

WOLTS Project Tanzania

Mundarara Summary

August 2017

Daley, E., Lanz, K., Mhinda, A., Driscoll, Z., Ndakaru, J.,
Grabham, J. and Kereri, E.



This short Summary presents the main findings set out in full in the WOLTS Project Tanzania –
Mundarara Village Report, August 2017, available at www.mokoro.co.uk/wolts.
Text © WOLTS Team. All photo credits © WOLTS Team

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 together with 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 from internal threats within communities, as well as to support communities as a whole to withstand external threats to their land and natural resources (see our website: www.mokoro.co.uk/wolts).

This Summary shares our findings from our research in Mundarara village between September 2016 and February 2017, including initial field visits, a baseline survey and a participatory fieldwork phase. We are grateful for both the overall support of the Longido district government and the engagement and hospitality of the people of Mundarara throughout.

Our baseline survey was conducted in October 2016 with 10% of households across Mundarara. It included 71 households, of which 57 were randomly sampled and 14 were additional female-headed households. Thus 80% of the total survey sample was randomly sampled (including 50 male- and seven female-headed households) while 20% comprised deliberately targeted female-headed households (14 households). This was done to boost the total number of female-headed households surveyed so as to help uncover critical gender issues for vulnerable groups. Data from the 14 additional female-headed households have only been included in comparative analysis of male- and female-headed households, and not in all the general baseline analysis.

The participatory fieldwork phase took place in February 2017 and included 13 focus group discussions (FGDs) and 12 individual biographic interviews (BIs), involving over 92 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, monogamously/polygamously 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 ways both gender relations and access to different resources have changed since their childhoods. Our research also included interviews with different local government officials as well as with representatives of mining companies and organisations working in Mundarara.

Location and population

Mundarara village lies in Mundarara ward in Longido district, Arusha region, in northern Tanzania. The nearest small town is Longido, where the district headquarters are based, about 33 km east of Mundarara along a single-track dirt road and situated on the main tarmac road between the major town of Arusha (about 82 km further south) and the Namanga border crossing to Kenya (about 28 km north). No data were available on the total land area of Mundarara; however, the village's two main land uses are pastoralism and, to a much lesser extent, crop farming. There are wild animals visible throughout the village, part of which lies within a Wildlife Management Area (WMA); the district also includes the Lake Natron Game Controlled Area. According to the Arusha Zonal Mining Office as at 11 October 2016, eight mining licences had been granted in Mundarara, all for ruby gemstones, but only one was active during our fieldwork.

Mundarara is a fairly typical, sparsely populated Maasai village. People in different areas generally live together within traditional boma (large compounds containing multiple households and livestock grazing areas, all enclosed by a fence of thick and thorny bushes), which can often contain up to 20 or more households. The total population of the village as at 12 October 2016 was 4,857 people living in 701 households.

Twelve per cent of the randomly sampled households in our baseline survey were female-headed households. Extrapolating from this suggests that at least 84 households in Mundarara were female-headed at the time of our survey. Our survey data also suggest that at least 54% of the population were children (aged 18 or under), at least 4% were elderly (aged 65 or older), and just 37% were working age adults (aged 19 to 64). At least 74% of the members of our randomly sampled households were under the age of 35, a finding that is broadly in line with the national average. Mundarara is ethnically very homogeneous, with almost all inhabitants being Maasai. Christianity is the predominant religion, with a small minority following traditional beliefs.

Communication is poor all over Mundarara, although some parts of the village are served by a mobile phone mast. Because the village is so spread out, with few paths, tracks or roads in some areas, it can be difficult to travel within it – and made even more difficult in the rainy season by a river that becomes impassable and by the increased presence of wild animals.

Recent history of economic and population change

Mundarara village has expanded considerably in the last three to four decades from its origins as a very low-density pastoralist settlement with only a few boma dotted around the main ruby mining site in what is now the village centre. Before Villagisation in 1974 there were just a few scattered settlements in the area and the local Maasai people moved around frequently with their livestock. During Villagisation, village boundaries were clearly identified and permanent movement across them only became possible with the permission of village governments. As a result, many local households set up permanent boma in Mundarara and movement for grazing became more seasonal; whole families began to stop moving around together and instead men went off to graze livestock in the dry season while women and children stayed year-round in the village. This pattern was reinforced with the introduction of universal primary education (UPE), from 1977.

