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## **A Discourse on Emergence of New Conflicts and Their Impacts to Surrounding Communities after Livestock Keepers' Eviction from Mkomazi Game Reserve (MGR) in Tanzania**

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*Article history:* Received 20 March 2014, Received in revised form 5 May 2014, Accepted 18 May 2014, Published 4 June 2014.

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**Abstract:** The main purpose of this paper was to make a detailed study on new conflicts that have emerged after pastoralists evicted from the reserve had settled in new areas around the reserve. Data collection was carried out using participatory techniques in which new conflicts and assessment of resource conditions was also carried out. Formal questionnaires were also administered to 341 respondents. Open meetings and semi structure interviews were used to collect data from groups of farmers and livestock keepers. Results indicated that evicted pastoralists settlement outside the MGR gave rise to new conflicts with other communities. Conflicts were based on the use of natural resources such as land, water and grazing resources. Livestock diseases, inadequate grazing and water resources and unsuitable conditions for livestock keeping around the villages where they settled were blamed for livestock losses of 60-100%. Local communities frequently lost their valuable standing crops (maize and rice) to pastoralists' cattle especially during the dry seasons. It is recommended that (i) well designed land use plans to separate areas for grazing and watering resources should be in place (ii) pastoral communities should be encouraged to change their current lifestyles to avoid dependency solely on pastoralism.

**Key words:** eviction, conflicts, resource utilization, game, Mkomazi-Tanzania

## **1. Introduction**

The Mkomazi Game Reserve (MGR) was established by the colonial authority of Tanganyika in 1951, under Government Notice No. 265 275. It has an area approximate 3,276 square kilometers in the north- Eastern Tanzania. However, the reserve is only a very small part of protected areas in Tanzania. Game reserves and other protected areas in Tanzania cover over 20% of the country's vast area of 940,000 kilometre squares. In many areas around these protected enclaves, human communities live but are generally forbidden to utilize their flora and fauna resources and the Wildlife Division has the task of enforcing such restrictions on daily basis (Brockington, 1999). The major reasons given for the formation of the reserve was to enable the government then restructure wildlife sanctuaries so as to ease pressures of human population growth and migration on wildlife resources (Brockington, 2004). This was more so important in view of the fact that the same government had de-gazetted the then Ruvu Game Reserve close to the MGR a few years before to allow farmers to practice agriculture along the Ruvu basin. The new MGR was located in a small part of the Greater Tsavo ecosystem which covers over 40,000 square miles of wilderness area in Southern Kenya and Northern Tanzania.

The MGR (1997) reports that despite its gazettelement, some very few Maasai pastoral families still resided in the reserve and were allowed to exploit its pastures and other range resources. Nevertheless progressively, the sanctuary was invaded by other pastoralists not normally resident to it. By 1987, the number of pastoral families most of them of Maasai ethnicity had risen to 41 with a total of 392 individuals and with over 40,000 herds of cattle. The livestock growth alarmingly caused a lot of degradation. This forced the government of Tanzania in the late 1960s to evict all pastoralists to protect the game reserve from total degradation. Tenga (1998) argued that this influx to the MGR by the Maasai pastoralists was actually caused by the Government which, a few years after establishment of the MGR had introduced a controversial programme that reallocated dry season grazing land in the then Maasai District for farming. This reallocation resulted in the Maasai who were resident in the District to relocate and consequently some had to move to other areas of the country where fertile lands and pastures for grazing could be found Mkomazi was one such area.

In 1987–88 overgrazing and poaching in the reserve resulted into the government forcibly removing pastoralists the MGR. This eviction, culminated into a prolonged legal battle between pastoralists (mostly Maasai and Pare) and the Tanzanian Government until 1990's when the Government prevailed (Tenga, 1998). It is understood that the Government did allocate an alternative area in Handeni District (Tanga region) where the evicted pastoralists were advised to take their livestock. Very few went there and some went to settle along River Ruvu in Same District. The majority though settled in villages surrounding the game reserve and such settlement areas were within the MGR proximity.

This research reports the findings of a study carried out to assess what new conflicts emerged between the evicted pastoralists with other communities. Through this research new conflicts that came up and were common in those areas are unearthed and how they had affected such communities. This gap in knowledge has never been studied before. The potential of such knowledge for advocating change in the life styles and mode of production of the pastoral communities is immense. This was very important considering the fact that Tanzania has many protected areas with communities surrounding them. Therefore, lessons from this MGR case would be extended to other areas in the country or the region. Specifically, the study had the following objectives:

- i. Study new conflicts emanating from past evictions from the MGR
- ii. Assess impacts of the new conflicts to communities

## **2. Materials and Methods**

### *2.1. Description of the Study Area*

#### *2.1.1. Location, boundaries and size*

The MGR is situated between latitude 3° 47' to 4° 33' South and longitude 37° 45' to 38° 45' East (see Figure 1). It has a maximum width of 41 km and a maximum length of 130 km. The MGR has an area of 3,276 km<sup>2</sup> although some of the boundaries remain uncertain. It lies along the Kenya-Tanzania border in the north eastern part of Tanzania and within the districts of Same and Lushoto. The MGR forms a common border with the adjacent Tsavo National Park (21,000 km<sup>2</sup>) in Kenya and is part of the greater Tsavo ecosystem estimated to cover about 40,000 km<sup>2</sup>.

