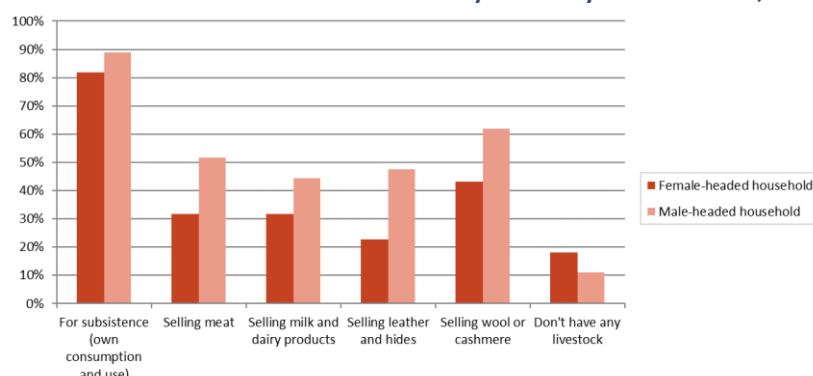
Source of cash income	Number of households	As percentage of households receiving any cash income from keeping animals
Herding - dairy products	52	57%
Herding - cashmere	76	83%
Herding - meat	18	20%
Herding - wool	26	28%
Herding - leather	1	1%
Herding - livestock trade	42	46%
Herding - herding another household's livestock	2	2%

Source: WOLTS Mongolia baseline survey, 2018. N = 92.

Among the 137 randomly sampled households in Tsenkher, 12% (17) did not have any livestock at all, including the two households just mentioned that made money from herding other people's livestock. Of the rest, 20% (27) of all randomly sampled households had livestock but kept them only for subsistence and 2% (3) were keeping their own livestock for both subsistence and income generation but had not earned any money from this activity in the previous year. During our participatory fieldwork phase we sensed also that some households accumulated many livestock for prestige and other socio-cultural reasons, but were not really focused on income generation.

Overall in Tsenkher, 88% (120) of all randomly sampled households used livestock and other animals for subsistence. Forty-seven per cent (64) of all randomly sampled households reported selling meat, 42% (58) reported selling dairy products, 36% (59) leather and hides and 58% (79) wool or cashmere. The data are broken down separately for all male- and female-headed households in Figure 11, where respondents reported all uses of their livestock and other animals that applied. It is notable that a higher proportion of male-headed than female-headed households relied on livestock for their livelihoods across the board, for subsistence and/or for cash income, and that 18% (8) of all female-headed households did not have any livestock, compared to 11% (14) male-headed.

Figure 11. Use of livestock and other animals by all surveyed households, Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

Popular dairy products in Tsenkher include aarts, aaruul and eezgii, and we observed that most herders did not sell milk itself as they live far from the soum and aimag centre markets, making it preferable to process the milk into dairy products that travel better to market; Arkhangai aimag is

well known for its dairy products, which many visitors and outsiders buy. However, it also appeared that households with large herds, especially if living isolated from the main roads, tended to prefer instead to fatten their livestock for sale than to milk them and process the dairy products.

“Our main livelihood is from the livestock. Mainly meat – horse, sheep and goat – and dairy products such as aaruul, eezgii, milk, cream and yogurt. We sell our dairy products in the aimag centre. Our biggest expenses are support for our student children. Then we usually sell our livestock. That is all we can do.” (BI 7, married herder couple)

The most common type of livestock kept by people in Tsenkher were yaks, which 85% (116) of all randomly sampled households in our baseline survey kept; 31 of these households had over 50 yaks. Sheep, goats and horses were also relatively common, kept by 77% (106), 77% (106) and 68% (93) of all randomly sampled households, respectively. Fifty-eight per cent (80) of all randomly sampled households kept all four of these types of livestock. The largest single herd we came across during the baseline was a herd of between 751-1000 sheep, kept by a male-headed household in Orkhon; this household also had between 251-350 yaks, between 251-350 goats and between 76-100 horses. According to local leaders, there were more than 30 households with 1000+ head of livestock across the entire soum, and a few whose herd sizes had reached as much as 2000+ head. During our FGDs and BIs, whenever the topic of pastureland degradation came up, participants indicated the massive increase in livestock numbers since the democratic transition, noted above, as the first cause of this.

The type of livestock kept was fairly mixed throughout the soum, but we observed predominantly yaks in the mountain areas and upper valleys like those in Orkhon bagh and more sheep and goats in lower valleys and the flatter landscape of Builan. Table 7 illustrates the different livestock-keeping patterns by bagh in Tsenkher for the most common animals kept. In addition to the data shown in Table 7, there was also one household that kept ducks, one that kept cows, one that kept camels and two that kept pigs; all these households kept other types of livestock too.

Table 7. Number and percentage of randomly sampled households keeping animals, Tsenkher

Bagh	Yaks		Sheep		Goats		Horses	
	Number of households	As percentage of households in bagh	Number of households	As percentage of households in bagh	Number of households	As percentage of households in bagh	Number of households	As percentage of households in bagh
Altan-Ovoo	21	88%	21	88%	22	92%	20	83%
Builan	20	95%	19	90%	20	95%	16	76%
Orkhon	21	88%	18	75%	17	71%	17	71%
Tamir	12	52%	10	43%	10	43%	8	35%
Tsenkher	16	89%	14	78%	14	78%	14	78%
Tsetserleg	26	96%	24	89%	23	85%	18	67%

Source: WOLTS Mongolia baseline survey, 2018. N = 24 in Altan-Ovoo; N = 21 in Builan; N = 24 in Orkhon; N = 23 in Tamir; N = 18 in Tsenkher; N = 27 in Tsetserleg.

Tamir, the soum centre, contained the lowest proportion of surveyed households reporting to have any animals. Among those households in Tamir that did keep livestock, the highest proportion had yaks, kept by 52% (12) of all randomly sampled households. Over 80% of randomly sampled households in Altan-Ovoo were keeping yaks, sheep, goats and horses. Builan and Tsetserleg also had over 80% of randomly sampled households keeping yaks, sheep and goats, but slightly lower proportions keeping horses, at 76% (16) in Builan and 67% (18) in Tsetserleg.

“My oldest son is also a herder man. When he got married 18 years ago I gave his family 20 yaks, 40 sheep, 20 horses and 20 goats. They increased their livestock and are living decently. My youngest daughter lives with us and helps us a lot; she also has her own trading business. My youngest son is also a herder and lives next to us with his family. I gave him 200 sheep, 70 yaks and 20 horses when he got married. They have been married for three years. They have their winter camp under customary rights and an otor area as well. I also bought an apartment for my younger son in the aimag centre.” (BI 19, elderly male herder)

Our baseline survey also produced specific data on the division of tasks between men and women in herding. In 64% (88) of all randomly sampled households women were involved in milking, whereas men were involved in milking in just 5% (7). Likewise, processing and preparing milk products was done by women in 63% (86) of all randomly sampled households and by men in only 18% (25). However, herding larger livestock was largely done by males; men herded the large animals in 59% (82) of all randomly sampled households and boys in 24% (33). Conversely, women only herded animals in 16% (22) of all randomly sampled households, and girls in just 3% (4). Men were also more commonly responsible for livestock sales, with 61% (83) of all randomly sampled households reporting that men carried out livestock sales, compared to 26% (35) who reported that women did; no women or girls were involved in slaughtering in any of our randomly sampled households

There was also some outsourcing of herding activities. In 29% (40) of all randomly sampled households non-household members were involved in herding large animals. However, in 12 of these cases, household members, including the household head, spouse, and children, were also involved. In 20% (27) of all randomly sampled households non-household members were involved in milking, and in 18% (25) non-household members were involved in processing and preparing milk products; in all these cases household members carried out milking and milk processing too. Much of the outsourcing took place within the reciprocal economy rather than in the form of paid work for cash wages. For example, during our FGDs and BIs, it was revealed that many people in Tamir who had livestock kept them in the rural areas to be looked after by their extended family members, and it appeared that some wealthy herders with large herds also hired assistant herders. Some assistant herders were paid cash, while family members were almost always not paid cash, but it also seemed that both family members and assistant herders would often keep the products of the livestock they were looking after for other people and/or be provided with other forms of non-monetary help, rather than being paid cash for their services; this might include being given a new-born animal every year in lieu of a salary, receiving winter meat or hay from the owner of the livestock, or being assisted with ad hoc problems, such as medical costs etc. In Orkhon, for example, we encountered poor herder households with few livestock but many household members living in the same khot ail with wealthy herder households, helping them with milking and herding and being paid in kind with live animals. However, even though it was clear that some assistant herders in Tsenkher soum were paid in cash for their services, we observed that most people – both the assistants themselves and the households with large herds – did not like to speak openly about monetary payments for herding support as the local herding economy seemed to be strongly based on traditional norms of reciprocity that placed great value on the notion of a homogenous community of equal members. Thus assistant herders did not like to be seen as wage labourers, while large-scale herders did not like to be seen as being above others in the community.

“We have around 400-500 livestock. We have an assistant herder household who live next to our ger. They have few livestock and we give them some livestock each year.” (BI 17, young married man)

“My brother is looking after our sheep and horses and my wife’s brother has our yaks. We do not pay them, but help out whenever needed, for example with preparation of winter meat. They live 30-40 km away so usually I just buy meat here, but I have those livestock to sell them when I need to, and to get some meat. Those who are herding them take the benefits like milk and wool, but the offspring belong to us.” (BI 12, married male sawmill owner)

Crop farming

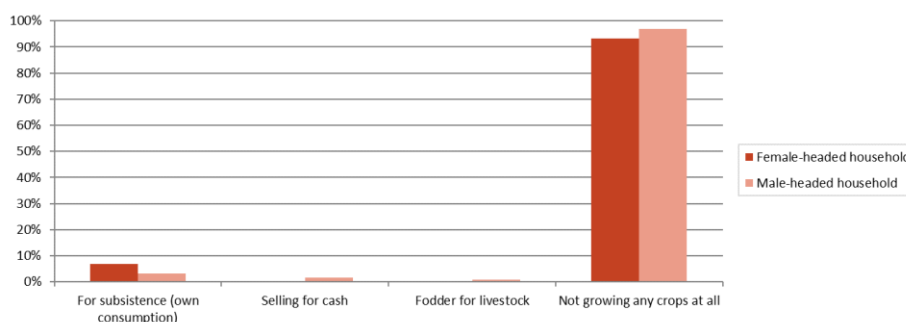
As noted earlier, state organised crop farming began in Builan bagh in the socialist period, but it was abandoned in 1991 when the socialist regime collapsed and it remains relatively unpopular in the soum. In recent years, some very limited crop farming has been taken up again, including a 2 ha fodder plantation organised by a community group of soum herders (a buleg), and a small buleg of disabled female-household heads who began growing vegetables on 0.6 ha with the support of a

World Vision project. Among all the randomly sampled households in our baseline survey just 3% (4) reported farming agricultural land in Tsenkher soum at the time of our survey. The average size of their cultivated land was 20.14 ha, but this figure is massively skewed by one of the four households, a household in Tamir, headed by a man born in the soum, that had 80 ha of cultivated land. The remaining three households between them had on average just 0.19 ha of cultivated land each; two were male-headed households in Builan, the other a female-headed household in Tamir. There was also one further male-headed household among the randomly sampled households in our baseline that reported growing crops but on their khashaa in Tamir, rather than on a separate plot of agricultural land; that household was growing a small number of potatoes for subsistence only. The variety of crops grown by these five randomly sampled crop farming households in Tsenkher was quite limited. All five grew potatoes, and the household with 80 ha of agricultural land also grew onions, cabbages, carrots and turnips, while the sole female-headed household had planted trees in addition to potatoes. One of the two male-headed households from Builan growing crops only grew potatoes, while the other also grew onions, turnips and carrots. There were also two additionally sampled female-headed households in Tamir that reported they were crop farming, not on their khashaa but on very small separate plots of agricultural land; one grew potatoes and the other carrots, turnips and potatoes.

“I am very proud of my farm. One cabbage weighs 16 kg, one turnip weighs 6 kg and one potato 1.8 kg. I use some pesticides, but only sheep and chicken dung as fertiliser. I cultivate 1 ha but I have not got a certificate for it. The soum government asked me to plant vegetables – I sell them to the government school. I don’t tell anyone else because I don’t have enough to sell to others...To establish our farm, we took out a loan of MNT 5,000,000 (USD 2,061), which we are supposed to pay back this year. I hope that I will make enough money from selling vegetables.” (BI 8, married male crop farmer).

The most common use of crops in Tsenkher soum was for subsistence. All five of the randomly sampled households in our baseline survey that reported they were growing crops were doing so for their own subsistence; two of them also sold their crops for cash and one used their crops as fodder for livestock. Ninety-six per cent (132) of all randomly sampled households confirmed they were not growing crops at all. As Figure 12 shows, the only notable gender difference was that we found no female-headed households selling crops they had grown for cash or using them as fodder for livestock.

Figure 12. Use of agricultural crops by all surveyed households, Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

More generally, we detected throughout all our research in Tsenkher that elderly people living in the soum centre with few or no livestock seemed keen to grow vegetables on their khashaas for their own consumption when they became too old for other work. During our FGDs and BIs, we learned that some of the households growing crops for sale hire casual labourers to help with planting and/or harvesting, but the employment created by this is very limited as there are so few crop farmers overall. The lack of interest in food crop farming in Tsenkher appeared to have several reasons. First, there is no local tradition of growing vegetables or using them for cooking everyday

meals. Second, as soum centre restaurants and any individuals who do use vegetables have easy access to vegetables imported from other parts of Mongolia in the aimag centre, the local market for Tsenkher people to grow vegetables is very limited, as they can only sell them to the soum school, kindergarten or supermarkets. Third, due to the cold and the local soil conditions in much of the soum, productivity was known to be low, which put off some potential farmers and limited people's overall experience of vegetable growing in the soum. As noted above, Builan is the only bagh where crops are farmed in any way that could be considered large-scale; it is geographically the most suitable, being flat, low-lying and far from the cold mountainous parts of the soum, and we heard that people there have more experience of crop farming due to vegetables having been grown in Builan in the past. Interestingly, however, we also came across resistance in some of our FGDs and BIs to the development of large-scale planting of crops or vegetables in the soum due to fears of land loss and environmental degradation.

