

‘The Mkuze River it has crossed the fence’ (1) – communities on the boundary of the Mkuze protected area

Christopher N. Burgoyne^{1, CDFMR}, Clare J. Kelso^{2, CMR}

¹University of Johannesburg, School of Geography, Environmental Management and Energy Studies, Faculty of Science, South Africa; phone +27 720 618 195; e-mail: chris@burgoyne.co.za (*corresponding author*); ²phone +27 115 592 423; e-mail: ckelso@uj.ac.za

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Abstract. Restricting access to wilderness and wildlife resources is a contested topic in a time when developing nations are seeking to increase quality of life for their citizens. A case in point is the Mkuze Game Reserve which encompasses rich biodiversity and is surrounded by under-resourced rural communities. A history of exclusion from land and resources has left local residents feeling negative about western conservation ideals. Perceptions of protected areas and conservation objectives are important if management authorities are to affect a meaningful buy-in to conservation and sustainable resource use among local residents. In this paper, part of a larger mixed-methods study, we set out to explore the perceptions three rural communities have of 1) local land-cover and livelihood change and 2) the socio-economic benefits expected and derived from living adjacent to Mkuze Game Reserve, a publicly administered protected area in KwaZulu-Natal, South Africa. People living around the reserve felt they receive few benefits from living near to a protected area. Management countered that they are not well funded enough to provide much development support. In addition to this, the community sees a contrast between this lack of benefit sharing and the successful benefit sharing experienced by a neighbouring community which borders a private reserve. This has added to their negative view of the way Mkuze Game Reserve management has been engaging with communities. Effective engagement with communities and understanding their expectations will be important for strengthening conservation initiatives and community engagement objectives in the area.

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1. Introduction

The first statutory protected areas in southern Africa date back to the 19th century, but the subcontinent has a history of resource protection that is much older than that. Local people had knowledge systems that helped them subsist upon local ecosystem services without causing long term degradation (Berkes et al., 2000; Maffi, Woodley, 2010). Before European colonialism of southern Africa in the 17th century, protectionism was being practiced as royal hunting preserves were set aside for use by Zulu royalty (Briggs, 2008). It is thought that this was done by the Zulu elites in order to control the utilisation of desirable species and their products (Child, 2009). As Europeans began to settle in southern Africa, conflicts of land use and the prominence of firearms led to the decimation of wildlife across parts of southern Africa (Carruthers, 2010; Page, Ateljevic, 2009). This devastation of natural resources at the turn of the 20th century led to the establishment of hunting restrictions and forest reserves. These were initiatives that sought to preserve wilderness and wildlife for economic and political reasons but often excluded Africans from the resources upon which their livelihoods depended (Beinart, 2003; Child, 2009; Hutchins, 1903).

In the early 20th century General Smuts called for the establishment of wilderness reserves as areas for the protection of wildlife and advancement of natural science (Adams, 2004). As public support for reserves grew, they were managed in a top-down fashion, as tourist areas, by a centralised state bureaucracy. Protected area management was con-

sidered the realm of scientists and experts (Carruthers, 2009). These protected areas were to become fenced off from the rest of the landscape and well equipped with facilities for tourists. They became a source of nationalist pride in South Africa (Child, 2009). Africans were removed from their land to make way for the establishment of these parks and reserves. They were excluded from using land and wildlife despite their importance to local rural livelihoods (Child, 2009; Gush, 2000). These historical race-based practices have had lasting consequences on local communities' perceptions of the benefits that biodiversity protection can have for them.

More recently there has been a shift in perspective of protected area governance. In the 1990s the NEMA (Act no. 107 of 1998) was designed to serve as a framework for future environmental legislation and environmental governance activities in South Africa. Devolved environmental governance requiring public participation is part of this national policy (Carruthers, 2009; National Environmental Management: Protected Areas Act, 2003). With the promulgation of the National Environmental Management: Protected Areas Act (NEM-PA) the governance of protected areas in South Africa has become closely linked to social and political narratives, particularly as government seeks to improve the quality of life for under-resourced and historically marginalised rural communities living adjacent to protected areas (Adams, 2004; Strydom, 2007; Child, 2009; Anthony and Szabo, 2011). These represent major changes in the policy paradigm of protected area and resource management in South Africa.