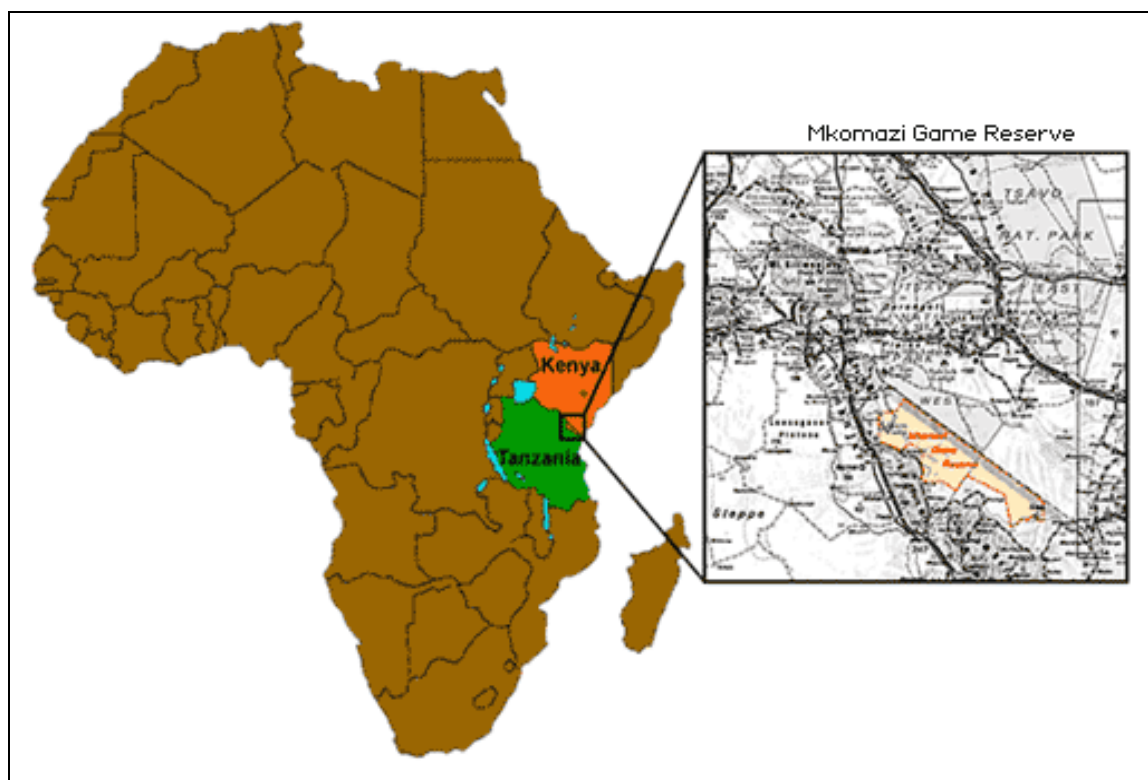
#### *2.1.2. Climate*

The climate of the MGR is characterised as semi-arid with evapo-transpiration rates being much higher than rainfall for most of the year. This has a severe effect on the water available to plants and animals alike. Rainfall therefore has a critical influence on the distribution of wildlife and vegetation communities alike. For example, plant productivity and hence animal biomass has been closely correlated to rainfall in semi-arid areas. Temperature on the other hand does not play such a significant role in Mkomazi. Rainfall has a bimodal distribution with the long rains occurring between February and May (with a peak in March) and the short rains from late September through December (with a peak in October). The mean annual rainfall for MGR is 500 mm. There is a rainfall gradient running west to east in the reserve with the western part receiving the highest amount of rain between 550-650 mm, the central part of the reserve 400-500 mm and the eastern part around 400-450 mm. This together with the generally shallower soils (and less water holding capacity), greater air movement and less cloud cover make the central and eastern part much more arid than the western

section. These ecological differences have a profound effect on animal and plant productivity, distribution and density patterns.