The reduced permanent movement of people and livestock combined with general population growth to lead to an expansion of settlements in the village from the late 1970s. As the Tanzanian economy began opening up more from the late 1980s, mining in the area developed further and some migrant labourers moved to Mundarara to work for the local mining company. Population growth and the growth of local mining and related activities have continued up to the present day.

Livelihoods and gender relations

Marriage and family situation

The vast majority of married couples in our baseline survey were in customary marriages, with a small majority of these marriages (54%) reported as being polygamous. In some cases female household heads were actually in polygamous marriages, but their husbands were recorded for census purposes as the head of another wife's household. We felt it was possible, however, that some of these female household heads were in practice separated from their husbands, and were thus vulnerable women, but would not record themselves as such due to the stigma around separation and divorce. Marriage practices have changed over time with increasing numbers of 'love marriages', where young men and women decide for themselves whom and when to marry. However, although 'love marriages' appeared more likely to take place in church and to remain monogamous, the traditional practice of paying bridewealth to the young woman's family remained.

Education

Education levels appeared to be very low, with a large minority of both men and women who had started but not completed primary school or who had had no education at all. The lower overall rate of primary school completion among women than men and the higher primary school drop-out rate among women was explained as a result of the lower value given to girls' education, which was also linked to girls often being married off very young, by their parents, around the age of 13 or 14, to avoid their enrolment or continuation in school. The low levels of education among both men and women also appeared to be due to many people not attending school (or dropping out) because they were moving around with livestock, both before and after Villagisation.

Relative wealth and poverty

The vast majority of dwellings were traditional mud houses with thatched roofs; only a few individuals had built more modern houses with bricks, mainly in the village centre, and metal and tile roofs were also rare. There were no major differences in housing quality between female- and male-headed households. Most households did not have mains electricity, and those that did were predominantly male-headed, though female-headed households were more likely than male-headed households to have solar power. Most households relied completely on battery-powered torches and/or kerosene lanterns for their lighting.

Throughout the year, the most common source of water was from open deep wells nearby, by means of communal or shared access or by payment. A few households obtained water either from shallow wells that they had to pay to use or from boreholes. Male-headed households more often obtained water from open deep wells through communal or shared access than female-headed households and there was a slightly higher proportion of female-headed households who obtained water from open deep wells by paying for it, pointing to possible difficulties in accessing water on the part of poorer female-headed households. Most households did not have a toilet, with male-headed households slightly more likely to have one.

Donkeys were the most common form of transport. The most common mechanised form of transport was a motorcycle. There were significant gender disparities in access to all modes of transport, with 20% of all male-headed households in our survey reported as having a motorcycle while only one female-headed household reported having any kind of mechanised vehicle (a motorcycle).

About two-thirds of randomly sampled households in our survey had mobile phones, 21% had radios and 7% had televisions. There appeared to be quite strong gender differences between the possessions of female- and male-headed households, with female-headed households much less likely to have any of these three possessions than male-headed households.

Overall, our baseline survey data on housing type and materials, access to electricity, water, sanitation and transportation, and ownership of certain possessions provided some indications of relatively higher poverty rates among female-headed households. This was supported by the findings from the participatory fieldwork, which revealed specific areas of difficulty for women.

Main livelihoods

Almost all households appeared to engage in traditional Maasai pastoralism as their main livelihood activity. More than half of those we surveyed had relied on only one source of cash income in the previous 12 months and all the others had relied on just two sources, with male-headed households more likely to have had two sources of cash income and female-headed households more likely to have had just one. Most households reported herding as their top source of cash income in the previous 12 months, followed a long way behind by some form of involvement in mining, including

mineral trading and rubble sorting, as well as mining itself. A great many households were visibly engaged in mining but it seemed to have been significantly under-reported initially.