"Mining is a done deal, but now we also have an issue with crop farming. The Chinese will come here to do large-scale farming, which is even worse. With mining you can operate for 20 years on a 5 ha area, but if you farm rapeseed on 5 ha, after 5 years you cannot use that area any more. That is actually my biggest worry. The government of Mongolia has recently announced Arkhangai as a crop farming area...If more crop farming is developed here, people will reject the pastoralist lifestyle, because pasture will be very limited. People will just be able to come and put up fences everywhere for crop farming. So while we are worrying about mining, crop farming is much more dangerous. If mining was done properly, I mean not close to the river, damage would be limited. Crop farming can take a much bigger area and they take the whole nutritious part of the soil, so afterwards the soil will be useless." (BI 12, married male sawmill owner).

Gender relations

Divisions of labour within herding households in Tsenkher were largely regulated in accordance with long-standing gender norms, with men in charge of outdoor activities such as herding livestock, preparing firewood, taking livestock on otor migration, and women mostly in charge of indoor work such as milking, processing dairy products, child care, cleaning and cooking. For example, our baseline survey revealed that cooking for the household and washing clothes were done by women in 85% (116) and 82% (113) of all randomly sampled households, and by men in only 33% (45) and 31% (43) of these households, respectively, as Table 8 shows.

Table 8. Gender division of household tasks among randomly sampled households, Tsenkher

	Men	Women	Boys	Girls	People from other households	No-one
Cooking for the household	33%	85%	11%	18%	3%	2%
Washing clothes	31%	82%	12%	17%	4%	0%
Taking children to school	25%	22%	6%	4%	0%	53%
Collecting firewood	71%	7%	22%	2%	22%	2%
Making the fire	52%	84%	18%	12%	4%	1%
Collecting water	61%	40%	28%	8%	12%	0%

Source: WOLTS Mongolia baseline survey, 2018. N=137.

However, according to the seasonal labour analysis done by men and women separately during our FGDs, it seemed that much more work was shared by women as well. For example, herding, haymaking, seasonal movement and preparing firewood were all reported by participants to be done nowadays by women too. The role of children also came out strongly in the seasonal labour analysis, especially during the long summer vacation from school. Participants reported that children in general help with herding, cleaning the house and taking care of their younger siblings, while secondary and high-school-age girls help with milking cows and preparing dairy products. Women in Tsenkher also have primary responsibility for school preparation at the start of each new school year, which often keeps them very busy with buying uniforms, books and other supplies for their children during the final weeks of August. Women with university or college age students in their

household have even more to prepare for this, including travel to Ulaanbaatar, tuition fees and accommodation once there. In addition, female household heads are responsible for doing all the outdoor activities that are usually performed by men in male-headed households. This can be very challenging and, as a result, participants in our FGDs and BIs shared that female-headed households often move to live near their relatives during the long winter months, especially their male relatives or those with more men in their household. As already indicated above, female household heads with grown-up sons are better off in this case.

“Previously my husband made hay for me. Now I don’t know who will do it this year, probably my relatives...When my husband passed away it felt like one of my hands fell off. I am a young widow, so it is very hard for me. I don’t know how to see my children through university...There are quite a few female-headed households in this bagh, both divorced women and widows. Their life is very difficult because they have to think about everything alone.” (BI 3, recently widowed woman)

With regard to household decision-making, it seemed that in Tsenkher this is usually shared by women and men, and that both genders also participate in meetings of the bagh and soum citizen khurals. Husband and wife were jointly looking after the household finances in traditional herding households, but with women taking the lead in day-to-day budget management. When purchasing livestock or a vehicle, however, it appeared that men had a greater decision-making role. In general, women were reported by participants in our FGDs and BIs to be actively engaged in household decision-making, although decisions about access to pastureland and otor migration were made mainly by male family members. All these deep-seated gendered norms and divisions of labour made it difficult for women to engage in herding without male support, as already suggested above. Moreover, during our participatory fieldwork phase we observed that women living in remote areas were often shy and reluctant to talk, while women in the soum centre were much more open and spoke freely about their issues.

“We discuss together when we buy something. I really only get involved in bigger businesses, like buying a car or livestock. The rest my wife decides.” (BI 17, young married man)

“Women are usually weaker and more shy, so men tend to make decisions over natural resources.” (BI 3, recently widowed woman)

Another issue that has a big effect on gender relations in Tsenkher is that married women often go to the soum centre when school starts in September and stay there with their children until the end of the school year the following June. Several male participants in our FGDs and BIs said that this made them vulnerable, as they had to do everything at the household’s winter camp during this period, like herding, cleaning, cooking and so on.

“The problem is that women go to the soum centre with the children, so it is very hard for us. We have to keep quiet, because we have to think about our children. Usually husbands and wives phone each other a lot, so it is okay...Usually in winter we are alone in the mountain area with our animals, so we just look after the animals, cook and so on. That is the lifestyle we have. It would be nice if there was a good boarding school where we could send our children. It was better organised in socialist times, because we could send our 8 year old children to the dormitory and the wife and husband could stay together. Usually, the wives just ask relatives to put up a ger in their khashaa, but the living arrangements in the soum centre vary.” (FGD 7, married male herders)

“The workload of men and women is the same as it was back 30 or 40 years ago, the only change is that men stay at home in winter time, while the wife goes with the children to the soum centre because of schooling.” (FGD 13, men herders with customary land rights)

One further critical issue for gender relations – that of alcoholism – came up repeatedly during our FGDs and BIs and was underlined in our CFMs. We observed that while alcoholism predominantly

affected men, there were also many female alcoholics in the soum. Male alcoholism not only increased the workload of women, most notably the alcoholic's wife, but it also appeared to contribute to violence against women – a big, if hidden, issue in Tsenkher, as in many other parts of Mongolia, that was not always talked about very openly during our research.

"In the old times, there were fewer female-headed households. Nowadays there are so many. We think it is due to alcoholism. Many couples are getting divorced. Theft is increasing. There are way too many shops and stores selling alcohol and beverages from day to night. People often get into accidents while drunk driving their motorbikes." (FGD 9, elderly female household heads)

"It is hard for female-headed households to be herders. But I have a son who helps me a lot. Life used to be tough when my kids were younger. Now I am good. Sometimes I think it's better to live without a husband. Worse to marry someone who drinks and beats up their wife." (BI 14, elderly unmarried woman)

"Generally, women are more hardworking than men. I see them working everywhere, in the shops etc. Even in the government offices there are many women. All the men are alcoholics...It's the same everywhere I go. If you don't have a woman in the house, men just meet each other and drink and then they turn into alcoholics." (FGD 10, vulnerable single men)

Mining companies and artisanal mining

As already described, Tsenkher's main mining site lies in Orkhon bagh, taking up 30-40% of the bagh's territory. Large-scale placer gold mining was pioneered in the Deed Nuur in Orkhon in 1999, by Mongolia's two biggest mining companies at that time: Mongol Gazar and Altan Dornod. Their combined area under production licence was approximately 620 ha, with around 300 ha to Mongol Gazar and 320 ha to Altan Dornod. In our baseline survey, 28% of both female and male respondents (23 of 81 and 25 of 89 respectively) agreed with the statement that: "In your community, companies have been able to come in and take people's land without consulting ordinary people". Sixty-seven per cent (20 of 30) of all respondents in Orkhon agreed with this statement, as did 45% (13 of 29) of all respondents in Tamir, but only 14% (15 of 111) of all respondents in the remaining four baghs. This points to a relative lack of awareness and information on the part of local people about issues in the soum that do not seem to directly affect them and lie beyond their immediate vicinity, which we noted above and elaborate further below.

"In 2000 we were planning to have our winter camp and had prepared the livestock shelters and everything, but Mongol Gazar came without prior notice and they got the land. We did not do anything against it. We just moved from there, as they wanted. At that time we had no idea about mining and how it would impact on our lives. We did not get any compensation at that time. We simply did not know anything at that time about mining at all." (BI 19, elderly male herder)

According to soum officials, Mongol Gazar got its land on a 60-year possession right but the licence is no longer legally active as the company has ceased its local operations. However, according to the aimag office of the State Specialised Inspection Agency, there were five business entities with active special mining licences in the Deed Nuur at the time of our research – Altai Gold, BMNS, Golden Hammer, Mongol Gazar and MGH. These companies were responsible for paying water fees directly to the aimag in respect of their licensed areas, and paying waste fees of MNT 1-1.2 million (USD 412-495) per company per year. We were further informed by the State Specialised Inspection Agency that two of these five companies, Mongol Gazar and MGH, had the same owner, and that only Altai Gold and BMNS were operating properly, in full adherence to the terms of their licences. This included carrying out environmental rehabilitation and reclamation work in accordance with their environmental management plans, which we directly observed being done systematically by BMNS during our participatory fieldwork phase. Meanwhile, we were told by the aimag office that the owner of Mongol Gazar and MGH had exploited a loophole in the law to sublet his licensed areas to

a further 15 business entities at the time of our research, which included some small-scale mining companies belonging to people from Tsenkher soum; the fifth business entity with an active Special Mining Licence, Golden Hammer, had also sublet land to other small businesses, but they had not yet started any mining operations and were also not doing any environmental rehabilitation.

According to the State Specialised Inspection Agency, Mongol Gazar and MGH had failed to conduct any environmental reclamation work for several years preceding our research in Tsenkher, after ceasing their operations with the government's adoption of the so-called 'Long Name Law' that banned mining near rivers and lakes. As a result, their environmental management plans had not been approved by the Ministry of Environment and their special mining licences had not been extended, and we were told that an Inspection Booth had been set up on their land to stop people from continuing mining there.

The aimag office also told us that another company, Shinshiva Mongolia, had recently acquired a mining licence and brought all its equipment to Tsenkher soum, but the local community did not want them to come so had held demonstrations. It appeared that representatives of Shinshiva Mongolia were asked to attend the soum and bagh khurals to discuss the company's proposed mining activities with the local people, but in the meantime it just went ahead and started operating at the end of August 2018, just after the end of our participatory fieldwork phase. During our CFMs in December 2018 we learned that the company had been very unlucky as there proved to be no minerals to extract in their licensed area, even though they invested a lot of resources in deep excavations, and no rehabilitation had been done.

As noted above, other than in Orkhon there has also been some placer gold mining in Tsetserleg bagh, in the Nariin Khamar area, on the southern slopes of Mount Suvraga Hairhin, where Mongol Gazar had obtained an exploration licence for 13,000 ha but only undertook mining production on 68 ha in 2005 (cf. Byambajav 2012). During our FGDs and BIs, local herders from Tsetserleg expressed their pride to us that they had managed to get this operation closed down very soon after Mongol Gazar had begun it. A local movement called Aruin Suvraga played a crucial role in their achievement, organising sit-ins with local herders at the mine site for three months to save the area from mining. In addition, Aruin Suvraga investigated the whole licensing process from the beginning and gave the aimag level court a list of soum officials who had signed the contract with Mongol Gazar without consulting local herders as prescribed by law. As a result, mining production stopped completely in the Nariin Khamar area. The land on which mining production had already taken place was rehabilitated by the company and is now used as pastureland by local herders. In 2007, the Mongolian government approved Mount Suvraga Hairhin as a state-worshipped mountain, in order to better protect it from any mining in future (cf. Byambajav 2012).

Sub-contracting of small-scale mining companies

As just mentioned above, even though Mongol Gazar's mining licences are no longer valid, the company has found a legal loophole through which to subcontract small-scale mining companies to operate in its licensed areas in Orkhon's Deed Nuur, by sub-letting parts of the land under licence on annual contracts. We learned that the small-scale business entities that rent land from Mongol Gazar, MGH and Golden Hammer, had started operating in this way from around 2010 and pay some MNT 10-15 million (USD 4,122-6,183) each per year. According to soum officials, there were in total 36 small-scale mining companies operating in 2016 and 30 in 2017. However, during our FGDs and BIs, local people reported the presence of more than 50 active small-scale mining companies in Orkhon. It appeared that most of them were owned by ninjas who had previously worked (totally illegally) in neighbouring Uyanga soum of Uvurkhangai aimag – an area well known since the mid-1990s for its extensive mining activities that involved over 10,000 ninjas. Their lengthy mining experience enabled these ninjas to upgrade both their techniques and their equipment, as well as to transition into legally registered small-scale mining companies working formally as artisanal miners.

However, it seemed from our participatory research phase that better-off people of Tsenkher soum are also involved in this sub-contracted small-scale mining, especially wealthy herders from Orkhon bagh. These local people are operating totally illegally when they rent their mining land from Mongol Gazar, also on annual contracts. Because they are not formally registered artisanal miners but are still ninjas, they have to hire a drilling company with the necessary machinery and technical equipment as an executing company, which takes about 70% of any profit. The remaining 30% of any profit goes to the local holder of the (totally illegal) sub-contract with Mongol Gazar. However, these drilling companies are generally the same registered small-scale mining companies from outside Tsenkher soum, just mentioned above, that also sub-contract directly with Mongol Gazar and used to be ninjas themselves. Thus it seemed that these outsiders were taking all the profits from mining in their own sub-contracted areas as well as a share of the profits out of any (illegal) arrangements they made with individual citizens of Tsenkher, and that the fluidity and dubious legality of all sub-contracting arrangements by the large-scale companies left open much scope for confusion and overlapping claims.