Some 48% of the rains fall in the long rains between March and May and 27% in the short rains between October and November. The remaining amount usually occurs between January and February. The rains falling in the long rainy season is less variable than the rains falling in the short rains. By July, the savannah grassland dries out quickly as the winds increase and the humidity drops. A period of intense desiccation follows throughout August and September when ambient temperature rises, daily sunshine hours are at their longest and the wind velocity reaches its maximum. This is the time when uncontrolled fires sweep through the reserve and many areas are completely burnt. By mid October, the Mkomazi Game Reserve experiences its first showers and thunderstorms and it is then that the soils are most susceptible to erosion because of the lack of vegetation cover.

The mean annual temperature is 23.1° C with a mean annual minimum of 17.5° C and maximum of 29.0° C. July and August are the coolest month and the hottest are December-through February each year. The mean monthly range of temperature is 17° C.



**Figure 1.** Location of Mkomazi Game Reserve

### 2.1.3. *Physiography, vegetation and soils*

The Mkomazi Game Reserve stretches in a north west to south east direction along the Kenya-Tanzania border. In the North West, the reserve rises up to a series of hills and ridges which at

Majikununua (1,620 m) and Kinondo (1,594 m) form the highest part of the reserve. These hills are an outlier of the North Pare Mountains. The area covered by these hills and ridges cover approximately 130 km<sup>2</sup> or about 4% of the reserve. From the North West the reserve slopes gently towards the south east and the Uмба plains at an altitude of 230 m. The centre of the reserve is broken up by a series of isolated hills and ridges between 800 and 1,356 m which in total cover approximately 200 km<sup>2</sup> or about 6% of the reserve. Various vegetation types predominate the MGR including Apodytes-Heywoodia Forests/Woodland in the highlands, Brachylaena-Spirostachys Forests/Woodland. This type of vegetation community has adapted to some extent to fires and it is quite different to the hill summit forests. Middle hill Slope woodlands cover the Upper hill slopes and the Lower hill slope forests and woodlands. It contains, however a quite distinct vegetation community of *Combretum spp* woodland as dominant. Lowland woodland and bush land occurring mainly below 850 m. and are the characteristic plant community for much of the MGR. It has been drastically influenced by fires. It has covered approximately 70% of the reserve with Acacia- *Commiphora spp* woodland/bush lands being very dominant.

## 2.2. Sampling and Sample Sizes

Table 1 indicates the number of households interviewed in each village. In each village respondents were divided into two groups of equal sizes. Pastoralists evicted from MGR but now resident on the fringes of the study villages and the local villagers. In order to select the study households within each group, a list of names of household heads were first assembled from the respective village governments' offices, then each written in foldable piece of paper, put in a bucket, stirred and picked up at random to avoid any bias. Additional provision was also made to sample households recommended by each community as potentially suitable for providing data and other information that could suit this project.

**Table 1:** Household interviewed across the six villages

<i>Village Name</i>	<i>District</i>	<i>Region</i>	<i>Pastoralists'</i> <i>households</i>	<i>Farmers'</i> <i>households</i>	<i>Total</i>
Kivingo	Lushoto	Tanga	30	30	60
Mnazi (Kwemkwazu)	Lushoto	Tanga	26	26	52
Mkundi	Lushoto	Tanga	31	30	61
Kisiwani	Same	Kilimanjaro	30	30	60
Ruvu -Jiungeni	Same	Kilimanjaro	24	24	48
Muungano(Mferejini)	Same	Kilimanjaro	32	32	60
<b>Total</b>			<b>171</b>	<b>170</b>	<b>341</b>

### *2.2.1. Study approach and data collection*

The project team conducted open meetings, semi structured interviews with the target communities, their representatives, and the local counselors from the surrounding villages were also engaged through interviews, key informants meetings and interest group discussions. For capturing additional information, individual interviews were conducted with administrative leaders in both districts of Lushoto and Same for more clarification of many administrative issues.

The six villages had between 48-60 such resourceful people. This brought the studied sample to 341 households (Table 1).

Field tours were made to have a firsthand information from hot spots of conflicts such as water and grazing resources all of which were sources of conflicts. Household surveys were conducted using both formal structured questionnaires and semi structured interviews. Data collected from the questionnaires was entered in Excel 2007 and analysed.

Primary data were collected in the field using participatory diagnostic approaches. These included household information, historical trends of conflicts in the target communities and resource status. Secondary data were collected from literature survey, reports and relevant manuscripts available on the study area. Some of them these included the Mkomazi Management Plans and Technical Papers from MGR management itself, public libraries and the internet.

## **3. Results and Discussions**

### *3.1. New conflicts originating from the evictions*

#### *3.1.1. New conflicts between communities and conservationists*

Despite the official ban of trespassing into the reserve, nearly 10% of the respondents admitted to still be making use of resources from the MGR (Table 2). The practice was most evident in the villages which shared a common border with the protected area like Mkundi, Kivingo and Kisiwani villages. The majority of those making use of the resources from the MGR did it at their own risk. Some 56% of the respondents reported knowing that trespassing into the MGR was forbidden. Such offenders reported that they trespassed because scarcity of resources left them with no other alternative other than depending on the MGR which is just across the road. To most respondents MGR was a major source of building poles and firewood.