Herding

Almost all households in our survey reported that they were using their livestock and other animals for their own subsistence, compared to just 40% who reported that they were selling live animals. Livestock keeping clearly had huge cultural significance, with livestock used as a traditional store of wealth and status and in traditional practices such as bridewealth payments. For many local people livestock would thus only be sold when needed in times of poverty, drought or hardship, rather than being kept mainly for the purpose of generating cash. Conversely, when cash income could be obtained from other sources, such as mining or crop farming, livestock would not need to be sold.

There was evidence of very clear and strong gender (and age-related) divisions of labour, with women mainly in charge of milking and looking after old and sick animals and men generally in charge of watering livestock, taking animals on migration, and livestock slaughtering and sales. All these divisions were similarly found among female-headed households; boys were largely responsible for herding large and small animals, and in the 12 additionally surveyed female-headed households where live animals were sold, half relied on boys within the household and the other half on male household members or other male relatives.

Traditionally women had been much less involved in herding than they were now, but had started to become more involved about 30 years ago, as boys were increasingly sent to school (making them unavailable for tending livestock during school term times). It appeared that local women became even more involved in herding from around the year 2000, because of a push for all children to attend school and a trend for men to take up alternative livelihoods. However, longstanding norms around different responsibilities for livestock, with men predominantly in charge, clearly remained.

Changing livelihoods

Although no surveyed household in Mundarara reported crop farming as their top source of cash income in the previous 12 months, we learned during our FGDs and BIs that crop farming had been taken up over the past 20 years in response to perceived pressures on grazing areas and the felt need to diversify livelihoods. It was now considered an important source of household food and a potential contributor to cash needs if produce could be sold, but it had also become very unreliable with the recent droughts; some participants said they had not used their farmland at all for the last six years and very few people had succeeded with growing crops in the three to five years before our fieldwork. Although no-one was currently farming, it seemed that there were also strong gender differences related to it, with men more involved in the hard physical tasks of ploughing, planting and weeding. Harvesting was reported to be done together, although with women doing the majority of the work, but most women said that after the harvest, all farm produce belonged to men, and women would only be given some maize to mill as food for the children.

We detected a general trend in pursuit of alternative livelihoods and away from traditional pastoralist lifestyles. Mining had brought new opportunities for both sexes and both women and men ran small businesses. At the same time, the extended drought of recent years had demonstrated the fragility of local livelihoods, with people becoming more dependent on earnings from mining-related activities while crop farming remained lapsed and while pastureland quality suffered from both the lack of rainfall and from human and livestock population pressures. This sets the context in which to understand the levels of violence and conflict over mining and pastureland in Mundarara and also for understanding the increased workloads that women now face, even as traditional gender divisions of labour may appear to be breaking down and becoming less rigid.

Gender relations

As indicated, there have been quite strict traditional norms around gender divisions of labour within Maasai households, with women considered as being in charge of all domestic activities both inside and outside the boma. Decision-making within the household, including about the day-to-day division of labour in herding and crop farming, was still largely the prerogative of men. However, changes have included more 'love marriages' (although still relatively few) and more monogamous marriages, partly as a result of preaching in the churches about women's rights. Women and men who were in monogamous marriages were more likely to mention that the wife was at least consulted in household decision-making.

The prospect of increased wealth in the form of more livestock seemed to be one reason for men to choose polygamous marriages, as having more wives provided a man with extra labour resources to build his herds and more possibility of sharing work. However, most women in polygamous marriages reported that the actual sharing of tasks between co-wives was often minimal and that most men had a favourite wife (usually the youngest) who would be spared the heaviest work; this was clearly a potential source of conflict between women.

Women's overall workloads have substantially increased with the trend towards livelihood diversification: as they have become more involved in herding, they still remain responsible for housework. While it seemed that whatever money was made by a woman could be kept by her, it also seemed that this was the case only when it was just a small amount, and that generally women were supposed to spend it on their families rather than on themselves, especially on their children, for whom women generally have to meet the cost of school fees and expenses. In many married households there were no women reported to have earned any cash incomes in the previous 12 months, making women in those households extremely dependent on their husbands to meet their day-to-day cash needs.