1.1. History of Mkuze Game Reserve

The Mkuze conservation area consists of about 40,000 hectares in northern Kwazulu-Natal. With the Mkuze River on the north and east of the reserve, the abundance of water has allowed a rich diversity of species to thrive. For the same reason, this area has also been home to indigenous peoples for centuries. In the late 18th century, a time of drought and famine, chiefdoms in the region fought each other or banded together in an attempt to control more natural resources. The Zulu's rapid rise to regional dominance came about through their military prowess (Knight, 1995). At that time game animals were largely free from any large scale exploitation, but they were subject to use by localised Zulu communities like the *KwaJobe*. The *KwaJobe* could not keep cattle due to the *tsetse* fly so meat had always been obtained through game hunting (Gush, 2000). Up till 1824 local populations, largely through the authority of local chiefs, restricted the hunting of certain species including elephant, lion and otter. These were perceived as a source of political power and community controls existed. As a result, game was plentiful in the region (Gush, 2000) (2).

During the mid-19th century, European hunters were attracted by the abundance of game in the area and large hunting expeditions took toll on the wildlife. In addition, their trade with the Zulu nation led to an influx of firearms. This combination of European hunters and more efficient, larger scale hunting by the Zulu nation began to decimate the wildlife populations in the region (Gush, 2000; McCracken, 2009). Gush presents one example of the nature of European hunting in the region with quotes from the diary of William Baldwin, a professional hunter who: "... notes that he had met up with another hunter who had a "splendid hunt" during which he killed 150 sea cows and 91 elephants!" (Journal of William Baldwin in Gush, 2000). British occupation of Zululand in the late 19th century saw the beginnings of change in the management of wildlife resources. The destruction of wildlife became great enough for government officials to suggest that hunting would need to be regulated before wildlife resources were finally exhausted (Gush, 2000; McCracken, 2009). As public support for the idea

of game reserves grew, hunting was regulated and reserves were established to protect wilderness and wildlife. The Mkuze Game Reserve was officially proclaimed in 1912 and a report by the Game Conservator was delivered to the Natal Provincial Secretary stating that the amount of game present makes the Mkuze reserve a valuable one (Gush, 2000). The land has been legally protected area since then.

In the years following the proclamation of the reserve, illegal settlement inside the reserve did at times take place as cattle farmers from local communities sought more land to graze their animals. Similarly poaching was a problem as local rural inhabitants around the reserve could not be regulated in their wanderings. In the 1920s, a number of locals set up their kraals within the boundaries of the reserve which were not removed due to insufficient evidence for their interference with protected game. After a census in 1941 it was thought that about 1200 people were living in the reserve. The mid-20th century was a time when South African conservation and wildlife management was changing from a "custodianship of a balanced natural environment" approach to "command and control" as discussed by Carruthers (2008). As game reserve managers sought more control, the last settlements were removed from Mkuze Game Reserve in the 1960s. Illegal settling in the reserve had remained a hotly contested topic for several decades, but was resolved when a fence was erected on the western border in the 1970s (Gush, 2000). A fence was erected around the entire reserve in the late 1990s following the proclamation of the area as a World Heritage Site within the greater Isimangaliso Wetland Park, and the park authority contracts the management of Mkuze Game Reserve to Ezemvelo KwaZulu-Natal Wildlife (SANParks & Isimangaliso-Wetland-Park, 2012).

Being surrounded by under-resourced rural communities, the Isimangaliso Wetlands Park is under the spotlight in its efforts to support local conservation and development objectives. As was reiterated by Dahlberg and Burlando (2009) decoupling the work on conservation and development goals is unrealistic. Moreover, a top-down buy-out could have negative consequences in the long-term economic development of local rural communities. The alternative: co-management. For the co-management of this protected area to become more successful, lo-

cal people living around Mkuze Game Reserve need to buy in to conservation objectives, and also have positive perceptions of the benefits they can receive from biodiversity protection.