“Some local guys, including me, rent land from Mongol Gazar...I hire a company to execute the work in the mine under a contract where we share income – 70% is for the drilling company and 30% is for me. But we sometimes lose it because Mongol Gazar intentionally gives the same land to different people. This creates big conflict. Some even could not get back their money that they invested.” (BI 16, young married man)

Legalisation of local artisanal miners

Partly in response to some of these growing issues in the soum, from 2017 local ninjas have begun to be encouraged to establish small community groups and associations (nukhurlul) to formalise their mining activities. By the time we were carrying out our FGDs and BIs, in August 2018, there were already 10 mining nukhurluls involving members of over 100 households who had previously been mining illegally as ninjas. According to participants in our FGDs, after consultations with the Mongolian Artisanal Miners’ Association, a large Ulaanbaatar-based umbrella organisation, set up with support from the Swiss Agency for Development and Cooperation’s (SDC’s) Sustainable Artisanal Mining Project, these 10 nukhurluls got together and established themselves as a local NGO in order to further formalise and protect their mining rights. This was because, as nukhurluls are only newly provided for under Mongolia’s mining legislation, their status is not yet fully secure. Nukhurlul members we spoke with in Tsenkher soum shared that they had not yet experienced any difference from being ninjas, as mining companies do not care about nukhurlul registration certificates but rather are keener to collaborate if they have an NGO registration certificate.

We learned that in order for nukhurlul members to obtain land on which to legally carry out their mining activities, their local NGO first makes a request to the mining company that holds the desired area under licence. The NGO then has to collect documentary proof that all the nukhurlul members are citizens of Tsenkher soum, including ID card numbers and evidence of members’ social and insurance tax approval, enabling it to obtain an approval letter from the soum government for the request. A tripartite agreement is then made between the local NGO, the soum government and the mining company, and the company allocates the nukhurluls part of its licensed area to use for mining. This process is wholly in line with amendments to Mongolia’s mining legislation that were designed to support the legalisation of artisanal miners (Resolution 308 – see Daley et al 2018), and is different to the sub-contracting of small-scale mining companies described above. According to participants in our FGDs and BIs, of the five large-scale business entities with formal mining licences in Tsenkher soum, both Altai Gold and Golden Hammer had entered into tripartite agreements with the nukhurluls’ local NGO by the time of our research.

However, as with the sub-contracting cases described above, due to lack of availability of the necessary heavy machinery and technical equipment, the local NGO also has to make a contract with one of the outsider-led registered drilling companies to act as executing company, and the executing

company again gets 70% of any profit while the NGO's nukhurlul members get the remaining 30%. However, in this case, environmental rehabilitation is contractually obliged to be done by both the nukhurluls and the executing companies. Under the tripartite agreements, any gold extracted is supposed to be sold jointly by the executing company and the local NGO to the original mining licence owner (i.e. Altai Gold or Golden Hammer), but we heard that in practice the executing companies often sell the gold on their own. Some participants in our FGDs and BIs complained that the originally licensed companies sometimes give the remaining dirt – the soil that is left over from the bigger companies' digging and extraction work and which contains small flakes of gold that are not economical for them to extract themselves – directly to the executing companies, thereby going over the heads of the local nukhurluls that they have signed agreements with, so that the nukhurluls then have nothing from which to try and extract any ore.

"The regulation on artisanal mining changed last year [2017]. According to the new version, a nukhurlul should have nine members with the following machinery to start their mining activities: a [very large] capacity shovel [excavator]...other machines for washing leftover soil, and they should also be able to do rehabilitation on their own. So it makes it harder for local nukhurluls to work on the mining site." (FGD 12, women engaged in mining).

Effects of mining

During our baseline survey, 48% (66) of all randomly sampled households reported that mining had affected their household in some way in the previous two years, but this varied significantly between baghs. In Altan-Ovoo and Builan, far from the soum's mining site, just 21% (5) and 29% (6) of all randomly sampled households respectively reported that mining had affected their household, while in Orkhon and Tsetserleg, 79% (18) and 67% (18) respectively reported this. In contrast, across Tsenkher soum as a whole only 12% (17) and 7% (10) of randomly sampled households reported that national parks and large-scale land acquisitions (LSLAs) respectively had affected their household in the previous two years. The households that reported having been affected by national parks lived in all baghs except Builan; those reporting that they had been affected by LSLAs in general lived in Orkhon, Tsetserleg and Tamir. Table 9 provides a detailed breakdown of our data.

Table 9. Effects of different land-related interventions on households in different baghs, Tsenkher

Bagh	% of randomly sampled households reporting effects from mining	% of randomly sampled households reporting effects from local national parks	% of randomly sampled households reporting effects from LSLAs
Altan-Ovoo	21%	17%	0%
Builan	29%	0%	0%
Orkhon	79%	17%	17%
Tamir	52%	13%	9%
Tsenkher	33%	28%	0%
Tsetserleg	67%	4%	15%
Tsenkher soum overall	48%	12%	7%

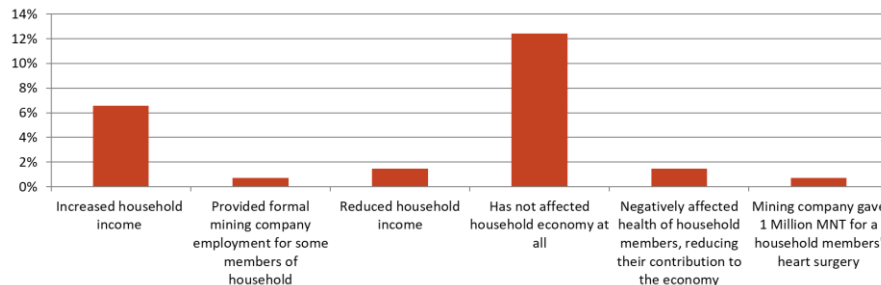
Source: WOLTS Mongolia baseline survey 2018. N=24 in Altan-Ovoo; N=21 in Builan; N=24 in Orkhon; N=23 in Tamir; N=18 in Tsenkher; N=27 in Tsetserleg; N = 137 in Tsenkher soum overall.

As Figure 13 and Figure 14 below show, the reported effects of mining on local land and natural resources have been more notable than mining's economic effects on our surveyed households. Only 7% (9) of all randomly sampled households reported that mining had increased their household's cash income during the previous two years, while 1% (2) reported that mining had reduced it; these results are in line with the data on actual cash incomes earned from mining that we reported above. Five of the nine households reporting that mining had increased their household's cash income over the previous two years lived in Orkhon, where 21% (5) of all randomly sampled households in the bagh reported this. Our baseline data are further supported here by the

findings of our participatory fieldwork phase, where only two participants out of those taking part in our 19 BIs reported that mining was beneficial to their livelihoods.

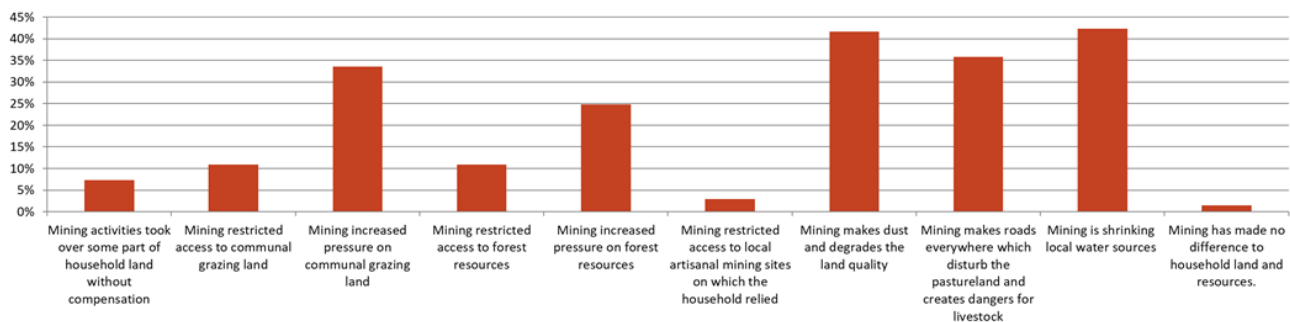
“I think working as a ninja is beneficial. I now have 30 goats, which I bought with my savings from mining. I’ve worked as a ninja since 2002, after I came back from Ulaanbaatar, and I bought my goats in 2012. Nowadays from mining I get regular money for buying my tobacco and bread.” (BI 15, elderly widower).

Figure 13. Reported economic effects of mining on randomly sampled households, Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. N = 137.

Figure 14. Reported environmental effects of mining on randomly sampled households, Tsenkher



Source: WOLTS Mongolia baseline survey, 2018. N = 137.

As Figure 14 illustrates, people’s main concerns about the effects of mining on local natural resources included that ‘mining makes dust and degrades the land’, reported by 42% (57) of all randomly sampled households across the soum, that ‘mining is shrinking local water sources’, reported by 42% (58), that mining has ‘increased pressure on communal grazing land’, reported by 34% (46), and that ‘mining makes roads everywhere which disturb the pastureland and creates dangers for livestock’, reported by 36% (49). These findings were confirmed by almost all participants in our FGDs and BIs. In addition, many people in Tsenkher reported major concerns about the quality of their drinking water, particularly those living in the Deed Nuur. Across the soum, we heard that almost everyone had used the main Tsenkher river for their drinking water up to five years or so ago and have all been affected by it becoming so polluted from the mining upstream in Orkhon; many people no longer trust it to drink from. Some local people in the Deed Nuur take their vehicles to fetch drinking water from rivers and streams that are further away from the mining site; others use water from wells built by the mining companies; and we also heard that some mining companies had sometimes trucked in water to distribute to local herder households for free.

“Drinking water problems are increasing. We get our drinking water from mining companies’ wells. We can’t use river water for our own consumption any more.” (FGD 11, men engaged in mining)

“Our family is not involved in mining at all, but I was born in Orkhon. When I went there a few years ago, it was heart-breaking. It looked so bad. Orkhon used to be the most beautiful area and because I was born there it makes me feel so sad. There is a river, which now is sometimes running yellow, so we try not to go close to it. Although now it is getting a bit better.” (BI 13, elderly married herder couple, husband speaking)

“I have never been involved in mining. We hate it, because it is hard now to trust our drinking water. Mining companies are at the top of the river, so we cannot trust their water.” (BI 8, married male crop farmer)

Many participants in our FGDs and BIs also shared more generally that the local environment has degraded as a result of mining, especially the local pastureland, and that local wildlife populations have decreased. At the same time, however, and as already elaborated, out of the whole soum only certain parts of Orkhon bagh have direct experience of mining and its impacts. So while participants from Orkhon were directly affected by this, and thus spoke from their own experience, we found that, although people from other baghs often did not know very much about what was happening in Orkhon, they mostly still believed that mining had led to the degradation of Orkhon’s environment and pastureland. Moreover, we found that even some local herders from Orkhon who lived just one valley away from the mining site at the Deed Nuur had little understanding about its actual environmental effects. In particular, locals with larger herds tend to live in different valleys, away from the main mining site, and often seemed to have little understanding of, or sometimes even interest in, the mining that was taking place not so far from them as the crow flies.

“In Orkhon bagh there used to be rare birds, wild boars, ibex, snow leopards, wolves, roe deer, red deer, marmots, falcons etc. Now due to environmental degradation we do not see that many. We believe it is due to mining activities that result in small creeks drying up, shrinking the water supply.” (FGD 9, elderly female household heads)

“Pastureland has degraded since mining operations started...We can’t move now as we want to the winter and spring camps. Every year when mining companies start their work we have to move from our spring camps. There is nothing good out of mining...If there is pasture, we move [our camps] there, if there is mining, we move out. That’s how we live now.” (FGD 11, men engaged in mining)

“We don’t like the mining that is happening in Orkhon bagh at all. But, honestly, we don’t really care about that mining in Orkhon. It is far from our area.” (BI 7, married herder couple from Tsetserleg)

One of the issues around mining-related environmental degradation in Tsenkher was linked to the poor record of carrying out (legally required) rehabilitation on the part of the mining companies, as noted above. Data provided by the aimag office of the State Specialised Inspection Agency, set out in Table 10, confirmed this: out of some 981.8 ha of land licensed for mining in Tsenkher soum that had been recorded by government inspectors as degraded, only around 11% (104 ha) had been fully rehabilitated by the licence holders by the time of our research; in Mongol Gazar’s case, land that had been rehabilitated was mined again, so the land was still recorded as damaged.

Table 10. Damaged and rehabilitated areas (hectares) under company mining licences, Tsenkher

Company name	Special Mining Licence number	Damaged area (ha)	Rehabilitated area (ha)
BMNS	MV-001401	381.6	31.5
Golden Hammer LLC	MV-004780	58.8	7.1
Altan Dornod Mongolia LLC	MV-004174 MV-004822	34.5 69.7	61.4
Mongol Gazar LLC	MV-005529 MV-002427 MV-002426	126.7 123.4 84.8	
MGH LLC	MV-007207 MV-009258	23.7 55.9	
Altai Gold LLC	MV-012470	22.7	4
Total areas		981.8	104

Source: Official data from Arkhangai aimag office of the State Specialised Inspection Agency, as at 3 August 2018.

As well as all the environmental issues around mining, there are also social effects linked to high alcohol consumption, which seemed to have contributed to various accidents and criminal incidents. In addition, elderly herders living in Orkhon shared their view that people’s characters have changed as a result of mining, with local men and women becoming more aggressive and violent.