Lack of monetary resources seemed to be one of the main challenges in general for women. Although it appeared that women's male relatives, particularly their sons, did very often help and support them throughout their lives, women's lack of assets and independent tenure security, and their overall economic and financial dependence on men, would make it very difficult for them to leave their husbands and helped to explain the stigma around separation and divorce; it also helped to explain why separated and widowed women seemed to be among the most vulnerable members of society, especially if they were looking after children with very few resources and limited support.

While most women complained about their very heavy workloads, the everyday violence they faced and their lack of assets, voice and political participation, only a few men acknowledged these issues.

Mining in Mundarara

The presence of ruby mining in Mundarara has provided a key opportunity for local people trying to diversify their livelihoods, and it seemed that almost every household had some kind of involvement in it.

Mining companies

There are two mining companies that have been active in Mundarara in recent years. The *Mundarara Ruby Mining Company* (MRMC) has a long history. The current stakeholders in the company are the Tanzanian government, the owner of the MRMC licence area and the operator. It appeared that the operators change regularly; the current management team had been operating the Mundarara Ruby Mine for the previous five years. A second company, *Paradiso Minerals*, was set up by a former director of the current MRMC operators approximately four years before our fieldwork started. It had stopped operating because of conflicts with villagers and was in the process of building teachers' housing in order to build better relations with the community. A third mining

operation was that of the *Mundarara Village Ruby Mine*. This was established by the village government in 2009 and started operating in 2010 in collaboration with an Arab investor but stopped operating in 2015. It falls under STAMICO, which was formed by the national government to help small-scale miners. The village mining site was leased out to individual operators who had to share a percentage of their profits with the village government, and the current village office building and toilets were constructed with the proceeds from the mine. However, it had not operated in the two years before our fieldwork because of a lack of investors with sufficient capital.

Contributions of mining to local livelihoods

Jobs

Participants in our FGDs and BIs, who included among them several people involved directly in mining with MRMC, complained about low salaries and about delays with payment and difficult working conditions; they generally thought that working conditions needed to be improved and wished to be given more jobs, including employment in higher management positions. There were complaints that most employees were outsiders and that it was not easy to get a job with this mining company; that applicants had to either go through the village government to be recommended or try to get a job directly by bribing the company. However, while MRMC agreed that 50% of its workers were outsiders (with experience in mining), the company's operators claimed to have taken on 40 illiterate local people and trained them up, including 50% of the foremen. MRMC did not employ any women, partly because they were considered physically unable to do the work, and partly to prevent rape and violence against women who might otherwise have been given office or domestic jobs. Those workers who lived on the compound at the mine site were not allowed out and local women were not allowed in.

Rubble sorting and mineral trading

There were clear gender divisions of labour within ruby mining and its related activities; many local women and men engaged in rubble sorting, but only very few women were involved in mineral trading and broking. Many women and men went to the MRMC mining site daily to sort through the rubble left there by the company; they would take away all stones that appeared to have rubies in them and try to sell them to the predominantly male brokers in the village centre. Most of the people engaging in this practice were unaware of the value of rubies and were thus easily cheated, and women in particular were often given very small amounts of money for their rubies. In contrast, processing and trading of rubies appeared to be a lucrative business, enabling the mainly wealthy and well-connected men involved to increase their wealth. There had also been conflicts associated with the provision of fresh rubble, as many people competed over the limited resources, and women were particularly subject to violence and abuse. Some people also felt that MRMC was trying to trick them by bringing out left-over material with no minerals in it, but this was explained by the company's operators as a result of fluctuating production limiting the supply of fresh rubble.

Effects of mining

There seemed to be ambivalence among people in Mundarara about the effects of mining on themselves and their village. While some appreciated the financial benefits, others felt that mining-related conflicts, which had included some deaths and loss of land, outweighed the benefits. It was clear, however, that mining had contributed a lot to local livelihoods, for example during our fieldwork we witnessed many new buildings springing up. Most people also said that they would like to see more interactions between the mining companies and the villagers in the form of information meetings, better working conditions and concrete corporate social responsibility (CSR) projects.