Due to the increasing competition for land-use around protected areas, we performed a mixed methods study to investigate the relationships between increasing population and land-cover/use change around Mkuze Game Reserve. Census data was used to quantify population changes in the population districts seen in Figure 1. Remote sensing was used to detect vegetation change between 1979 and 2008 in these same districts. These data inform us on large-scale community dynam-

ics, a backdrop for our qualitative investigation in the area. The section of the study presented here aims to be informative on the relationship between the rural communities living adjacent to the reserve and the local protected area management authorities. Our focus is on expectations of resource use and benefit sharing, and we situate this data with community members' experiences of livelihood and land-cover/use change. This information is important in strengthening conservation efforts in the area. Choosing a qualitative methodology allowed us to record the thoughts, opinions and feelings of people living near to Mkuze Game Reserve, providing us with experientially rich data.

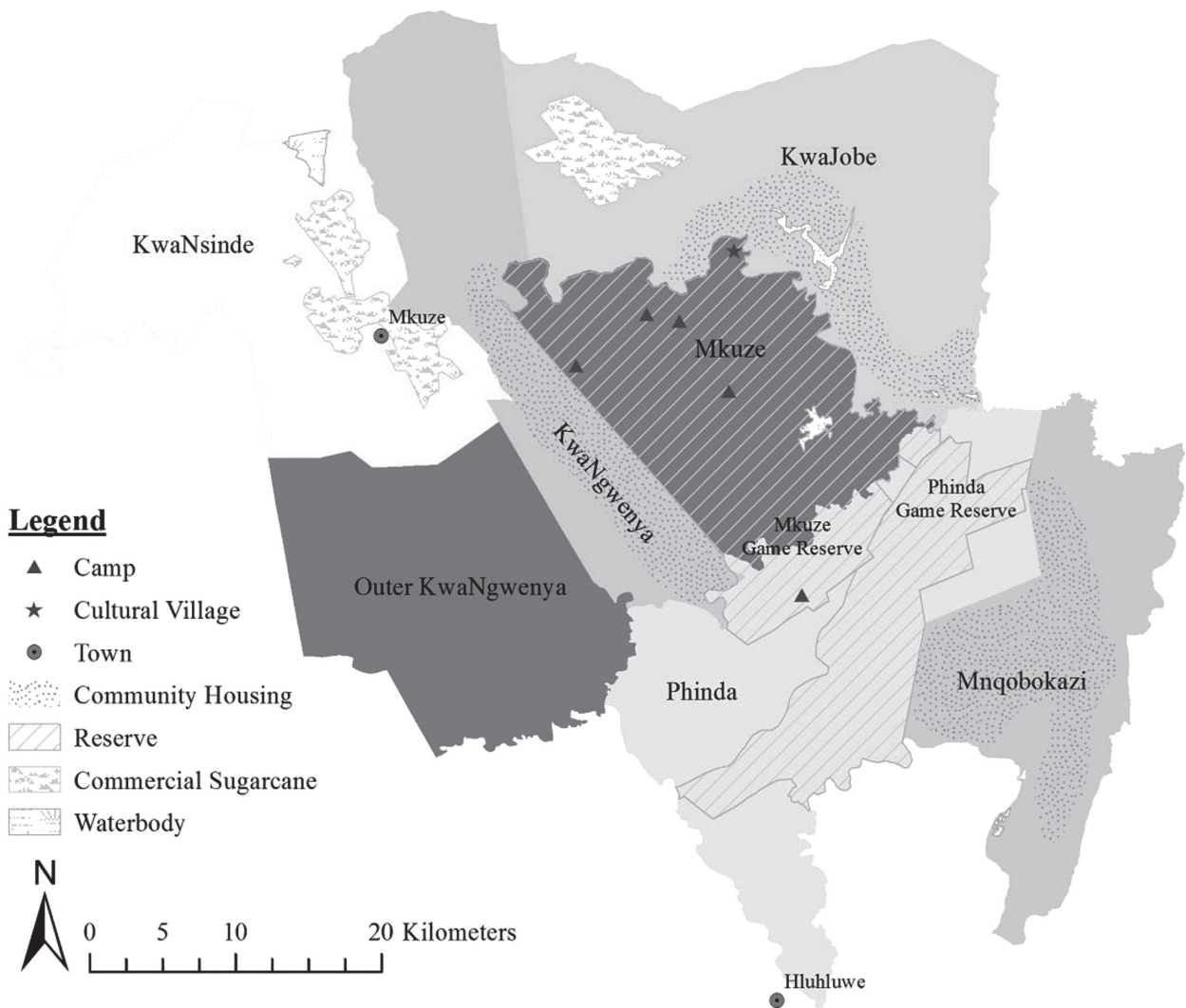


Fig. 1. Layout of the study area with depiction of population districts and areas of interest

Source: Authors

2. Methods

This paper is based on data derived from a larger, integrated study around Mkuze Game Reserve. The mixed methods approach involved the use of population data, GIS, and remotely sensed imagery to investigate the impact of human activity on the borders of Mkuze Game Reserve. A long-term time series of land-cover was created from Landsat and SPOT images. The study area was delineated using census enumerator areas that contained the major land-use centres of each of the large communities living adjacent to the reserve. These enumerator areas were further used to create districts aligned with the neighbouring communities (Fig. 1). The images were clipped into the seven districts in the study area and a land-cover class-area time-series was calculated for each district. Mkuze Game Reserve was the central district and effectively provided a control to compare to the change in the surrounding districts. Population data from the 1991, 1996, and 2001 national censuses were provided by the Human Sciences Research Council. The South African National Space Agency and United States Geological Survey provided the satellite imagery. Trends in these datasets were analysed statistically to investigate their individual trends as well as their relationship with the other datasets.

To supplement this quantitative aspect of the study, we went into the KwaJobe, Mngobokazi and KwaNgwenya communities to record the perceptions residents have of the socio-economic benefits derived from living adjacent to Mkuze Game Reserve. Beginning with three Key Informants (KIs), a snowball sampling technique was used to find more participants in the communities.