“We used to have four children. But one boy who was 26 years old died in 2012. He was killed near the Mongol Gazar mining site. We found his body in one of the lakes created by mining. The police investigation said it was suicide. But I do not think so at all. He was with some drunk men from the mining site the day before he disappeared...I went through this tragedy because of mining. I am very sure, if there was no mining in our area, I would not have lost my son.” (BI 15, elderly widower, his eyes full of tears as he spoke)

“Alcohol usage is increasing in the soum and it’s causing many negative impacts to the social life of people in this soum. It brings domestic violence at the family level, sets a bad example to children, and causes different kinds of criminal cases.” (CFM, Tsenkher and Altan-Ovoo, male participant)

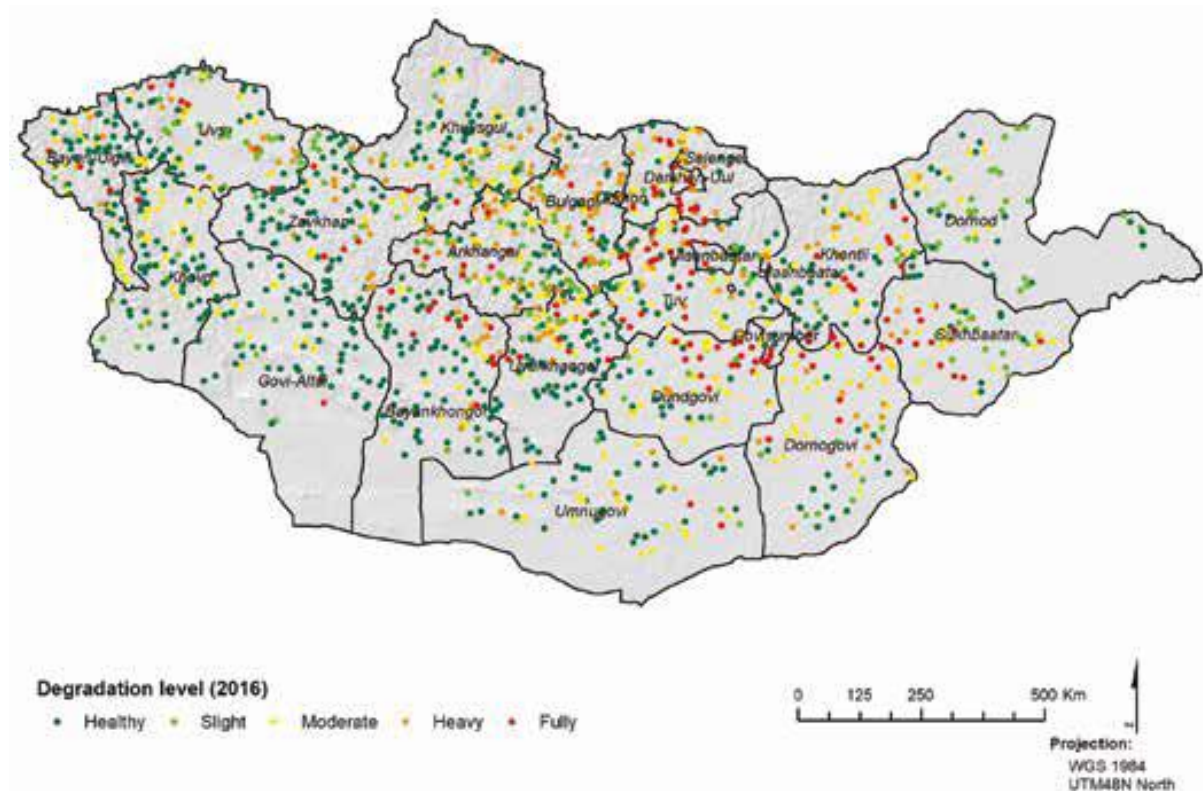
More broadly, taking into account considerations beyond mining, the overall extent to which people in Tsenkher perceived their local environment to be degraded is indicated by our baseline survey data. As Table 11 shows, 84% of all female respondents (68 of 81) and 89% of all male respondents (79 of 89) reported that there were issues around environmental degradation of natural resources in Tsenkher, while 53% (43) of all female respondents and 56% (50) of all male respondents reported that there were issues around water pollution.

Table 11. Perceptions about the local environment by gender of respondent, Tsenkher

	True (as percentage of respondents by gender)		False (as percentage of respondents by gender)		Don't know (as percentage of respondents by gender)	
	F	M	F	M	F	M
In your community there are issues around environmental degradation of natural resources.	84%	89%	7%	11%	9%	0%
In your community there are issues around water pollution.	53%	56%	37%	45%	10%	1%

Source: WOLTS Mongolia baseline survey, 2018. Table includes additional vulnerable households, as well as those randomly sampled. N = 81 for female respondents. N = 89 for male respondents.

According to participants in our FGDs and BIs, the pastureland in Tsenkher and the rivers used for watering livestock have all been degrading for the last 5-10 years as a result of lower rainfall, increased herd sizes, mining activities and tourism. Local herders described how Orkhon used to be an isolated, untouched wilderness, protected from modern development by its high mountain pass that no vehicle could cross, and that change only occurred after a road across the pass was built by the mining companies. However, compared to other parts of Mongolia, such as soums in the Gobi region, the issue of broader pastureland degradation seemed not to be considered too serious by people in Tsenkher soum because of the generally rich water resources in all baghs, and pastureland in Tsenkher as a whole appeared to be in relatively good condition, with diversified local grassland plants. According to the SDC Green Gold project’s National Rangeland Health Report of 2018, pastureland in the southern part of Arkhangai aimag (wherein Tsenkher soum lies) is slightly degraded with some areas moderately degraded, as indicated in Map 2 below. By “slightly degraded” the report means that “key dominants are still dominating, some grazing sensitive forbs are in decline and grazing resistant species are increasing”, while “moderately degraded” means that “dominants are in decline and replaced by other subdominants, number of species drops down”. Further, the class of recovery condition of the pastureland in the Tsenkher area is given as between class 2 and class 3, meaning that it would take 2-5 years to fully recover under either favourable weather conditions or a changed rangeland management regime (SDC 2018).

Map 2. Rangeland degradation dot map of Mongolia, 2014 and 2016

Source: Rangeland degradation dot map by degradation level I-V from non- to fully degraded, 2014 and 2016, SDC 2018, p.18.

Land allocation processes

In general in Tsenkher, land tenure arrangements for all types of land appeared to be largely still regulated in accordance with customary practices, both for people settled in the soum centre and for herders in the rural baghs. The main types of land subject to formal land allocation and certification processes were soum centre housing plots, for land ownership rights, and winter and spring camps, for possession rights, as we elaborate further below.

Not everyone in Tsenkher had an adequate understanding of the relevant Mongolian laws, as indicated by the data from our baseline survey in Table 12 below. For example, just 64% (52) of all 81 female respondents and 54% (48) of all 89 male respondents in our baseline survey correctly knew that women were allowed to own land. However, 80% (65) of all female respondents and 88% (78) of all male respondents correctly knew that discrimination between men and women as regards land ownership was illegal. On the other hand, 31% (25) of all female respondents and 33% (29) of all male respondents believed, incorrectly, that having rights to the land also meant having the rights to the minerals under the land, while 28% (48) of all 170 respondents in our baseline survey did not know whether or not that was the case. Moreover, 36% (29) of all female respondents and 40% (36) of all male respondents thought that according to Mongolian law men's rights to land take precedence over women's rights. Table 12 also shows that only 21% (19) of all male respondents and 14% (11) of all female respondents thought that women played a big role in decision-making about natural resources in the soum, while only 19% (17) of all male respondents and 15% (12) of all female respondents thought that all people were involved and consulted in decisions about community land management.

Table 12. Perceptions about Mongolian land laws by gender of respondent, Tsenkher

	True (as percentage of respondents by gender)		False (as percentage of respondents by gender)		Don't know (as percentage of respondents by gender)	
	F	M	F	M	F	M
In your country the law does not allow women to own land.	1%	11%	64%	54%	35%	35%
In your country the law says that men's rights to land take precedence over women's and that husband's rights to land take precedence over their wives'.	36%	40%	46%	42%	19%	18%
In your country it is illegal to discriminate between men and women as regards land ownership.	80%	88%	7%	8%	12%	4%
In your country, if you have the rights to the land, you also have the rights to the mineral resources on or under the land.	31%	33%	32%	47%	37%	20%
In your community all people are involved and consulted in decisions about community land management.	15%	19%	60%	69%	25%	12%
In your community women play a big role in decision-making about natural resources.	14%	21%	64%	61%	22%	18%

Source: WOLTS Mongolia baseline survey, 2018. Table includes additional vulnerable households, as well as those randomly sampled. N = 81 for female respondents. N = 89 for male respondents.

Housing plots

According to soum government officials, 285 households were allocated a housing plot in Tsenkher between January and August 2018 and, by August 2018, some 1,381 soum citizens in total had obtained ownership certificates for housing plots, with this number also including some Tsenkher citizens who had got housing plots in the aimag centre. We were informed that the process for soum citizens to get a housing plot under a formal ownership right is to submit a land application to the soum land officer, following announcement of an area to be designated for the allocation of housing plots by the soum government. The application has to include a letter from the applicant's bagh governor, confirming that he or she belongs to that bagh. Applications are then discussed in a meeting of representatives of the bagh citizen khural and, subject to their approval, the soum governor issues an order granting formal permission for each applicant to be allocated, and given formal certified ownership of, a housing plot in the designated area. The applicants then have to get a cadaster map made by an approved surveying company, at a cost of MNT 20,000 (USD 8). The soum governor's order and the cadaster map are submitted together to the aimag land registration office, where the citizen is then issued with his or her land ownership certificate. According to participants in our FGDs and BIs, the whole process is lengthy and usually takes more than two to three months, but local leaders said that it only took one month. Furthermore, we learned that it was women in Tsenkher who tended to run around preparing the required documents and meeting with local government officials during the application process, as in many other parts of Mongolia. Male herders in the rural baghs did not often participate because, as discussed above, they usually lived away from the soum centre while their wives stayed there at least for the duration of the school year. However, although women did most of the work, it seemed that land ownership certificates were mostly issued in the man's name.

"There is no discrimination here, all soum citizens can apply for land, even small children below the age of 16. Land is allocated on a first-come-first-served basis, according to the soum's annual land planning. However, the cut-off date for applications in the national law that allows Mongolians to own land was recently extended, so many people are not rushing to get land now. This has slowed down the process [of more soum households acquiring formal ownership rights to land]. The land certification process itself usually takes about a month from submitting the application." (FGD 1, local leaders)

"Last spring, the Ministry of Construction and Urban Development held an open day in our soum. They promoted for us to get land. That is how I knew that I first needed a letter from the bagh governor...The soum land officer has a computer system, so my plot is registered there." (FGD 10, vulnerable single men)

“Usually it is women who chase after land certificates, but they usually put the certificate in their husband’s name. In case of divorce, the land would usually be divided. Women have more rights in Mongolia when it comes to divorce, so they would probably get more.” (FGD 6, women in informal/customary marriages)

Seventy-eight per cent (107) of all randomly sampled households in our baseline survey reported that they owned or possessed one or more housing plots somewhere in Mongolia, not necessarily just in Tsenkher soum. Fifty-one households had one housing plot, 52 households two, and four households had three housing plots, equating to 167 housing plots owned or possessed by all 137 randomly sampled households, as Table 13 shows.

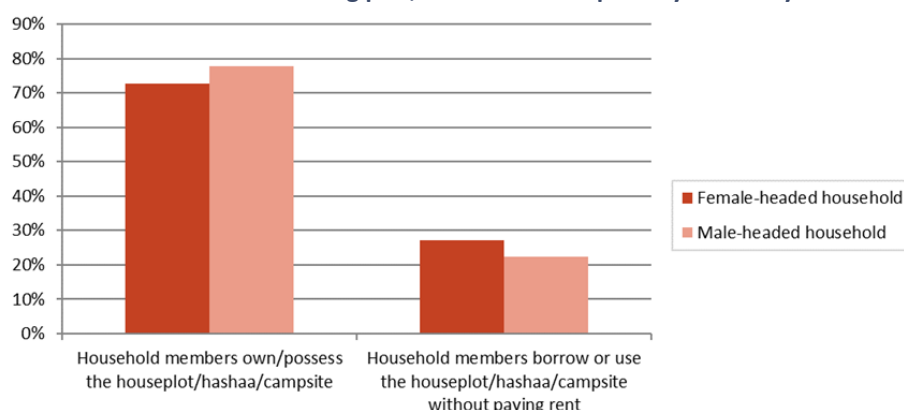
Table 13. Housing plot ownership/possession among randomly sampled households, Tsenkher

	Number of households not owning or possessing a housing plot	Number of households with 1 plot	Number of households with 2 plots	Number of households with 3 plots	Total number of plots owned/possessed by all 137 randomly sampled households
Number of households	30	51	52	4	167

Source: WOLTS Mongolia baseline survey, 2018. N = 137.

Seventy-six per cent (104) of the randomly sampled households in our baseline survey reported that household members either owned or possessed the household’s main housing plot, khashaa or campsite in Tsenkher. This was most common in Altan-Ovoo and Tsetserleg, where 88% (21) and 85% (23) of all randomly sampled households respectively said that they owned or possessed their main housing plot, khashaa or campsite, and least common in Builan, where just 57% (12) of all randomly sampled households reported this. However, of the 104 households across the soum as a whole that reported ownership or possession rights over their main residential site, 67 specified that in fact they had customary tenure rights for their spring or winter camp, rather than formally registered possession rights, and one subsequently specified that although they had bought the housing plot, they did not have any documents for it and did not actually buy it in their own names. Thus at most only 26% (36) of all randomly sampled households in our baseline survey actually formally owned or possessed the household’s main housing plot, khashaa or campsite in the soum.