It was difficult to assess whether mining development would be a threat to people's land in Mundarara in the future, given the small scale of mining there at the time of our fieldwork. There did

not appear to be many mining companies and/or new investors interested in coming to Mundarara to develop mining, and it seemed instead that Mundarara people wanted to get more benefits for themselves from the ruby mining that was already there, hence the setting up of the village mine. The encroachment on farmland and pasture by mining companies, and their perceived lack of CSR, as well as repeated conflicts and violence around mining, all posed continuing sources of worry for many local people. Yet the importance of ruby mining to most households' livelihoods was only increasing with the drought-related lack of farming and pressures on keeping livestock. Ensuring that mining made a positive contribution to local livelihoods was therefore a priority for many people.

Land allocation processes

Wildlife and the Village Land Use Plan

As noted above, Mundarara was part of a WMA, and at least one hunting company was operating in the area at the time of our fieldwork; attacks by wildlife on people were reportedly not uncommon. A Village Land Use Plan (VLUP) was established in Mundarara in 2012, in part intended to help support prevention of conflict between pastoralists and wildlife. Within the VLUP all village land had been allocated for different purposes, including crop farming, herding and settlements; it also governed the use of forests and mining sites marked on the plan, although resources such as firewood could still be collected by people for free from anywhere. Many people expressed their concern that little land had been left available for the future expansion of farming and settlements. Nevertheless it seemed clear that the VLUP was considered especially relevant to (and useful for) pastoralists for the governance of grazing areas, to help sustain them through sound land management.

Land governance and perceptions about the law

Before Villagisation, land in Mundarara had been abundant and was largely regulated through customary land tenure arrangements. However, statutory institutions had since gradually acquired more power. Farmland and land for settlements were now governed by statutory regulations and anyone wanting these types of land needed to apply to the village government. Pastureland was jointly governed by the village government and the Ilaigwanak, the traditional Maasai council, under customary regulation and practice within the designated grazing areas within the VLUP.

Community decision-making in general in Mundarara was very male-dominated with almost all statutory local leaders being men, and those women who were on the Village Council (as required by law) were generally not considered by other women to be either powerful or approachable.

Local knowledge about the relevant Tanzanian laws around land ownership and land governance was quite mixed, with awareness of the law generally very low and widespread misperceptions about women's rights to land ownership and about mineral rights.

Access to land for settlements and farms

Historically people just took and enclosed whatever land they wanted for settlements and farms. However, as the local population had grown, and as land had been seen to have increased in value, it had become much more difficult to get access to unoccupied areas and procedures had become more complex, with the need to go through statutory processes and institutions. Concerns were raised about the slowness of the land allocation process, the need for regular follow up, and the particular difficulties for poorer people to get land. There seemed to be a lack of clarity about the nature and amounts of the fees needed to be paid to support land applications, and there was a concern that access to land through statutory channels was more difficult for poorer people, including women who might become vulnerable to pressures to pay 'in kind'.

There was also lack of clarity about documents relating to land. There were no households in our baseline survey that reported having any documents for any of their land. However, it seemed that ownership was actually interpreted in different ways. While some people in our FGDs and BIs said they had a customary ownership receipt or certificate, others felt that they owned their land simply by occupying it and they neither had no formal documentation nor saw any need for it.

Various participants in our FGDs and BIs also reported having bought or rented land for crop farming. It appeared that some wealthier individuals rented out their farmland to others in exchange for looking after their livestock; however, none of those in our baseline survey who reported having non-residential land had acquired it through borrowing or renting.