Three key informants facilitated the research. Key Informant A was a leading member of the KwaJobe Community who offered his services as guide and translator in the local communities around the reserve while being able to help involve additional participants who we met in small groups or alone in their homes and fields around the reserve. Key Informant B was an employee of Mkuze Game Reserve who resided in a neighboring community and was able to provide infor-

mation about community boundaries and their relations with reserve management in terms of resource sharing and educational initiatives. Key Informant C was an employee at the reserve who introduced the researcher to reserve staff in discussions about communities around the reserve, not only with regard to their relations with reserve management but also their population and livelihoods. The primary research took place from 5-10 December 2012.

Conversations with these KIs and participants were guided by a series of questions developed for the study. The questions were designed to provoke thought and engage participants in a semi-structured discussion around several key issues relating to the management of Mkuze Game Reserve, benefits derived from the reserve, population change in their communities, resource use and management, and land-cover change around their homes. The questions provided a guide for the researcher to engage in conversational, informal, unstructured interviews with community members. This method of engagement aims to facilitate open discussion often led by the respondents themselves. The discussions emerging from this were recorded verbatim and transcribed in order to conduct a thematic analysis.

From a constructionist approach, a grounded theory based analysis of semi-structured interview transcripts can provide a useful means to co-create knowledge in unexplored domains. Being semi-structured the researcher can let the discussion wander while keeping it within the bounds of key interest areas. From an analysis of interview transcripts the researcher is able to identify concerns and then triangulate them within the context of varying points of view among differing stakeholders (Charmaz, 2014). In this way the information is elicited by the researcher, but still emerges authentically from the participant (Andrews et al., 2012).

This paper presents briefly the results from the quantitative portions of the research, including recent changes in the population of the region as well as changes in land use/cover identified. These, along with information on local livelihoods, provide the context for an analysis of perceptions among residents of communities adjacent to Mkuze Game Reserve.