It became clear during our participatory fieldwork phase that outside Tamir most people had not acquired formal land ownership or possession rights, but instead believed that because they had lived on and used ‘their land’ for generations that they ‘owned’ it; others thought that the documents they had received for their winter and spring camps during a recent cadaster mapping exercise in rural baghs, discussed further below, were actually formal certificates of possession rights. Twenty-four per cent (33) of all randomly sampled households in the soum did, however, report that household members borrowed or used their main housing plot, khashaa or campsite without paying any rent, and thus explicitly did not own it, and this was also the case for seven of the 33 additionally sampled vulnerable households. As Figure 15 below shows, there was almost no difference by gender of the household head in any of these survey responses on housing land ownership, but participants in our FGDs and BIs confirmed that many of the cases where randomly sampled households reportedly borrowed or used their main residential site would have been families where wives or grandparents spending most of the school year in Tamir put up their own ger on a housing plot or khashaa belonging to their relatives or friends.

Figure 15. Means of access to main housing plot, khashaa or campsite by all surveyed households, Tsenkher

Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

Among just the 103 randomly sampled households in our baseline survey reporting that members of the household owned or possessed the household's main housing plot, khashaa or campsite – and subject to the caveats just noted above about what respondents actually meant by this – 2% were reported to be jointly owned (for two households) and 98% were reported to be solely owned (for 101 households). In both households reporting that their main residential site was jointly owned, the household head was one of the owners. One was a man from Orkhon who jointly owned the land with his wife; the other, a female household head, was a single woman living in a duplex house in Tamir that was jointly owned with her neighbour, although they were in a dispute over this. During our participatory fieldwork phase it became clear that sole ownership most often meant registered ownership just by the household head, while more generally in cases of jointly registered ownership of housing land, although this usually involved a male household head and his wife, it also sometimes meant that the household head (of either sex) owned the land with other household members, most usually sons, or sometimes the eldest daughter if the household head had no sons.

We further observed during our participatory fieldwork phase that most people in the rural baghs did not seem to have any documentation for any of the land they owned or used, including where they lived. In our baseline survey, just 36 of all randomly sampled households reported that they had documents for at least some of their land. In total, 50 documents were reported to be held by members of these 36 households, as detailed in Table 14.

Table 14. Types of land documentation found among 137 randomly sampled households, Tsenkher

Type of Document	Apartment	Shop	Housing plot	Spring camp	Winter camp	Total
Ownership certificate	2	1	23			26
Possession certificate			9	5	10	24
Total number of documents	2	1	32	5	10	50

Source: WOLTS Mongolia baseline survey, 2018. N = 137.

As Table 14 shows, the most commonly reported document types were ownership and possession certificates for housing plots. However, as discussed shortly below, we discovered during our FGDs and BIs that many rural households were confusing cadaster maps with possession certificates and thought that the cadaster maps that many of them held for their winter and spring camps were either actually possession certificates or were at least another form of equivalent official title document for their camp.

As already mentioned, for married couples that had documents, housing plots appeared to be mostly documented in the name of the male household head, even though women could also legally apply for and register their own housing plots as individuals. However, most often people considered their housing plot to be owned jointly – i.e. belonging to the immediate family for household use – even if it was formally registered solely in the man's name, and the tendency to

sole registration seemed to be connected at least partly to the lack of space provided for more than one person's full name on the pre-printed official land application forms that must be filled out by hand. Further, under Mongolian family law, once a household's main housing plot, *khashaa* or campsite has been formally registered in the (male) household head's name under ownership or possession rights, it would pass automatically to his widow should he die.

"This housing plot here is the 0.07 ha that every citizen can get for free. If I want another housing plot, I will have to pay for it. This one is in my name but it's for my whole household's use." (BI 5, young married man)

On the other hand, we learned in our FGDs and BIs that female-headed households and vulnerable groups of people often rely on borrowing a *khashaa* to live on temporarily, as they find it more difficult to obtain an officially allocated housing plot. This is mainly due to lack of money to put a fence up on the plot boundaries and/or lack of male household members to help them build it.

"I do not own any housing plots at the moment. We used to live on someone's *khashaa* last year, but they came back and asked us to move out. So we had to find someone else who could let us live on their *khashaa* free of charge. We found that person, but we do not know when she might ask us to move out. I did apply for a housing plot in the soum centre and the land officer said she would help us to get land. But we are not able to put a fence up because we do not have money to buy the materials and no men to build it. If we do not use our housing plot or put a fence on it within two years, the government will take back the land. For this reason we do not have our own *khashaa* yet. But I still want that land." (BI 1, female household head)

"It also depends on your ability to build a fence, because fencing materials are expensive, it costs about MNT 2 million (USD 824) to build a fence. If you don't build a fence within three years, they take back the land, even if you have a certificate for it. So, even if we have enough money to build a fence, we don't do it if we are not planning to live there, as thieves could take down your fence." (FGD 7, married male herders)

Winter and spring camps

As noted above, winter and spring camps are also subject to formal land allocation and certification processes, but it appeared that this was still in its early stages at the time of our research. According to local leaders, over 100 households in the soum were in the process of obtaining a certificate of possession rights for their winter and spring camps; this process was being organised systematically by the soum Land Office through a contract with a surveying company, in line with national law, but the documents again mostly appeared to be in the name of the (usually male) household head. During our FGDs and BIs in rural *baghs*, many herders shared that they had paid for the preparation of cadaster maps for the land of their winter and spring camps that they held under customary rights, at a cost of MNT 50,000 (USD 21) per campsite; those with both winter and spring camps thus spent MNT 100,000 (USD 41). Most of the better-off households did this, but we learned that poorer herder households, including vulnerable households with few livestock, could not manage to pay due to constraints on their available cash. In a major misunderstanding with respect to their tenure security, we also found that all of them were under the mistaken impression that those herders who had paid for the cadaster mapping had been given formal possession certificates, while in fact the documents they showed us were only cadaster mapping payment receipts. Furthermore, some participants in our FGDs and BIs did not seem to be fully aware of exactly how much of the land they used was being (or at least should be) legally secured through this process.

"Everybody here has paid MNT 50,000 (USD 21) for the cadaster map of their winter camp, but we don't know if this is useful. We also don't know if we will get another piece of paper. We were just given a very strange map. We think it might be a fraud. The land officer came with a person from Ulaanbaatar to do it. So every household went with them to identify their winter and spring camps and they used GPS to map them. The Ulaanbaatar people then came back alone to collect the money. The cadaster map was written in the name of the household head." (FGD 5, men and women herders with customary land rights)

“We do not have a [possession] certificate for our camp. Only last year we paid MNT 100,000 (USD 41) to make the cadaster maps of our winter and spring camps. They cost MNT 50,000 (USD 21) each, but the size shown on the map is only 0.07 ha each [like for soum centre housing settlements, rather than the 500 m radius allowed by law for winter and spring camps]. It is not securing the pastureland area at all.” (FGD 14, widowed, divorced and separated women and men)

Vegetable and fodder plots

As discussed above, crop (vegetable) farming is very limited in Tsenkher, but we did observe a number of fodder plantations throughout our time in the soum, particularly on the outskirts of the soum centre on the road in from the aimag centre and the road between Altan-Ovoo hot springs and Tamir; these plantations were all fenced round and generally seemed to be at least a few hectares each. During our participatory fieldwork phase, local leaders revealed that agricultural land in the soum is only allocated following specific requests made to the individual bagh khurals. Soum citizens have to request land from a meeting of representatives of the bagh citizen khural in the area where they want to be allocated land. If their request is approved it is forwarded to the soum citizen representative khural, which decides whether to allocate the land on a tender or privilege basis. If this is to be done on a tender basis, by auction, then the precise areas to be put up for auction will be decided in accordance with the soum’s annual land use and management planning and the land will end up with whoever is willing to pay the most for it, which does not favour poorer and more vulnerable households; if land is to be allocated on a privilege basis then those people considered to have the most farming experience will get it, but this will usually favour whoever made the original request to the bagh khural for the land. In addition, the local leaders told us that outsiders are only able to acquire land for vegetable and fodder plots on a tender basis, but that usually even then it is not given to them because the bagh khural has to approve the outcome of the tender process.

In total, just 2% (3) of all randomly sampled households in our baseline survey reported that they had land for non-residential purposes in Tsenkher, all under ownership rights. One male-headed household from Builan had 0.5 ha in Builan, which they reported to have obtained by applying to the local government. Another male-headed household from Altan-Ovoo had 200 ha and a female-headed household from Tamir had 40 ha; in both cases the land was in Tamir and acquired by auction. These data are different to the reported agricultural land data discussed above, as they did not relate to land that households owned, but rather to land for crop farming that they were renting or borrowing or just using without formal rights at the time of our survey, either in- or outside Tsenkher soum.

For groups of farmers (bulegs or nukhurluls) land allocation procedures appeared to be slightly different. Participants in our FGDs and BIs shared that obtaining certification of a plot on which to grow vegetables was a lengthy process, similar to the process of acquiring a housing plot. The buleg or nukhurlul first has to submit a land application to the soum land officer, then it has to be approved during meetings of the bagh and soum citizen representative khurals before the soum governor can issue a resolution to allocate the land and cadaster mapping can be carried out by an approved company. Once a certificate is issued awarding possession rights to the land, the farmer group then also has to make a contract with the soum land officer and start paying a yearly land rent. Because of this lengthy and complex process, not everyone growing crops in Tsenkher had the correct documentation for the land they were using; some started farming without waiting for the paperwork to be in place; others lacked information on how to obtain it.

Forests

In our baseline survey, 58% (47) of all 81 female respondents and 62% (55) of all 89 male respondents identified access to forest resources as a major issue in Tsenkher soum, while 27% (22) of female and 34% (30) of male respondents reported that members of their household did not have

secure rights to all the forest resources they rely on. These perceptions are important given that some 22% of the soum's territory is covered by forest, excluding the even larger area lying within the boundaries of the National Park.

As described above, Tsenkher's forests are rich with NTFPs such as pine nuts and berries, while timber itself is a valuable local resource for both commercial and domestic use. Each year the soum government decides how much of the forested areas can be used for timber harvesting, and two different types of permit are issued: for firewood collection by individual soum citizens and for logging by registered business entities. We were informed that in recent years the soum government has been issuing logging permits to eight local timber companies, of which we observed that at least four were fully operational at established saw mills in the soum at the time of our research. The companies each get a yearly permission to carry out forest cleaning and thinning, which costs MNT 9,750 (USD 4) per 1m³. The permits enable the companies to use the products of their logging activities to make products for sale, such as timber supplies for housing and carpentry, in their saw mills, and to bag up and process the offcuts for sale as domestic firewood.

With regard to firewood collection by local households, participants in our FGDs and BIs reported that they first had to approach the soum government's Forest Unit, which would identify a place for them to harvest firewood by gathering fallen branches and dead wood, and cutting old trees; use of young trees is prohibited by law. They then had to pay a fee of MNT 12,900 (USD 5) per truck at the bank and take the payment slip (receipt) back to the Forest Unit, where they would be granted their permit. Participants shared that firewood collection was usually a man's job and it was therefore usually male household members who applied for the permission, but there were no difficulties for women, including those in female-headed households, in applying for and obtaining this permission. We were told that conflicts sometimes arose if the Forest Unit assigned someone an area for firewood collection that was far away from where they lived, as somebody with a truck would then be needed to help collect the firewood and fuel money would have to be paid to the truck driver. This made it particularly difficult for female-headed households who did not live near the soum's forested areas to gain access to firewood, because of the need to find a (male) truck driver to help them on a practical level, even if they could manage (and afford) the application process by themselves. Participants in our FGDs and BIs further shared that people who lived in the soum's forested areas were generally better off, because they had direct access to forest resources for their own consumption as well as for sale. This contrasts with the situation of people who live far from the forests, like those in Builan, who always have to pay for transport if they want to get firewood.

"We have a special logging licence. Each year some land...is allocated for thinning. There are no disputes around this because the aimag and soum authorities allocate the areas...Business entities in this soum get a 5 ha area each, based on a study done by the Forest Unit (BI 12, married male sawmill owner).

"Firewood collection is usually a man's job, so the men run after the permissions. Female household heads can also get a permit, there is no problem with that. But a female household head usually finds a driver, who can then also go to the different places and organise everything for them...There is only one man in the Forest Unit and he has been there for a long time, so we have a very good relationship with him. We also have good relations with the bank – we just go there to pay the money. The difficulty is finding truck drivers, because it is like asking a favour of them by just providing fuel money, so they are often unavailable." (FGD 6, women in informal / customary marriages)

As discussed earlier, the collection and sale of NTFPs is an important local source of cash income, particularly for poorer households who live near the soum's forests. Soum government officials explained that private companies, whether soum-based or outsiders, had to pay a tax of MNT 800 (USD 0.33) per kg for pine nut collection. They shared further that in a good harvesting year, three or four companies might come to request permission to collect pine nuts, and in 2015 and 2016, the soum had raised MNT 1 billion (USD 412,201) in taxes from pine nut collection. Ordinary soum citizens are allowed to collect around 10 to 20 kg of pine nuts and berries for their household

consumption, without paying any tax, but some herders told us they had neither the time nor the capacity to collect berries and nuts, while other local people, with fewer livestock or who lived in the soum centre, reported that they often went to collect those NTFPs both for themselves and for sale.