Land disputes

The main types of land dispute seemed to be boundary disputes caused by people expanding their farmland into their neighbours' land and conflicts over livestock migration. Both women and men came to the statutory Village Land Tribunal to resolve their disputes; the women were mostly widows whose lands had been grabbed by other people. Disputes with mining companies were resolved by the village government in discussion with the mining companies, and did not fall within the remit of the Village Land Tribunal. Disputes about the use of pastureland and migration, which seemed to have become increasingly frequent in the years of recent drought, were also not resolved by the Village Land Tribunal but rather by the Ilaigwanak.

Women's access to land through statutory processes

The statutory system of land allocation and the emerging land market both grant women in Mundarara, as elsewhere in Tanzania, equal opportunities with men to access and own land. However, it appeared that many structural challenges persisted, including strong customary norms that prevented women from accessing land. It also appeared that many women were not aware of their rights and did not know the correct process to apply for land. Most did not feel that their interests were taken into account by the male-dominated governing institutions in the village, and some did not know whom to approach to get their rights protected; others were sceptical that the village government would help them, or thought they would not be taken seriously if they did not go with a male relative for support. Furthermore, most women, and particularly widows, were not able to cover the costs associated with applying for land, nor to buy or rent land in their own right.

The question arises of whether wealth and money are more important than gender in enabling access to land (and livestock) in Mundarara today. If so, or if things are moving that way, then supporting women's economic empowerment, for example through ensuring they are able to benefit to the maximum extent from local ruby mining, would be a means of supporting women to attain increased access to and security of tenure over land, and, in due course, increased influence within the local government on matters of land management.

Pastureland management

As a result of the gradually increasing formalisation of land tenure over the decades since Villagisation and of other changes such as human population growth and the introduction of UPE, the Maasai have become more sedentary and we were told that movement with livestock now only took place at specific times of year, with mainly men migrating, leaving women and children behind.

As noted above, pastureland management now took place with the help of the Mundarara VLUP, with related rules and regulations to support it, as a joint endeavour between the village government and the Ilaigwanak. Some participants in our FGDs and BIs said that, with the move away from customary tenure, traditional leaders were not as powerful as they had formerly been. However, while access to pasture and the organisation of migration did seem to have become more

regulated, the Ilaigwanak still provided the main forum in which to settle disputes over migration, as their jurisdiction cut across every village where traditional Maasai leadership was still respected.

The Ilaigwanak themselves were male-dominated, with only very few women being Legwanak; all decisions about migration and herding were still made by men, and women were often only informed at very short notice when men would leave with the livestock.

Access to grazing areas and changing movement patterns

Prior to Villagisation, pastureland was perceived to be both plentiful and of good quality. However, erratic rainfall, human population growth and the general increase in crop farming in the past 20 years (current drought years excepted) have led to many conflicts over pasture in and around Mundarara. The growth in the number of farms and settlements, as well as the presence of mining companies, has increased the distance people have to walk to reach grazing areas. All communal pastureland is shared with people from neighbouring villages, requiring collaboration between the different village governments and traditional councils.

While small livestock (goats and sheep) can make do with little pasture and dry shrubs, larger animals such as cattle depend on good pastureland for their survival. Most people were thus reliant on large areas of communal land for their livelihood. Only those with a small number of livestock sometimes grazed them on their farms or boma. It appeared that many people also paid others both to herd animals for them and to take them on seasonal migration for longer periods, often because the men who had traditionally herded livestock were now too busy with mining-related activities.

Most of Mundarara's pastureland was open to all during the rains but some parts were set aside for dry season grazing for weak and small animals, which could not migrate. The Ilaigwanak and the village government would inform people when the reserved areas would be opened for dry season grazing; that also opened the season for general migration with larger livestock. If the terms of use of reserved dry season grazing areas were violated by any individual, they would have to pay a fine.

The length of migration in terms of both the overall distance and the period away from home had increased in recent years because of the changes already mentioned, and those who migrated were sometimes forced to spend up to five months away from the village. Previously, while pastoralists had rarely migrated long distances, when they did so they would normally move with the whole family and set up a new boma. However, migration appeared to have become a regular annual seasonal event in the dry season, and it was most likely to be young men who were involved in it.