There are no figures to indicate what the situation was before the evictions. However, nearly a tenth of the respondents reported that incidences of trespassing into the MGR have actually been increasing. Despite some respondents reporting that these incidences are decreasing, the magnitude of those being unaware (55%) casts doubt on the validity of the statement. This is because; in an earlier study Kiwasila and Brockington, (1996) reported that the human population around the MGR had

increased by 15% from 1978 to 2000s (National Census, 2002). It is now estimated that approximately 60,000 people live up bordering the Mkomazi Game Reserve. This means, as the populations in these villages increase, the need for resources from the MGR by the adjacent communities also increased. In fact, lately the MGR (2000) in its Management Plan has admitted increase in the incidences of trespassing into the MGR by adjacent communities.

**Table 2:** Major resources of conflict from the MGR used by surrounding communities

<b>Resource</b>	<b>Percent (%)</b>
Fuel wood	3.2
Grazing	2.4
Building poles	4.0
Wild meat	0.4
None	90.0
<b>Total</b>	<b>100.0</b>

Source: Field data

The data in Table 2 actually manifests a human–conservation conflict. In his work, Chachage, (1996) described a human–wildlife conflict as involving the wildlife conservation services on one hand and the communities around the game reserves on another. Normally such types of conflicts ranged from conflict on grazing resources (Igoe and Brockington, 1999), conflict on watering points (Brockington and Homewood, 2001), conflict on forest and edible products (Kiwasila and Brockington, 1996, Kiwasila et al. 2002), conflict on due to poaching and illegal hunting of game (Chachage, 1996).

In fact, during our discussion with the MGR administrators at their Same headquarters, it was reported to us that incidences of fire and poaching in MGR have generally been increasing. In July 2003 for example the MGR was ravaged by a big fire which destroyed a major portion of the reserve. This fire incident was reported to the Same District authorities. However, in their assessment of the fire, the District authorities concluded that the fire was caused by game poachers who set it on to have a better view of the wild animals in the MGR. In the reported fires, the game warders obtained help of the adjacent communities to help put out the fires. In other instances, similar fires in the MGR have been set by honey seekers, charcoal makers and other people making illegal residence in the reserve.

Data available from the MGR indicates that since the evictions, subsequent re-introductions of some game species and concerted efforts of curbing poaching, there has been some increase of animal numbers. During our study for example elephants numbers were reported at 1100 from 30 a few years earlier (MGR, 2001). The management is also working hard to increase tourist attraction of from local areas and the foreign world. However, field informal discussions with respondents in Kisiwani,

Mkundi and Kivingo villages revealed that their crops had frequently been destroyed by elephants, monkeys, baboons and wild pigs from the reserve. Respondents in Mkundi recalled an incident in 2002 in which a lion from reserve killed a man and livestock. Rangers from the MGR eventually killed the lion (Manongi, 1997). In some cases wild dogs from the reserve have been killed after apparently they had killed several cattle, sheep and goats near Kisiwani village in Same. A similar scenario has been reported in Kenya where, the KWS (2002) established that increased animal numbers also caused conflicts because some strayed in nearby fields in the adjacent villages and destroyed crops and sometimes killed humans.

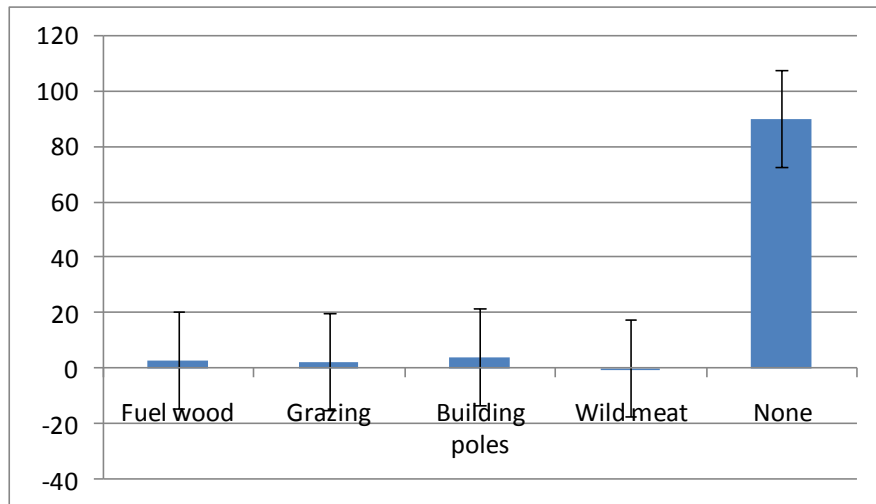
### *3.1.2. New conflicts between pastoralists and cultivators*

Many cultivators reported to have had direct conflicts with pastoralists. Nearly a third reported to have had their crops damaged in the field by pastoralists' livestock. While the village governments and the courts had been used to settle most of the conflicts, some of these developed into full-fledged physical confrontations. In general, it can be said that though there have been conflicts between the two communities, the major area for conflicts was on the utilisation of water and grazing resources. This is propounded by the perception of cultivators that the Maasai pastoralists actually deliberately let their cattle destroy crops.