“We have lots of outsiders who come here to collect nuts and berries for sale. We can’t go ourselves because we can’t leave our livestock without care, we are just few people at home. In some years of good harvests, more than 200 cars came here to collect nuts. They leave lots of garbage and damage the pine trees. Our bagh is rich in forests compared to other baghs.” (FGD 14, widowed, divorced and separated women and men)

Tourism

There were five tourist companies formally operating at the spa and hot springs in Altan-Ovoo bagh at the time of our research. During our participatory fieldwork phase we learned that the first tourist camp was established there in 2000, but none of the companies obtained official possession rights certificates to their sites until around 2007-2009. All five companies had to pay water usage fees for the hot springs to the aimag level tax office. According to both company representatives and local herders, poor land management in the spa area has led to an increasingly negative environmental impact: pastureland has been destroyed by the creation of new roads to accommodate tourist traffic and inadequate sewerage systems have caused local water to become heavily polluted.

“The hot spa creek is the most dangerous creek because it is so polluted with human waste. There used to be many fish in there but now we don’t see any...Tourist companies’ waste management is not good and some individual people also come and camp near the river...The companies’ waste management is very bad. They just want to save money, so when it rains they dump their waste into the river [so they don’t have to pay for waste collection trucks to take it away].” (FGD 7, married male herders)

“I have been here since 2008 and started operating in 2009. Land access was easy. I bought this land from another businessman who had already got all the necessary paperwork in place to run a tourism business here, so I did not have to deal with any government procedures. The land I bought was very small, but I was able to extend the area a little bit as I am a native of this soum...We use a septic tank system for sewerage, so our toilet waste is taken away by truck and waste water from people washing themselves goes into the river. But some of the sewerage from the other tourist companies sometimes overflows into the river.” (Director, Duut Tourist Camp)

The tourist camps in Altan-Ovoo are all clustered together around the hot springs and this appears to have gradually led to the development of an unmanaged settled area. During the summer months, local herders come to the area to operate temporary ger camps and sell their dairy products to tourists and tourist companies alike. According to one tourist camp owner, negative environmental impacts can only be avoided, and a sustainable and environmentally friendly local tourist industry established, if the land is better managed. He shared further that weak law enforcement and lack of local knowledge about how to run a decent business was beneficial neither for individual businesses nor for the local area.

“We are like a Sansar area [an overcrowded services area on the main road between Arkhangai aimag and Ulaanbaatar], fighting with each other, making prices go down etc. If we continue like this we will just be left with many small businesses not making much money and not fulfilling good standards, just destroying the environment. It would be better to reduce the number of tourist camps and enforce better standards. The government has to establish some strong regulations for tourist companies and for local herders. Now everybody is just acting on their own.” (Director, Duut Tourist Camp)

Participants in some of our FGDs and BIs complained that the tourist companies generally do not consult with local herders, and that if herders invited them to their bagh meetings they would not come. However, we also learned that in the spring of 2018, the existing tourist operators in Altan-

Ovoo had successfully fought alongside local herders against the establishment of any more tourist camps around the hot springs. Since then, however, it seemed that relations between the herders and company owners had deteriorated again and some new companies had been able to move in.

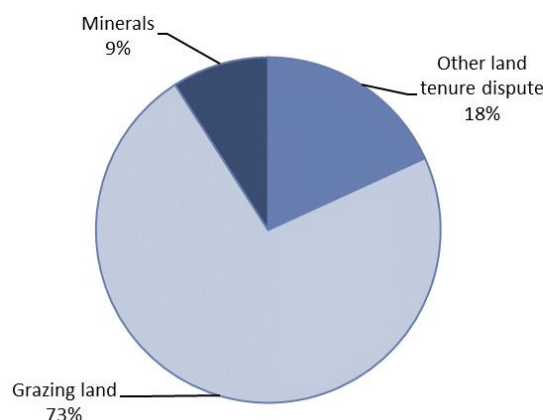
“More tourist companies want to come here, but that would mean they would take over my pasture here [around her summer camp area]. Four more companies actually applied, but the herders got together with the companies who are already here and resisted. It was discussed at the bagh khural. When there are heavy rains, the tourist companies just let their sewerage run through the river. It is a very dirty business. More tourist companies means more problems. Many private people also put up their tents in the forest and defecate everywhere.” (BI 10, elderly widow engaged in tourism)

“Somebody got a licence for a temple, but they just built a toilet in the shape of a temple and gers in the shape of temples and then run a tourism business, so that is how they are making fun of us. Another guy put up his fence because he already has a licence. He will probably come and start construction next year.” (Director, Duut Tourist Camp)

Land disputes

Only 8% (11) of all 137 randomly sampled households in our baseline survey reported that their household had been involved in a land or property dispute in the previous 12 months. There were no major gender differences, with 8% of all male-headed and 7% of all female-headed households reporting to have been involved in a dispute in the previous 12 months (10 of 126 and 3 of 44, respectively). The range of reported dispute types is illustrated in Figure 16.

Figure 16. Types of land disputes reported by randomly sampled households, Tsenkher



Source: WOLTS baseline survey 2018. N = 11 disputes.

Although by far the most commonly reported disputes related to grazing land, as we discuss further below, participants in our FGDs and BIs revealed that there have also been many more disputes over mining in recent years, as a result of Mongol Gazar sub-letting the same land to different nukhurluls and small-scale mining companies, as we elaborated above. This has caused conflict among people in the main Orkhon mining area with overlapping claims, who have not been able to proceed with their mining operations in a timely way. We were told that the disputing parties had informed Mongol Gazar but that nothing had been done to resolve these disputes by the time of our participatory fieldwork phase and they could not be taken to the courts because of the dubious legality of the whole practice of sub-letting of licensed areas. However, we subsequently learned that the aimag office of the State Specialised Inspection Agency had become involved in demarcating the disputed plots in order to help resolve the increasingly tense situation.

Details of specific land disputes that were reported in the baseline survey are provided in Table 15.

Table 15. Land and property disputes between February 2017 and February 2018, Tsenkher

Bagh	Type of dispute	Type of household	Resolved?	Explanation
Disputes recorded in the baseline survey in the randomly sampled households				
Altan-Ovoo	Other land tenure dispute	MHH	No	The household head has had land for a pharmacy since 2013 but to date has been unable to get a certificate for the land.
Altan-Ovoo	Grazing land	MHH	No	Another herder with many livestock came onto the household's winter grazing area and has not moved off the land. The household tried to chase them away due to lack of pasture for themselves, but the other herder informed the police. The household was told by the police that they have no right to chase the other herder away and were informed that they will be imprisoned if they try to chase them away again. The household's livestock started dying due to lack of pasture. The household head was feeling ill because of the dispute. He had high blood pressure and was sick at the time of our survey. They have used this winter camp for 20 years.
Builan	Other land tenure dispute	MHH	No	The household's winter camp was taken by another family that registered the land to itself during cadaster mapping. The household head had used that land since he was a child living with his parents.
Builan	Grazing land	MHH	Yes	Tuvshruulekh soum's farmers grow rapeseed on Tsenkher soum's land. This affects 30 ha of the household's summer camp grazing land. After the harvest the soum land officer came and showed the farmers where their border should be, but the household was not satisfied with this resolution.
Orkhon	Grazing land	MHH	No	A herder with 1,1000 livestock migrated from Bayan-Ovoo soum in Bayankhongor aimag and took their grazing land. The household head told the governors about this but they have not helped. The migrants now live on their grazing land.
Orkhon	Grazing land	MHH	Yes	A herder from another bagh came to the household's grazing land and their livestock ate all the pasture of the household's spring camp. They resolved by discussing but they are still not happy.
Orkhon	Minerals	MHH	Yes	There has been a dispute over the leftover soil from the big mines between soum citizens and mining workers, over who gets to extract the remaining gold.
Orkhon	Grazing land	MHH	Yes	This household moved to Tsenkher bagh's grazing area with their livestock. Tsenkher bagh herders chased them away.
Tamir	Grazing land	MHH	Yes	8-9 households from another bagh moved near them with more livestock. There is no regulation to stop this. They resolved by discussing with the incomers but are unsatisfied.
Tsetserleg	Grazing land	MHH	Yes	This household moved in the summer from their spring camp, but another household chased them away so they had to move again. They discussed the issue with the other household to resolve it, but are not satisfied with the lack of government regulation.
Tsetserleg	Grazing land	FHH	Yes	Other households moved onto their son's winter and spring grazing land and their livestock ate his pasture. They discussed with the other household but are not satisfied.
Disputes recorded in the baseline survey in the additionally sampled vulnerable households				
Orkhon	Grazing land	FHH	Yes	The household paid MNT 100,000 (USD 41) for cadastral mapping of their winter and spring camps but the soum land officer has not given them a possession certificate as the area was already given for a mining licence to another company. They tried to discuss but are not happy that nothing changed.
Tamir	Land ownership	FHH	No	The household had put in a land ownership application but had not yet got a certificate.

Source: WOLTS Mongolia baseline survey, 2018.

During our participatory fieldwork phase, it appeared that there were generally few disputes over grazing land among local herders, with conflicts over migration between people from different bags usually able to be resolved through informal negotiation at the local level. Instead, bigger pastureland disputes were mainly associated with herders from neighbouring soums coming into Tsenkher and allowing their livestock to eat up the local pasture. This phenomenon was mainly attributed to both increasing livestock numbers and the (negative) effects of mining on the pastureland in other soums. In addition, land disputes sometimes arose when outsiders on otor migration from further afield moved into Tsenkher soum.

“The pasture in my winter camp is very important to me. Some big herd families go there and I ask them to leave. I shout at them, then they leave!” (BI 14, elderly unmarried woman)

“Bayankhongor and Uvurkhangai households moved to Orkhon bagh...In recent years, a border dispute is occurring between Builan bagh and Tuvshruulekh soum...One household of Bulgan soum, with 300 horses, came to Orkhon for the winter. We complain about these things to the bagh governors.” (FGD 3, male and female heads of vulnerable households)

“Other soum herders come and eat winter and spring camps’ pasture. We are herders ourselves, so we simply meet them and negotiate and explain our situation. Mostly, it is OK, but we inform the bagh governor in some cases.” (BI 7, married herder couple).

“It is hard for us because we only have a small area and so many people are coming on otor. Disputes are usually just resolved between ourselves, we have to negotiate with them when they should move out.” (FGD 7, married male herders)

“Even within the same bagh, people sometimes have disputes, but mainly it is with outsiders who come on otor. I have complained about this to the bagh governor but nothing has happened. Last spring, we could not go to our spring camp because someone else was there, so in the end I just went there to chase the outsiders away. But now a guy from Builan is staying in our spring camp and I am not sure how to chase him away. Now [because he is elderly] I don’t move much between my different camps, that is a problem [as the camp stays empty so others can move in].” (BI 13, elderly married herder couple, husband speaking)

We also detected that better-off households who had obtained their documentation through the soum’s winter and spring camps cadaster mapping process, discussed above, had started to use those documents to secure their rights to exclusive use of the pastureland within a 500 m radius of their camps, as permitted by Mongolian law. However, it is only this land immediately around the camps that is protected by possession rights certification, and not the grazing areas beyond, which local herder households may still consider that they have customary rights to take precedence over. Many of the disputes we encountered during our research were thus due to this disjuncture between the (lack of) formal status of local herders’ pastureland use rights and their own understandings of what their (socially legitimate) rights were, according to customary practices.

“Last year most of the households in this area paid MNT 100,000 (USD 41) for their winter and spring camps and got documents for them. We could not get one because we have no money. So now some households are not allowing us to move near their winter and spring camps. I asked the bagh governor about it and found out that it is only for camps and not for pasture. So they should not kick us out from their grazing land, according to the law.” (BI 20, young married man)

“Herders from neighbouring soums move to our area for otor...sometimes with 1,000 to 2,000 livestock...This year we had herders from Ugiinuur, Erdenebulgan and Khotont soums. They usually move off after the spring. We tried to move them away from our grazing land but could not. We have no rights to kick them out because, according to the Constitution, every Mongolian citizen can move wherever he or she wants...The bagh governor has no legal authority to make them go away.” (FGD 14, widowed, divorced and separated women and men)

One further type of dispute of growing concern that we came across during our participatory fieldwork phase was that of livestock theft, which many people complained had increased in recent

years. The fact that most rural households lived in very remote areas and also lived far from each other, in relatively small khot ail, made tracking or catching livestock thieves very difficult.

“There is a lot of livestock theft going on these days because of all the cell phones and cars. Somebody can check if I am drunk and then call his friend to come and take my livestock. That’s why I have two guns ready [he shows them to us], so if thieves come at night I will shoot, just to scare them, not to injure them! A sheep worth MNT 150,000 (USD 62) was stolen from me just 20 days ago.” (BI 8, married male crop farmer)

“There are lots of livestock thieves around. Every year, every household will lose about five animals. Maybe we need chips to track our animals. We don’t know where the thieves come from, but there must be a connection between insiders and outsiders. So far none of them has been caught.” (FGD 5, men and women herders with customary land rights)

Table 16 below sets out our baseline survey data on respondents’ perceptions about local natural resource disputes in Tsenkher. The data suggest that disputes with outsiders in general were not considered to be a major issue by local people. On the other hand, while land disputes appeared not to have been too serious in Tsenkher soum in the more distant past, several participants in our FGDs and BIs expressed their general concern that disputes over pastureland, of the types described above, as well as over haymaking areas, discussed further below, seemed to have increased in recent years. It appeared that in most cases local people solved these issues by themselves, through face-to-face discussion to reach mutual understanding. However, some people also reported instances of physical fights and abuse. In more serious cases, people tried to get the support of bagh governors to solve their disputes, but as most participants in our research shared, there was no clear legal mechanism for resolving pastureland disputes. This echoed the findings from our baseline survey on people’s confidence in the local justice system, where, as Table 16 also shows, approximately half of all male and female respondents agreed that it was not easy to get a just resolution to land and natural resources disputes.