3. Results

3.1. Population

Census records showed that population has been increasing in the six districts surrounding Mkuze Game Reserve from 1991 to 2001 (Fig. 2). In this time, population in the overall study area increased consistently by a total of about 15%. The three districts with the highest population densities (people/km²) were Mnqobokazi, KwaJobe and KwaNgwenya, all adjacent to the Mkuze and Phinda Game Reserves (Fig. 3). The former two are close to major water sources (Mkuze River and Wetlands). Mnqobokazi and KwaJobe districts both increased by over 20%

during the 1990s, equivalent to over ten thousand people. In these, mostly rural areas, this increase of approximately 14 people/km² is likely to lead to increasing pressure on natural resources (Estes et al., 2012; Misra et al., 2014; Perfect et al., 2011). About the nature of this growth in Mnqobokazi district, an elderly participant stated that outsiders are moving into the community: *“They are from different places, some of them from outside usually. Maybe they are making shops, hardwares... they don’t farm... there is no place, it is very full here.”* When asked if people are moving away from KwaJobe community one respondent said that if people move away looking for work, when they fail *“they come back, yet here the issue there are no job opportunities”* and another added that *“basically people are just here, they are not moving.”*

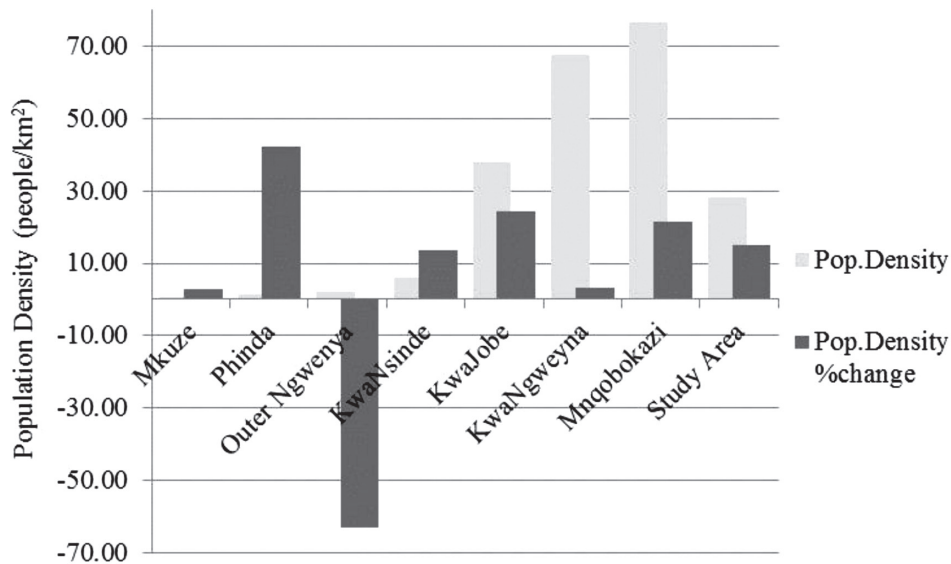


Fig. 2. Population density (people/km²) and % change by district (1991-2001)