Before the evictions, pastoralists with a large number of animals were deep in the reserve where natural water dams could easily be found. For that reason they had no motivation of bringing their cattle to the surrounding villages to find water. Likewise, the communities in the surrounding villages had never experienced water shortages because the water sources used to meet all their demands. However after the evictions, many of the pastoralists settled outside the MGR but in proximity to these villages. If short and long rains were abundant the animals could easily be watered without problems. But when rainfall was inadequate or the dry spell prolonged, conflicts between villagers and pastoralists emerged. Pastoralists were forced to bring their animals closer or into the villages for water. The animals used water either from the water pipes or from the natural water sources like wells, rivers and springs which were also used by humans. The large numbers of animals brought to drink from such sources all at once had actually been the major cause of conflicts and destruction of the water sources. In Mkundi village for example, farmers reported that incidences of sabotaging the water pipes bringing water to the village from the Usambara highlands began to emerge after pastoralist settled around their village. Sometimes pipes for domestic water supply were cut to allow animals to drink from water gushing out of such damaged pipes. In the village meanwhile, people started spending hours in long lines waiting for the water. Pipes were vandalised to force water out so as to drink livestock. Such actions fueled conflicts between pastoralists and cultivators. When we visited this village there was still so much tension between pastoralists and farmers such that we

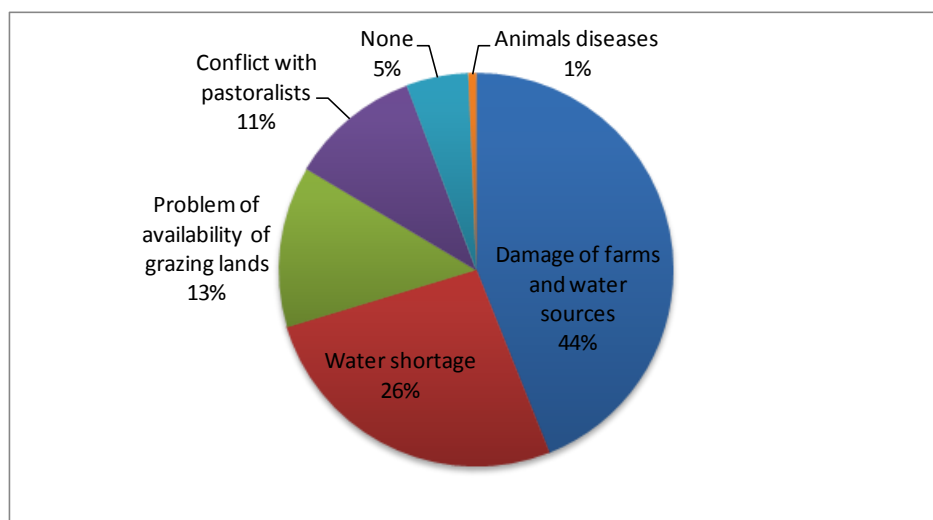


could not bring the two groups to hold a joint meeting. Despite some small variations in the perception as to who is most affected, the majority of the respondents reported that the entire communities were seriously affected (Figure 3).



**Figure 2:** Perception on who is most affected by resource degradation across the village

To many of the respondents the most serious effect was on farms and water sources. Most reported that as the dry season approached, most pastoralists brought their stock to feed from their farms and drink from the water sources close to the villages. This in turn caused destruction of the farms and the water sources because the animals were brought in large numbers thus causing erosion in the fragile environment of the water sources (Figure 4).



**Figure 3.** Major conflicts as perceived by respondents caused by increased livestock from MGR

However in Table 3, the views of pastoralists proved to be different from those of cultivators. Generally, over 27% of respondents replied that frequently crop damage occurred. In Mnazi, Mkundi and Kivingo villages the Maasai pastoralists while acknowledging frequent conflicts between them and farmers, livestock keepers claimed that in many cases they actually bought the standing stalks from cultivators after they have harvested their crops. They thus refuted the fact that destroying the crops did not happen. The arrangement was that they took their cattle to such fields and grazed on the stalks and not on actual crop. In the Maasai culture, it was the boys who did most of the cattle herding. Often times, the boys left the animals to graze in such a field while they played elsewhere. In some cases thus the cattle herds strayed into farmers' fields which had standing crops and in such occasions crop damage by cattle obviously could not be avoided.