Table 16. Perceptions about local natural resource disputes by gender of respondent, Tsenkher

	True (as percentage of respondents by gender)		False (as percentage of respondents by gender)		Don’t know (as percentage of respondents by gender)	
	F	M	F	M	F	M
In your community disputes between miners and community members are not a problem.	14%	28%	41%	44%	46%	28%
In your community disputes between investors and community members are not a problem.	17%	45%	23%	20%	59%	35%
In your community disputes between crop farmers and herders are not a problem.	27%	45%	9%	9%	64%	46%
In your community it is not easy to get a just resolution to your land and natural resource disputes.	46%	52%	16%	19%	38%	29%

Source: WOLTS Mongolia baseline survey, 2018. Table includes additional vulnerable households, as well as those randomly sampled. N = 81 for female respondents. N = 89 for male respondents.

Pastureland management

Given the economic and cultural importance of pastoral herding to the livelihoods of people in Tsenkher, the soum’s pastureland is its most important natural resource. As already noted above, 52% (71) of all randomly sampled households in our baseline survey gave herding as their top source of cash income in the 12 months before the survey was carried out. Reflecting a clear gender difference, however, 59% (74) of all male-headed households reported herding as their top source of cash income in the previous 12 months, compared to only 27% (12) of all female-headed households. At the same time, fully 96% (78) of all female respondents and 98% (87) of all male respondents agreed with the statement that: “The majority of people in this community depend on

herding livestock for their survival”, as Table 17 shows. The loss of pastureland was therefore a major worry, with 70% (57) of all female respondents and 72% (64) of all male respondents agreeing with the statement that: “In your community there are issues around access to grazing lands”.

Table 17. Perceptions about pastoralism by gender of respondent, Tsenkher

	True (as percentage of respondents by gender)		False (as percentage of respondents by gender)		Don't know (as percentage of respondents by gender)	
	M	F	M	F	M	F
The majority of people in this community depend on herding livestock for their survival.	96%	98%	1%	0%	2%	2%
In your community there are issues around access to grazing lands.	70%	72%	19%	26%	11%	2%
In your community there are issues around access to forest resources	58%	62%	28%	38%	14%	0%
In your community there are issues around access to water sources.	67%	56%	28%	43%	5%	1%

Source: WOLTS Mongolia baseline survey, 2018. Table includes additional vulnerable households, as well as those randomly sampled. N = 81 for female respondents. N = 89 for male respondents.

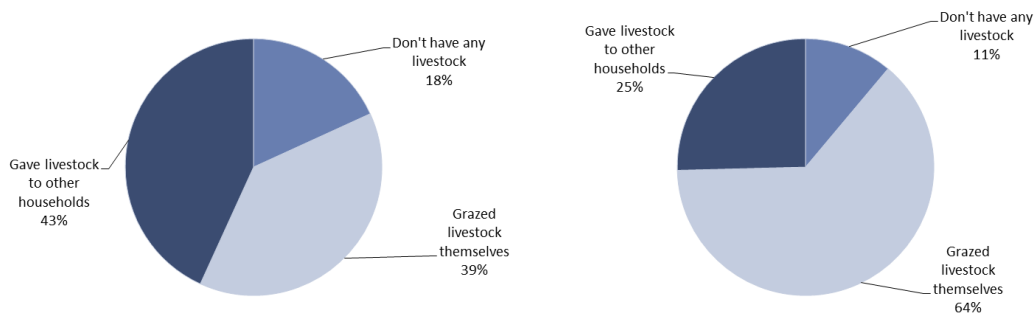
During our participatory fieldwork phase, local herders shared that they had not worried about pastureland issues even five years ago, but that now with increasing herd sizes and mining activities in the soum, it seemed that the soum's pastureland was becoming threatened and in need of greater formal regulation.

“Pasture is open access. Even though I came from the soum centre, I just found a place where there was nobody. But last year it was very difficult because many people came on otor migration. We tried to chase them, but it would be nice to have a law to regulate the use of winter and spring camps, otherwise we will not be happy. The total number of livestock is increasing and we can have a lot of fights over pasture, so any crime can happen.” (BI 13, elderly married herder couple, husband speaking)

“In the old days, one would never settle next to someone else's winter or spring camp, but that is not the case any more. 1,000+ livestock herders are destroying the pasture. We need a livestock tax, maybe households with more than 100 livestock should pay a tax.” (FGD 9, elderly female household heads)

According to the older participants in our FGDs and BIs, the soum's pastureland has also been specifically coming under strain from reduced rainfall and the late arrival of spring. Elderly local people told us that water levels in all the local rivers and creeks have been dropping year by year and this has been affecting traditional grazing patterns: the number of herder households moving nearer to rivers and other water sources has increased, creating severe pastureland degradation from overgrazing around these areas. In 2018, when most of our fieldwork in Tsenkher took place, people were happier that there was enough rainfall to temporarily ease these recent pressures, but it remains to be seen how issues around water pan out in the longer term, particularly in the context of broader trends around climate change.

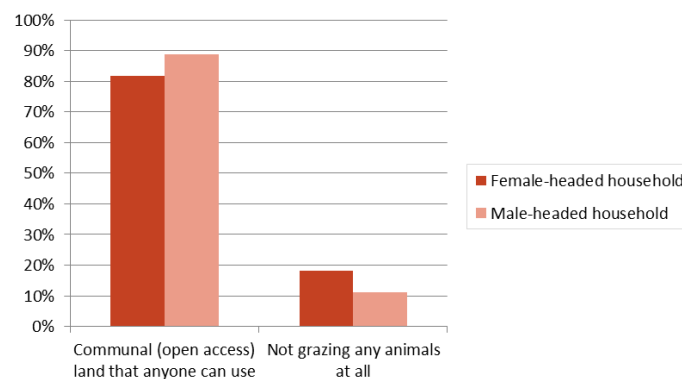
As discussed earlier, divisions of labour within herding take place within a complex set of reciprocal economic arrangements and social relations, and many people rely on paid or unpaid assistant herders and/or members of their extended families to help with taking care of their livestock, with vulnerable households and female-headed households in particular more reliant on this kind of support from others in order to manage as herders. Our baseline survey data confirm the gender dimension of this. As Figure 17 below shows, 43% (19) of all female-headed households reported for their main mode of grazing that they gave livestock to other households, compared to only 25% (32) of all male-headed households.

Figure 17. Grazing patterns in female- (left) and male-headed (right) households, Tsenkher

Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

As we have already described above, both female-headed households and households with elderly household heads of both sexes tend to give their livestock to other households to look after, especially during the winter. It seemed that elderly widows were particularly reluctant to keep a lot of animals, and instead asked their relatives and especially their grown-up married children to take care of their livestock. This enabled them to then spend more time in the soum centre near medical services, while at the same time some of them looked after their school-age grandchildren. This kind of reciprocal family-based arrangement seemed to positively support vulnerable households in Tsenkher soum, especially elderly and widowed households, to keep their independence and retain their cash (and non-cash) incomes from herding.

As indicated above, access to pastureland in Tsenkher was predominantly open access. Eighty-eight per cent (120) of all randomly sampled households in our baseline survey reported their primary means of access to grazing land as being communal (open access) land that anyone could use, as Figure 18 shows. Just 12% (17) of all randomly sampled households reported that they were not grazing (and did not have) any animals at all. As Figure 17 and Figure 18 both show, 18% (8) of all female-headed households in our baseline survey were not grazing any animals at all, compared to just 11% (14) of all male-headed households.

Figure 18. Main means of access to grazing land by all surveyed households, Tsenkher

Source: WOLTS Mongolia baseline survey, 2018. Chart includes additional vulnerable households, as well as those randomly sampled. N = 44 for female-headed households. N = 126 for male-headed households.

Haymaking areas

We observed during our research in Tsenkher that those herders who lived lower down the valleys needed hay for their animals in winter, while those living higher up in the mountains tended to be more likely instead to take their animals on otor migration in the mountains and upper valleys. It seemed to be common among the local herders that needed hay for them to have their own haymaking areas under customary rights. According to participants in our FGDs and BIs, if a household found a suitable area for haymaking that did not belong to – i.e. was not already being

regularly used by – another household, then the first household could begin to prepare hay from that same area every year in the autumn, as part of their annual winter preparations. In this way, customary rights had come to be created over haymaking areas in the soum over time.

However, we also learned that problems have started to arise in the soum’s haymaking areas more recently as households with larger herds have sought to access larger haymaking areas by gradually grabbing the areas of households with fewer livestock. Again, this seemed to be mainly a result of the five-fold increase in the total number of livestock in the soum over the past 30 years, noted above, and related pastureland degradation. Local herders and soum government officials alike told us that there was no government coordination of haymaking areas and they were left to be managed according to customary practice. However, concerns were expressed that conflicts over haymaking areas had the potential to cause serious problems in the longer term, including increasing the gap between wealthy and poorer local herders, if no formal demarcation and regulation took place.

“We don’t need to get a government permission for haymaking. We just go somewhere close to our spring camp to make it. There are many disputes and a lot of quarrelling over haymaking areas. Sometimes outsiders come in the night to make hay. This is difficult to resolve, because it is like theft.” (BI 13, elderly married herder couple).

“It is hard to get haymaking areas lately, due to pasture degradation and increasing numbers of livestock in this area. But we have a customary area where we prepare our hay. My parents-in-law used to have that area, so it is ours now, since they are in the soum centre.” (BI 20, young married man)

“At haymaking time, outsiders come and make hay and then leave. There is no government coordination of haymaking areas in the soum. We just have customary rights. Local people know whose haymaking area is where, and they never go there.” (FGD 14, widowed, divorced and separated women and men)

Seasonal movement and otor migration

Seasonal movement and otor migration are further key elements of pastureland management. Participants in our FGDs and BIs revealed that during the socialist period herders in Tsenkher soum seldom went on otor migration because local pastureland was in better condition then. Moreover, under socialism, as indicated above, pastureland management was led by the negdel and local herders were provided with transport between their camps as seasonal movement was collectively organised by the state. Participants reported that the frequency of seasonal movement was the same then as now, with most local herders moving between different camps at least three or four times each year, but the distance between their different camps each season was generally much further than it is now. Comparing the information shared with us by herders from different baghs, it seemed that, for at the least the last 10 years, the farthest seasonal movement was about 100 km, and most often this was between the winter and spring camps, while the shortest distance moved was only 5-10 km, between spring and summer camps. Those herders from the more mountainous parts of the soum who went for otor migration could even move six times per year, and travel greater distances.

Seasonal movement, including otor, is one of the main difficulties faced by female-headed herder households. It is especially hard for them if they do not have any male family members, because often, as explained above, it is only men who go on temporary otor migration in the winter, leaving the rest of their household behind at the main residence or winter camp. Female-headed households therefore tend in general to follow their relatives in households that are male-headed or that have more male family members who can help them manage all their seasonal moves.

Most often it is yaks that herders take for otor migration. During our FGDs and BIs, participants shared that otor was taking place more often nowadays due to the increasing pressures on the local

pastureland, whereas 15 or 20 years ago they would only go for otor in harsh winters and bad vegetation years, where there had been less rainfall during the previous summer.

“Twenty years ago we did not go often for otor because at that time we did not experience pastureland degradation. Now we have to go for otor because of mining, increasing herd sizes and movement of livestock from other areas into our area...We do not prepare hay. We do not need it. We have enough vegetation during winter in our pasture. But we do otor movement, and sometimes we do it two to three times a year, between November and March the following year. We do it together with neighbouring households [in the khot ail]. Most of the time men just do otor, because our wives have to stay here with the children. We have two gers. One is big and the other one is small for otor. We go for otor [to the same place each year that is] around 35 km away from home.” (FGD 13, men herders with customary land rights)

“We move 15-20 km for otor. We move with the stronger livestock and leave the weakest ones behind at home to feed. Some people move with cars, some just ride their yaks. Ten years ago we did not go for otor so often, just the last five years.” (FGD 14, widowed, divorced and separated women and men).

As discussed above, herders from the neighbouring aimags and soums coming to Tsenkher on otor migration is a cause of land disputes in the soum. However, as also noted above, this was not considered by participants in our FGDs and BIs to be a big issue yet, only one that might get more serious in future if more outsiders kept coming. At the time of our research, there was no particular coordination or regulation of otor movement or areas by the local government. However, soum government officials informed us in August 2018 that pastureland management might be strengthened in future with support from SDC’s Green Gold project. We subsequently learned from the project’s director that Green Gold had already finished its baseline work in Tsenkher and, by October 2018, was getting ready to start activities such as the formation of local Pasture User Groups (PUGs) and the provision of support to developing pasture management plans, in close collaboration with local herders and government officials. We were also informed by an expert from the Khangain Nuruu National Park administration that Orkhon was included in German Technical Cooperation’s (GIZ’s) Sustainable Pasture Management project, due to start at the end of 2018, with one of its main activities being to develop pastureland management plans with local herders.

Difficulties faced by female-headed herder households

Many of the specific difficulties faced by female-headed herder households in Tsenkher soum have been identified throughout this report. The traditional pastoral way of life is much harder for them, especially if they do not have any grown-up sons and lack physical strength, as they have to ask other people for help with everyday activities, such as preparing firewood and slaughtering animals, which local norms dictate are usually done by men, as well as with seasonal movement and otor migration. However female-headed households who live in more settled areas like the soum centre, without livestock, also have difficulties. We found that it can be a big challenge for them to obtain their own khashaa, because there is a high chance it will be taken back by the soum government if they are not able to put up a fence around it within two years. We encountered a few men in our participatory fieldwork phase who were keen to report their efforts to support vulnerable women herders. However, this contrasts with the majority of evidence from most female household heads we spoke with, who shared that they often felt socially isolated and unsupported and did not often go to bagh or soum meetings, that the younger among them faced sexual harassment in the countryside, and that they all struggled to balance the demands of pastoral herding with the legal requirements for their children to attend school in the soum centre from the age of six. At the same time, it was also clear throughout all our fieldwork in Tsenkher that the many unmarried and widowed male herders should be included as being among the most vulnerable people in the soum.