Source: Authors

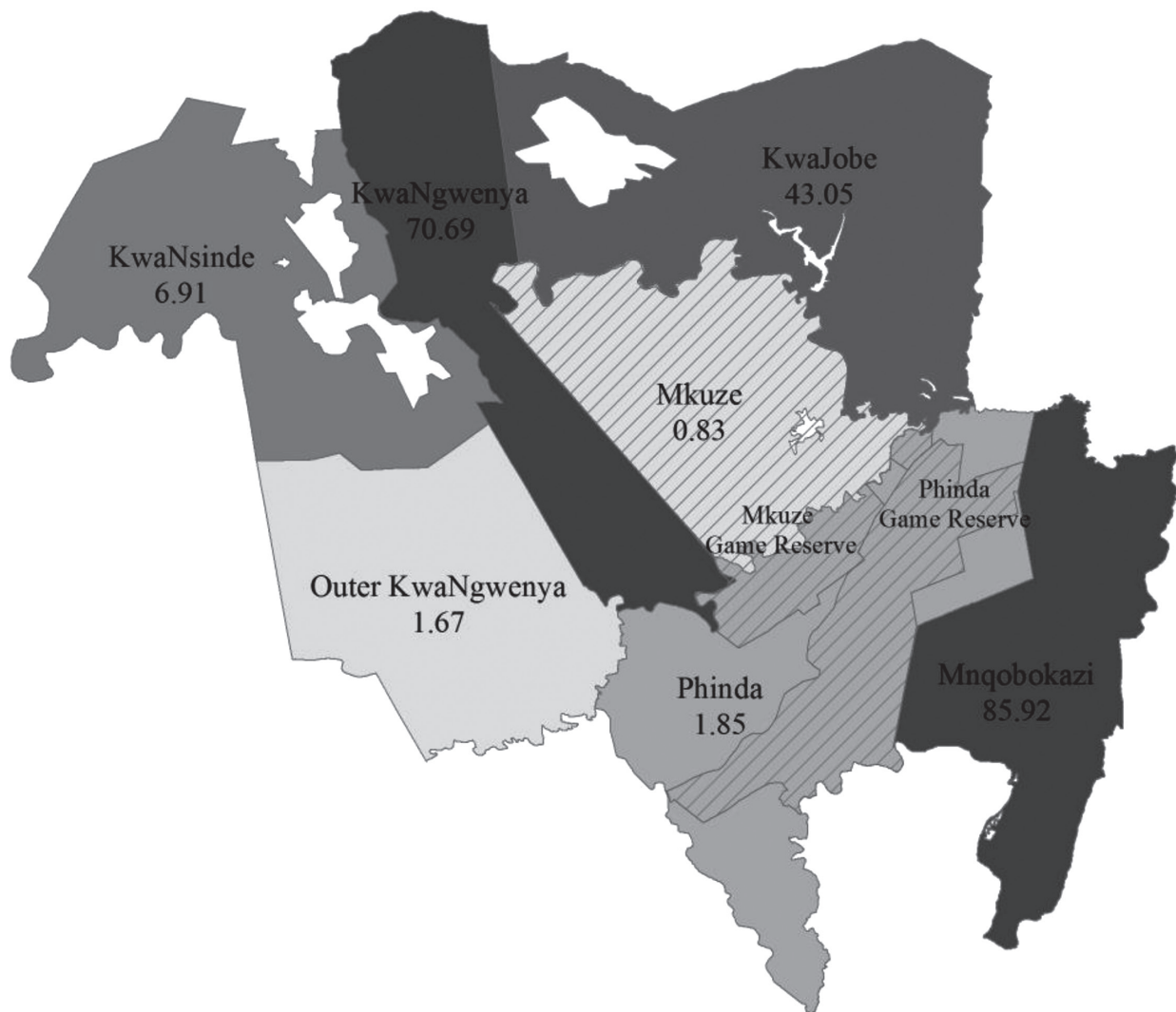


Fig. 3. Study area districts with reserve boundaries and population density (people/km²) in 2001

Source: Authors

3.2. Land-cover change

The use of remote sensing to detect land cover change from 1979 to 2008 showed that natural land-cover decreased at a statistically significant rate of 14.9km²/year. In total, approximately 432km² of natural land-cover were lost between 1979 and 2008, or 19.4% of the total natural area. Figure 4 shows the significant extent of degraded land around Mkuze Game Reserve. Degraded bush is largely situated around more densely populated areas occurring in close proximity to the water sources along the Mkuze River and wetlands. Of the natural classes, wetland showed a 32% decrease in cover, grassland

10% and bush 6%. The decrease in wetland was significant because there was a direct association between the increasing size of sugarcane plantations, cultivated by emerging commercial farmers, occurring almost entirely in the areas previously dominated by wetland (Burgoyne et al., 2015). Transformed classes increased significantly from 1979 to 2008. Degraded bush increased by 35%, with existing patches increasing in size and the appearance of new patches being noted. Degraded grassland decreased by 15%, with degraded patches being more predominant in communal grazing lands. Sugarcane

agriculture is of particular concern due to its advance in unprotected portions of the Mkuze River wetlands. These wetlands are an important source of ecosystem services and natural resources for local communities built around the wetlands and others living downstream. Forest, a mix of plantation and natural forest, showed an increase of about 8.5% in extent. Upon comparison of the natural forest on the border of Mkuze Game Reserve and plantation in the Mnqobokazi community, it has been noted that the extent of the naturally occurring riverine forest has remained relatively stable with some loss in non-protected areas. In contrast the extent of forestry plantations has increased from 1979 to 2008, with new patches appearing and other patches periodically disappearing due to harvesting (Burgoyne et al., 2015).