**Table 3:** Perception of the effects from the presence of pastoralists by local communities

<b>Effect</b>	<b>Yes (%)</b>	<b>No (%)</b>	<b>Total (%)</b>
Loss of crop through grazing	27.8	71.9	100
Physical fights	6.0	94.0	100
Conflicts over water	24.9	75.1	100

Source: Field data, 2005

In many cases where crops were destroyed by cattle, the Maasai did accept to compensate by paying fine to owners. Maasai respondents insisted that, the problem always became complicated when the owner over-estimate the value for the destroyed crops than what a pastoralist would accept. In such cases the two parties eventually would go to a court of law in which an evaluation of crop damage by an agricultural extension officer would be carried out to decide on the acceptable value of the destroyed crops. More often, cases of similar nature were reported to the authorities in Same District.

### *3.1.3. New conflicts emanating from cultural differences between pastoralists and cultivators*

The other area which was reported as being the cause frequent conflicts was based on cultural aspects. About a third of the respondents (Table 4) reported a negative cultural experience between cultivators and pastoralists. The habit of the Maasai youths (pastoralists) or traditionally called "morani" wearing garments that left most of their private parts visible was unwelcome. Of course from a distance this was not offensive. But on close range, things were perceived by cultivators as offensive particularly when these "moranis" entered homes of farmers in full view of the family. On the contrary, the Maasai girls and women were praised by farmers as being very decently dressed. Generally there are many farmers, women especially, who felt offended by this unwelcome nudity of the Maasai youth once amongst their household. There are instances of men from Maasai pastoralists marrying girls from cultivators, but seldom are cultivators marrying from the Maasai due to the high

dowry prices associated demanded for a Maasai girl. Most cultivators perceived the Maasai pastoralists as being arrogant and that they did not respect others. This state of affairs meant the two communities actually lived in mistrust of each other. For example when a farmer loses livestock, the first suspects were the Maasai pastoralists.

The other socio-cultural conflict between the two communities was on participation in community development work. Farmers generally perceived the Maasai pastoralists as being reluctant to take part in public work for community development. They complained that whenever they decided to build something for the betterment of the two communities, the Maasai did not fully participate.

**Table 4:** Perception on the effect of presence of the evicted families in the villages

<b>Effect of presence</b>	<b>percent</b>
Negative	32.7
Not negative	67.3
<b>Total</b>	<b>100.0</b>

Source: Field data

The complexity of this matter is amplified by the fact that most of the Maasai and indeed other pastoralists resided away from farmers. Also some of them still moved their livestock to other places including Kenya when dry conditions were excessive. This made participation of pastoralists in such development work nearly impossible and unfortunately the cultivators perceived that as an act of not cooperating.

### 3.2. *The Impacts Associated with New Conflicts*

Field observations clearly showed that eviction of livestock keepers posed negative impacts to both evicted pastoralists and the communities surrounding the MGR and around the villages where the evicted pastoralists made new settlements. According to respondents, some of major impacts included the following:

#### 3.2.1. *Destruction of water sources*

Around the villages into which the evicted pastoralist settled after eviction water sources dwindled because of the presence of many human and livestock populations that destroyed them. Studied villages had water sources such as rivers and springs. In year 2004 through to 2006 in Kisiwani village, due to the difficulty in controlling large heads of livestock belonging to pastoralists, a water source at Njiro was frequently destroyed. Pastoralists kept vandalising pipes taking water from this source hence leaving most of the villagers without water. This scenario was reportedly reoccurred

in the dry season each year during which the need for water by both human and livestock keepers were critical. This condition was not there before the evictions because water sources within MGR were plenty. Mbaramo river water supplies were for the villages of Mkundi, Mnazi and Kivingo. This river quenches most of the livestock during drought periods. However, of late the river has started to dry during dry a season which extends from months of June–October each year and also due to the increase in irrigated agriculture on the slopes of Usambara Mountains which takes fair share of water from the river. This decrease in water has meant that the livestock were now forced to drink from different available water sources e.g. wells and other springs present in and around the villages. As the numbers of animals involved are always huge, available water sources get eroded and some silted up to the point that some especially in Mkundi and Kivingo have long ceased to produce water. In turn this escalated the problem of unavailability of water to both livestock and humans.