“It is easy for women to get land, but hard to build a fence. It is very expensive and it needs manpower to build it.” (BI 2, female casual saw mill labourer)

“It is actually not so hard for a woman to be a herder. If there is a widow, we include her in our discussions about pasture management. We are all human. We do not discriminate against women in this soum.” (BI 7, married herder couple, husband speaking)

“I think in our area we do not have any gender issues. We even give special care to those who have no husband or sons.” (BI 16, young married man)

“We do not say a lot in bagh meetings. We do not know what to say.” (FGD 14, widowed, divorced and separated women and men)

Conclusions

In contrast to some other parts of Mongolia that had undergone dramatic social and economic changes over the past quarter century since the collapse of socialism and the democratic transition, it appeared in some ways that little had changed for people in Tsenkher soum. The pastoral herding lifestyle had continued among younger generations, rooted in customary land rights and pasture management based on the khot ail that were enmeshed in longstanding gendered norms and reciprocal economic arrangements and social relations. At the same time, herding traditions appeared to be gradually changing among younger herders, for example, as they preferred to use motorbikes for travelling and were chided by their elders for not training their horses. Moreover, although it seemed that both pasture condition and the broader environment had degraded around the mining area in Orkhon, in other baghs there were fewer issues of pastureland degradation, and only in periods of lower summer rainfall, perhaps due to climate change.

In the soum centre, Tamir, households have been able to access land under ownership rights, while the soum government has begun a process of possession rights certification for winter and spring camps in the five rural baghs. Compared to the situation in other soums of Mongolia (Daley et al 2018), land disputes did not seem to be as serious at the time of our research; mostly they were linked to the disjuncture between formal and customary rights, and the bigger disputes resulted from herders of neighbouring soums coming into Tsenkher for winter grazing. Some conflicts were also evident between local herders over haymaking areas, but for the most part disputes were managed informally by local people. On the other hand, it seemed clearly recognised by participants in our FGDs and BIs that pastureland disputes could become more serious in future if environmental degradation continued, livestock numbers kept increasing, and if a range of official regulations and coordination mechanisms were not set up. Livestock theft was also becoming more common, and seemed to be a big issue for many local people.

The soum’s rich natural resources were also being directly threatened by mining activities and the burgeoning but water-polluting tourism industry around the soum’s various spas and hot springs. The main mining area, in the Deed Nuur in Orkhon bagh, appeared to be very chaotic, with officially licensed small-scale companies working directly alongside ninja miners. The mining camps were disorganised and unmanaged, and it was difficult to distinguish between official mining camps and those of (illegal) ninjas, (formal) nukhurluls and the nukhurluls’ registered local NGO. Although the mining companies claimed to undertake environmental rehabilitation, we only observed one company, BMNS, whose area looked managed and included visibly rehabilitated land.

The most dramatic effects of mining have been on Tsenkher’s water and pastureland resources. People in Orkhon are no longer able to use river water for drinking, and instead mainly use well water provided by the mining companies, but the upstream pollution affects people throughout the soum who have previously relied on the main Tsenkher river as well. When mining first started in the Deed Nuur, local herders with the largest herds moved down from the mountains to the upper valleys in search of good pasture, while households with fewer livestock stayed at or near the mining site to engage in mining alongside their herding activities, to supplement their livelihoods. When mining took off from the late 1990s, the local herders were not well informed about it and just

moved away as they were told, without any compensation, but even by the time of our research, many people, even from nearby valleys, still seemed to lack information about, or even awareness of or any interest in, the mining activities taking place in the Deed Nuur. On the other hand, local people in Orkhon clearly did also benefit from mining as most of them worked either as ninjas or in a more formal way through nukhurluls, and some of the better-off people in Orkhon had been able to sublet mining land and contract with registered drilling companies to operate on a slightly bigger scale; some local herders were also profiting by selling meat and dairy products to the mining companies.

Gradually, and partly due to mining, there have been other signs of social and economic change. Alcoholism is a very big issue for the entire soum, increasing every year, and most particularly in the Deed Nuur. Related car and motorbike accidents have become common and have been linked to the growth in the numbers of households headed by widows and widowers. At the same time, participants in our FGDs and BIs reported that local people's characters had become more aggressive as they moved away from traditional reciprocal social and economic relations and a pastoral lifestyle based on strong community ties within the khot ail. These changes appeared to be linked to domestic and gender-based violence, which though not directly discussed much, was nonetheless present in the soum.

A further major social issue in Tsenkher, particularly for younger herder families, was a result of the Mongolian government policy of schooling now starting at the age of six. This has forced many young married women to live in the soum centre with their children for eight to nine months each year, while their husbands remain in the countryside herding. This puts immense strain on families from being separated for most of the year, and its short-, medium- and longer-term effects remain to be seen. Not least for the growing generation at school in the soum centre: they are growing up isolated from their origins, as some elderly herders pointed out. A second major social issue in Tsenkher soum has resulted from young male herders with no secondary school education being unable to find wives, since so many young women seemed to go to Ulaanbaatar to study and not return. While the young men who stayed in the soum were able to provide support to their ageing parents – which was a particular help to the female-headed households that were managing to keep herding in a way we did not find elsewhere in Mongolia (Daley et al 2018) – they were also in some ways among the vulnerable members of the community. The longer-term effects of these kinds of social change are all very hard to foresee, especially when put together with all the social and environmental pressures resulting from the continuing development of mining and tourism, which may become even more pronounced in the future.

Annex. Fieldwork Methodology and Sources

Baseline Methodology

The objectives, survey instrument and administration process for the WOLTS baseline survey were as described in Annex 2 of *Gender, Land and Mining in Mongolia* (Daley et al. 2018). The sampling strategy was updated to include specific targeting, additional to the random sample, of vulnerable single adult male-headed households as well as female-headed households. The data entry process was modified to incorporate the use of Kobo Toolbox before analysis with Microsoft Excel.

170 questionnaires were carried out in Tsenkher soum, for which 137 households (or 81% of the total sample) were generated completely by the random list method and 33 households (or 19% of the total sample) were specifically added to boost representation of vulnerable households including female-headed households and single adult male-headed households.

Sampling details

The breakdown of sampling numbers is given in the table below:

Bagh / Soum	Total number of households (as at 25 Feb 2018)	Total number of households surveyed	Randomly sampled households	Additional female-headed households	Additional single adult male-headed households
Tsenkher	209	22 (11% rounded up)	18 (82% of bagh sample)	3 (14% of bagh sample)	1 (5% of bagh sample)
Altan-Ovoo	306	30 (10% rounded down)	24 (80% of bagh sample)	4 (13% of bagh sample)	2 (7% of bagh sample)
Orkhon	293	30 (10% rounded up)	24 (80% of bagh sample)	5 (17% of bagh sample)	1 (3% of bagh sample)
Tamir	289	29 (10% rounded up)	23 (79% of bagh sample)	5 (17% of bagh sample)	1 (3% of bagh sample)
Builan	258	26 (10% rounded up)	21 (81% of bagh sample)	4 (15% of bagh sample)	1 (4% of bagh sample)
Tsetserleg	325	33 (10% rounded up)	27 (82% of bagh sample)	3 (9% of bagh sample)	3 (9% of bagh sample)
Total	1680	170 (10.1% of total)	137 (81% of soum sample)	24 (14% of soum sample)	9 (5% of soum sample)

Respondent details

The breakdown of respondents by gender is given in the table below:

Respondent sex	Respondent relationship to household head	Random sample	Additional female-headed households	Additional male-headed households	Grand Total
Female	Household head	20	21		41
	Spouse	34			34
	Son/daughter	1	1		2
	Son/daughter in law	1			1
	Brother/sister		1	1	2
	Mother/father			1	1
	Total	56	23	2	81
Male	Household head	78		7	85
	Spouse	1			1
	Son/daughter	1			1
	Niece/nephew		1		1
	Brother	1			1
	Total	81	1	7	89
Grand Total		137	24	9	170

Participatory Fieldwork Methodology

The objectives, methods, tools, exercises and process for the WOLTS participatory fieldwork were as described in Annex 3 of *Gender, Land and Mining in Mongolia* (Daley et al. 2018). Here we list only the details of FGD participants and BI interviewees in Tsenkher soum.

Focus group discussions (FGDs)

A total of 103 people participated in 12 FGDs with specifically targeted groups as follows:

Code	Type of participants	Bagh
FGD1	Local leaders, including soum officials and bagh governors	All
FGD2	Female household heads of all ages who do not engage in herding at all	Tamir, Altan-Ovoo, Orkhon
FGD3	Male and female heads of vulnerable households containing at least two orphans, disabled, widowed, separated or divorced members	All except Tsenkher
FGD5	Men and women herders with customary rights to khashaas, housing plots and winter camps	Tsenkher
FGD6	Women who are informally / customarily married (living with a partner)	Builan
FGD7	Married male herders of all ages who were born in the soum	Altan-Ovoo
FGD9	Elderly female household heads with mixed livelihoods and no sons or male relatives to help look after their livestock	Tamir, Altan-Ovoo
FGD10	Vulnerable single men with mixed livelihoods, including those with children and those who are not yet married or have no children	Tamir, Builan
FGD11	Men engaged in mining as ‘ninjas’, including married men and vulnerable single men	Orkhon
FGD12	Women engaged in mining, including widows and married women	Orkhon
FGD13	Herder men with customary rights to khashaas, housing plots and winter camps, of any age or marital status	Orkhon
FGD14	Widows, widowers and divorced or separated women and men with customary rights to khashaas, housing plots and winter camps	Tsetserleg

Biographic interviews (BIs)

Nineteen BIs were conducted with 21 specifically targeted individuals as follows:

Code	Type of interviewee	Bagh
BI1	Female household head with no cash income at all	Tamir
BI2	Female casual saw mill labourer	Tamir
BI3	Recently widowed woman living on Pension Allowance	Tsenkher
BI5	Undergraduate-educated male household head and father	Tamir
BI6	Divorced female household head who started postgraduate education but dropped out	Tamir
BI7	Married couple who both individually have formal documents for their land	Tsetserleg
BI8	Married male crop farmer, growing mainly vegetables for sale	Builan
BI10	Elderly widow who gets cash income from tourism	Altan-Ovoo
BI11	Elderly widow whose son was involved in a land dispute involving loss of winter camp	Builan
BI12	Married man with a saw mill who has herding assistants paid in kind	Tamir
BI13	Elderly married couple with two recent land disputes, including one relating to otor migration	Altan-Ovoo
BI14	Elderly unmarried woman with children who was herself orphaned when young	Orkhon
BI15	Elderly widower who lost livestock in a dzud and became a ‘ninja’ miner	Orkhon
BI16	Young married man and successful artisanal miner	Orkhon
BI17	Young married man and successful artisanal miner, with a well-educated wife	Orkhon
BI18	Young married man who works seasonally as a ‘ninja’ miner	Orkhon
BI19	Elderly and wealthy married male herder	Orkhon
BI20	Young married man who did not finish primary school, with a disabled child	Tsetserleg
BI21	Young married woman who did not finish primary school	Tsetserleg

Follow-Up Visit – Community Feedback Meetings (CFMs)

Five participatory CFMs were held to share and validate findings from the initial analysis of our data from both the baseline survey and the participatory research phase, with people from Builan, Tamir, Orkhon and Tsetserleg baghs, and jointly with people from Tsenkher and Altan-Ovoo baghs. A sixth feedback meeting was held with soum and bagh officials. A total of some 60 people took part in these follow-up meetings.

Key Stakeholder Interviews

Eight key stakeholders were interviewed during the course of our research as follows:

Date	Interviewees: Name, Position and Organisation
26 Oct 2017	Mr Erdenetsogt Jamiyan – Soum Citizen Khural Leader – Tsenkher soum
3 Aug 2018	Mr Dagvadorjin Boldbaatar – Expert – Khangain Nuruu National Park Administration – Arkhangai aimag
3 Aug 2018	Mr Ts. Mukhbaatar – Head of Environment, Infrastructure and Labour Safety Department – State-Specialised Inspection Agency – Arkhangai aimag
3 Aug 2018	Ms Ch. Oyunsaikhan – Mining Inspector – State-Specialised Inspection Agency – Arkhangai aimag
6 Aug 2018	Mr Sukh-Ochir – Mining Safety Engineer – Altai Gold Ltd. – Orkhon bagh, Tsenkher soum
6 Aug 2018	Mr Zolbadrakh – Mining Safety Engineer – Ulziit Teel (BMNS) – Orkhon mining camp, Tsenkher soum
7 Aug 2018	Mr Dashtseren – Director – Duut Tourist Camp – Tsenkher soum
18 Sep 2018	Ms Ch. Oyunsaikhan – Mining Inspector – State-Specialised Inspection Agency – Arkhangai aimag – follow-up interview by telephone
3 Oct 2018	Ms Ts. Enkh-Amgalan – Project Manager – Green Gold / Animal Health Project, Swiss Agency for Development and Cooperation (SDC) Mongolia – Ulaanbaatar
2 Nov 2018	Mr Dagvadorjin Boldbaatar – Expert – Khangain Nuruu National Park Administration – follow-up interview in Ulaanbaatar

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