The land-cover in the Mkuze Protected Area showed relatively little variation in comparison to the surrounding districts. As a measure of change, the classified images of 1979 and 2008 were differenced to produce a change map. Mkuze Protected Area showed the least amount of land-cover change of all districts in the study area, with 93.6% of the land remaining the same over these three decades. The most highly populated districts of KwaNgwenya, KwaJobe, and Mnqobokazi showed the most land-cover change. In KwaNgwenya 76% of the land-cover remained the same, while in KwaJobe and Mnqobokazi it was 71% and 53% respectively. In terms of degradation, the Mkuze Protected Area was again the lowest while Mnqobokazi, KwaJobe, and KwaNgwenya showed the highest amounts of transformation to degraded land-cover (Burgoyne et al., 2015)

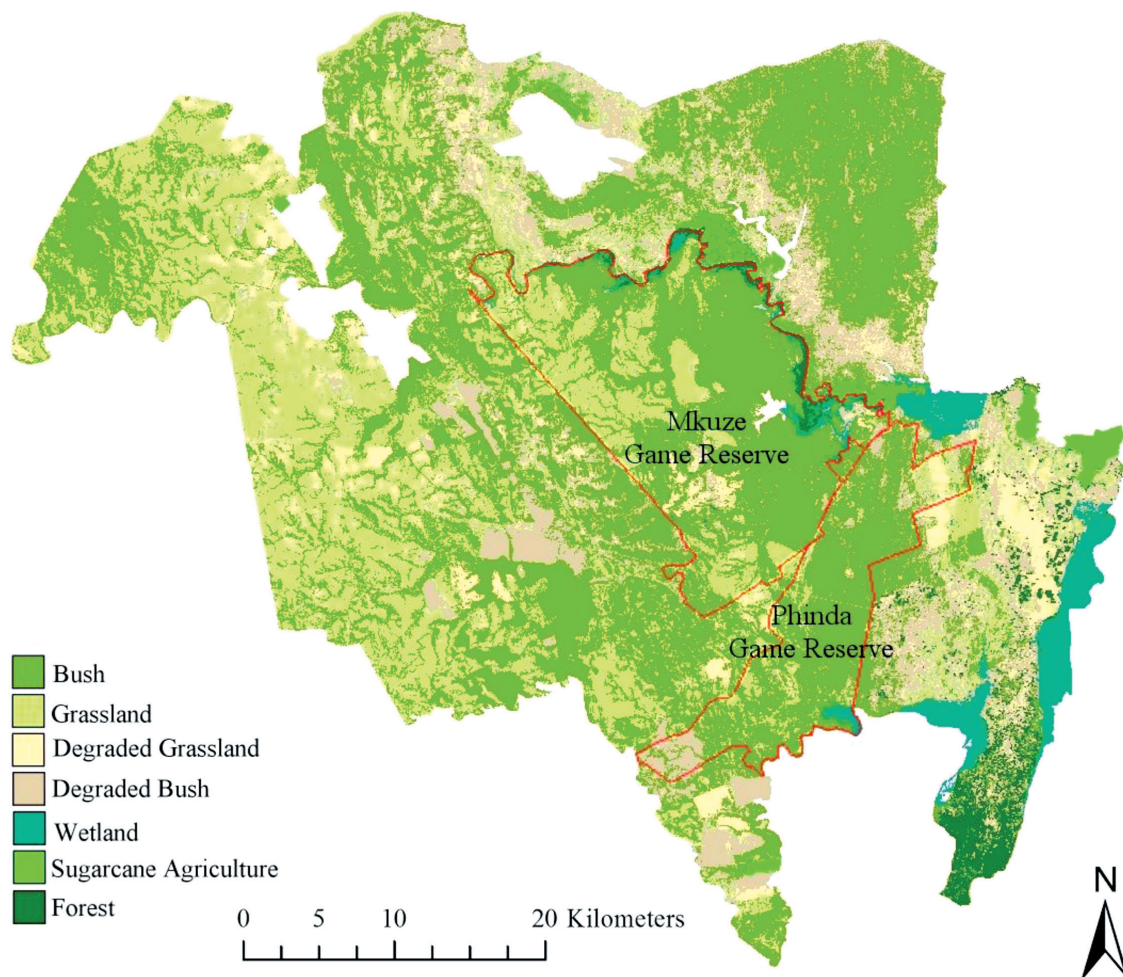


Fig. 4. Land-cover in the study area in 2008

Source: Authors

3.3. Community-based research

The land use/cover portion of the study did indicate a degree of degradation of land in the community regions surrounding the Protected Area. It also showed that land cover degradation was the least within the Protected Area. In this way it provided evidence of the role of the protected area in biodiversity conservation. What it is not able to do however is to indicate how communities perceive the Protected Area. The community research portion of the study aimed to see how communities value the Protected Area. In the context of the history of exclusion and relocations which provided early backdrop to the creation of some of South Africa's parks it was important to identify the way in which the communities on the border of the protected area view the protected area. It is also important to identify the expectations they have of benefits they feel they are, or should be gaining from living adjacent to the reserve. Negative perceptions of conservation objectives can, due to their potentially damaging impact on the sustainability of community resource use practices, pose a threat to biodiversity conservation and ultimately, the future of rural communities and their livelihoods (Bennet, Dearden, 2014; Snyman, 2012).

The thematic analysis of the community research revealed a number of issues. Although these differed slightly between the different communities, for this paper the discussion will focus on those that emerged as a common thread. Some of the residents observations serve to reinforce the changes identified in the remotely sensed imagery, others provide an explanation for those changes, while still others raise points that could not be obtained without community level research.

Livelihoods