### 3.2.2. Losses of livestock

Past and present data of more than 30 livestock keepers was assessed to have the numbers before and after the eviction (Table 5). The numbers are presented just to have an idea of how the evicted pastoral families suffered. The most common feature for all the pastoralists evicted from Mkomazi was the heavy losses they incurred in terms of decrease in livestock heads. The lowest loss was calculated at 86% of the original herd taken from MGR at the eviction to present. The highest was 100% Table 5 gives a general impression of the losses across the study villages from a sample of selected respondents. According to pastoralists, the heavy losses of livestock suffered after the evictions were attributed to a number of factors such as:

**Table 5:** Losses in livestock numbers after for selected villages

	<i>Name of villages</i>	<i>No of respondents</i>	<i>Number of cattle</i>		
			<b>before eviction</b>	<b>after eviction (2006)</b>	<b>% loss</b>
1.	Mnazi	3	1,800	12	<b>99.3</b>
2.	Mkundi	9	3,010	156	<b>95</b>
3.	Kisiwani	9	12,250	322	<b>97</b>
4.	Muongano	8	5,188	750	<b>86</b>
		<b>30</b>	<b>22,248</b>	<b>1,240</b>	<b>94</b>

Source: Field data

### *3.2.3. Diseases prevalence*

The general claim by livestock keepers was that when they were in the MGR their cattle were widely scattered such that disease outbreaks were few and therefore the spread from one herd to another was minimized. However following the evictions, a large number of livestock had to graze from small area around the villages. In these small areas, their animals mingled making diseases transmittance from one herd to another easy too. The commonest diseases which contributed to the decline in the livestock numbers include Foot and Mouth Disease (FMD) and east coast fever (ECF). The six villages lacked reliable veterinary services. The only place where they could buy veterinary drugs was from the weekly markets locally called “Gulio”. Many of these pastoralists administered the drugs themselves to their cattle because veterinary services were poor.

### *3.2.4. Frequent water shortages*

The six villages are located in Semi-arid zones areas in which both water and grazing resources are scarce. During the dry months nearly all pastoralists brought their stocks to feed and drink closer to the villages. For example, in Mkundi village, the animals were usually watered from water ponds constructed specifically for the purpose. But, when drought came, all the villagers scrambled for the little amount of water available from the pipes. Frequently, the water queuing to get water in Mkundi village took nearly all day during the dry months. To make matters worse, pastoralists brought their animals late afternoon and evening each day to drink from the same already depleted sources. This normally caused a lot of tension and sometimes culminated into physical fights between communities. According to the pastoralists in Mkundi village, it is only those who crossed into Kenya to an area called Katamboi who still had large sizes of herds. It was reported that in Katamboi, the Kenyan Government averted the critical shortage of water by digging water dams which provided sufficient water for livestock during the months of drought.

### *3.2.4. Different ecological settings*

Most pastoralists complained that the setting in Mkomazi was very different to where they had to settle. They were forced to drink their cattle on salty waters, poor grasses, and some lived in tse-tse infected places. All these problems were not present in MGR. Respondents gave an example of Mr. NdaloTamtam (57 yrs) who was evicted from MGR in 1999. He went to Pangani, Tanga region along the Indian Ocean coastline with his 300 cattle, during the study (2005) he has left with only 2 cows. Similarly due to the MGR saga Mr. Kiambwa Larusai (60yrs) left for Pangani with a head of 1700 animals—in 1999. Ten years after, he has only 40 cows remaining. In these places they encountered tsetse flies, salty and too brackish waters which were unsuitable for livestock wellbeing.

### *3.2.5. Increased social skirmishes, loss of farm and field crops*

One of the impacts of the new conflicts between pastoralists and the communities they settled in is in the crops and fields destroyed (Table 6). Unlike pastoralists, farmers do not keep accurate records of the destruction. Most recalled only a few plants which were destroyed. In many cases the timing was not well kept. In RuvuJiungeni for example respondents reported the following losses in the study year (2006) alone.

**Table 6:** Loss of crops due to livestock from pastoralist at Ruvu-Jitengeni village for year 2004

Name of respondents	area destroyed by livestock	value (Tshs)	value (US\$)
Francis Fongonyo	0.25 ha of lablab	400,000	400
Hamisi Sindano	0.50 ha of lablab	200,000	200
Loisi Mokaine	0.25 ha of maize	150,000	150
Hakimu Ramadhani	0.5 ha of maize	75,000	75

Source: Field data

Many farmers complained that over the years this trend has been increasing. Many reported that cases involving destruction of their crops in the fields have increased after their village received families which had been evicted from MGR. In many instances the affected parties would attempt to settle the matter between them before involving the higher authorities. However, in the event that failed, the authorities had to use the agricultural extension staff to estimate the value of the damaged crops. In one case in Kivingo village a farmer complained about his tomatoes being destroyed by cattle belonging to pastoralists. The extension technician was requested by the police to estimate the value of the crop destroyed and Tshs 24,000 (US\$ 24) was the real value of the damaged crop that the farmer had to be compensated. There were many such cases in the villages that surrounded the reserve in which farmers live in proximity to those evicted from the conserved area.