Conflicts over pasture had become more common both within the village and between neighbouring villages. The fact that pasture was shared with wild animals further exacerbated land pressures; for example, if mining sites blocked access to pasture, people might face risks in taking new routes with their livestock through areas full of wild animals. The most common way to resolve conflicts was through individual negotiations or village meetings. It appeared that people were now so concerned about needing to mitigate and reduce conflicts over pastureland that they were even taking matters into their own hands and making private grazing arrangements.

Conclusions

Climate change and human population growth have both contributed to making pastoralist livelihoods in Mundarara less predictable than they used to be. The uptake of farming activities (despite the drought of the last few years) has coincided with land tenure becoming more formalised and land management more regulated. The establishment of a Land Use Plan has demarcated the areas set aside for pasture and thereby reduced the availability of land for the expansion of settlements and farming. At the same time, many people have started trying to diversify their livelihoods, and mining has provided one avenue for diversification – even though expansion of mining sites has also contributed to pressures on overall land availability in the village.

While some jobs have been created, the main beneficiaries from mining appear to be the many male traders and brokers, some of whom have become relatively wealthy from selling rubies. Mining has also provided women (and especially widows) with some opportunities to generate a small cash income through the collection and sale of left-over rubble. However, the benefits to women have been minimised due to their lack of knowledge about the value of the minerals they are collecting, as well as the gender-specific discrimination they face in accessing the rubble, which ranged from verbal abuse to direct violence in the accounts we heard during our fieldwork.

Even though mining and related activities have clearly contributed to the local economy in Mundarara, some negative issues were also raised. We found that many local people were unhappy about the limited engagement of mining companies with Mundarara people, and that improvements were needed around consultation, compensation and the provision of more benefits to the community. These issues have contributed to resentment building up, and to violence and protests.

The increased involvement of local men in mining and the general trend towards livelihood diversification have led local women to take on more roles outside the household. While women were increasingly engaged in herding, and many also engaged in various cash income-earning activities, women still continued to be responsible for all domestic work and were often not allowed to keep any money they made themselves. We found that decision-making within the community remained largely male-dominated, despite the involvement of women in formal government institutions as required by law. However, changes seemed to be visible within at least some households. For example, although polygamy was still more common than monogamy, monogamous marriages appeared to be becoming more common and were characterised by more equity of household decision-making, for example about budgeting and expenditure. Even in polygamous households, it seemed that some women might have held more power than was openly acknowledged, and we were told that favoured wives were often more involved in decision-making and had more rights than other wives. We also felt that what people said they did and what they actually did were not always the same, and some men seemed open to changes that would support women's rights and benefit the whole household, while also respecting local culture and traditions.

The increasing formalisation of land tenure in theory has provided women in Mundarara with equal rights to access land and to have formal joint ownership of household land, thereby ensuring their tenure security. In practice, however, we were regularly told that men did not allow women to own any land and that the village government only granted land to widows with adult sons. Furthermore, most livestock belonged to men only. With these two important assets concentrated in men's hands, women had fewer opportunities to independently generate wealth or to contribute cash income to their household economy. Widows (and the very few separated women), especially those with children to look after, also often seemed to be left with few assets, limited access to resources and little male support. Although we encountered some very poor men, these women thus appeared to be among the most vulnerable people in Mundarara.

Climate change, drought and mining have also led to conflicts over increasingly scarce pasture and water resources. These external threats were thus changing pastoralist livelihoods and gender roles and divisions of labour in Mundarara, while the internal threats many women faced within the community seemed at the same time very difficult to overcome. Educating women and men about land rights, providing leadership training to women, and assisting with group formation to help women gain access to land and livestock came up during our fieldwork as possible solutions to these issues, although the enormous time burdens faced by most women remain a key obstacle to be overcome. Ensuring all people in the community have a forum where they can meet and discuss key land and natural resource issues in a participatory way would help to address the various issues that came up in our fieldwork around land, gender, mining and pastoralism and therefore support sustainable development in Mundarara – including men and women, young and old, rich and poor, and with specific support to vulnerable groups to ensure their concerns can be heard, acknowledged and addressed.