One area which has not been widely studied is the influence of the evictions on the social skirmishes in the villages around the game reserve. Many respondents in the six villages reported presence of occasional physical conflicts between pastoralists and cultivators. Occasionally, this has involved the entire communities. For instance, in Kisiwani village, farmers complained that their farming lands had been lost because some of the pastoralists from the game reserve have settled there. The settling of the evicted pastoralists in their former agricultural fields plus the usual seasonal gluts of pastoralists from Hedaru and Ruvu had seriously affected their irrigated lands. As such farmers reported increased social brawls in their village since the pastoralists came.

### 3.2.6. Protracted income losses to the villages

This was encountered in Kisiwani and Mnazi villages. Before the evictions, these villages used to be weekly livestock auctions and sales centres. The governments of the two villages used to collect levy from these markets and from pastoralists selling their stock. Similarly, most of the veterinary drugs used were available during these market days. However following the evictions, the seasonal cattle auctions ceased to exist. At Kisiwani especially, residents recalled how vibrant the village economy was at the time before evictions. During that time, after the auctions, the pastoralists would purchase goods from shops, hotels etc. before returning home thus boosting the villages' economy. Now they claim the villages are dull economically. Unfortunately we were not able to capture this loss in monetary terms and a subject to a further study.

### *3.2.7. Fragmentation of the pastoral communities*

There is adequate proof that the Maasai pastoralists particularly had suffered considerable fragmentation of their communities. Following the evictions, most settled around the conserved area where socio-ecological factors were not as conducive as in the MGR for livestock keeping and life in general. However, the gradual loss of their livestock had invited immense poverty among them. Having lost most of their livestock some specifically the youth had decided to do all sorts of works in urban areas which were once unthinkable to the Maasai culture. Some youths have accepted jobs that are not traditional such as becoming watchmen in the towns while some have taken employment as hair dressers of women in beauty and hair salons in many towns and cities. Yet some have opted to sell traditional medicines which seem to be popular to many people.

Perhaps, one of widely publicised story about family fragmentation that of the family of Mr. Lye Faru (60 years) in Same. This famous Maasai pastoralist had 1200 cattle before eviction from the MGR. When he was last evicted from the MGR, he settled his family close to Kisiwani village. However, gradually the family began losing their livestock from diseases such as east coast fever, babesiosis and foot and mouth diseases. From the 1200 heads only 11 remained. Unfortunately too, for this old man his two wives deserted him. The wives have long settled in Same where they have converted to Christianity and are selling traditional medicines but have remained poor and desperate.

## **4. Conclusions and Recommendations**

### *4.1. Conclusions*

The present study has come up with the following concluding remarks:

- Despite the eviction of pastoralists from Mkomazi Game Reserve in 1990s, the communities around it are still locked up in conflicts. The conflicts revolve around the use of natural resources such as water, grazing resources and agricultural lands.

- Both cultivators and pastoralists around the MGR currently practice inefficient resource use methods. These poor methods of resource utilisation deliver very little. Given the resource conditions around the reserve these poor practices have contributed a lot to prolonged conflicts between communities.
- The current social-economic and cultural situation around the reserve and the villages surrounding it, is not sustainable. It does not support the current nomadic lifestyle of the Maasai community.
- In villages where the pastoralists chose to settle, new conflicts with cultivators have not significantly subsided. Some of such conflicts have led to serious clashes between the two communities to the extent of resulting into loss of lives.
- In many cases loss of standing crops in fields from livestock damage has increased grievances. Evidently, villages which received the evicted pastoralists have small areas available for them to graze livestock. This has led to a number of straining problems such as overstocking, degradation of grazing and water resources and the actual loss of livestock through absence of enough pasture. Substantial loss of livestock by pastoralists to the tune of 70–100% of their original stock diminished forages, inadequate water and an up surge of diseases is a disincentive to poverty reduction efforts by communities.

#### *4.2. Recommendations*

From the results above it is recommended that

- Maasai pastoralists should widen their mode of production to take on board other agricultural activities like farming and other activities. There are some Maasai community members who have become agro-pastoralists. Similarly in Muungano and Jiungeni villages some have engaged in horticulture and cultivation of mucuna and lab lab which have good market value. Progressively in the villages where people do this, the government should introduce programmes aimed at capacity building of these new farmers in order to intensify and diversify their agricultural base
- Conflict minimisation structures present within community settings should be strengthened. This will effectively quell frequent conflicts between communities and increase harmony.
- Well designed and proper land use plans will greatly assist in the efficient use of the soils, water and land resources. Such an undertaking will benefit both communities.

### **Acknowledgement**

This work was conducted by funds from the International Development Research Center of Canada (IDRC). We also wish to thank the Tanzania Government for granting us a study leave while



conducting this research. Highly appreciated are the livestock keepers and farmers in the study areas who participated willingly in this research.

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