Overall community residents identified their main source of livelihoods as rural. Key Informant A told us that the community was historically hunting wildlife, gathering naturally occurring fruits, and farming maize as a staple food. Harvesting of natural resources was an important activity for gathering fuel, building materials, and seasonal food. One elderly man living in KwaJobe community said that the community has

“... completely changed. Before we were just getting bucks, kill it, eat it the way you like. But now if you get the buck they will just arrest you. People rely more on cattle now than before... since about 1962. [Previously] we were feeding ourselves by going to the forest”.

Gathering of naturally occurring foods still occurs, but not on the scale that it once did. Gathering of firewood remains vital. Key Informant A said that most people in the area are using wood as a source of fuel. When asked where this wood comes from he replied, “they are cutting trees... most of the time just around their homes.” He also told us that people living in more densely populated areas buy firewood or charcoal from neighbouring communities due to overharvesting around their homes.

The livelihood focus has shifted from hunting and gathering to pastoralism, with maize farming remaining the constant staple. A number of participants felt that numbers of cattle and goats were increasing around the reserve over the last few decades. The consensus was that raising cattle and goats was one of the few ways for residents to have a form of financial security. Another key livelihood was crop farming. While a number of residents grow small patches of maize or vegetables near their homes, some will also gather together in areas near the Mkuze River that the *AmaKhos*i (Chief) has designated as communal crop lands. Popular crops are maize, cabbage, sugarbeans, potatoes, and mangoes.

Key Informant A made repetitive mention of the Child Support Grant and National Pension Scheme. He and several other participants spoke about these in a negative manner, saying that “people are tending that money and doing nothing.” One respondent said that people tend to rely on this money more than on crops during winter, despite the availability of winter crop strains. Some participants felt that local residents have been growing increasingly dependent on these schemes as a form of bringing money into their households. One young man from the KwaNgwenya community felt that where he lived, people were no longer going to communal fields to plant crops because they preferred to grow smaller patches near their homes and use the money they receive from government pensions or grants to buy the rest of the food they need.

Perceptions of Land-Cover/Use Change

Most of the older people we spoke to expressed a fairly strong opinion on how land-cover and land use had changed in their communities. When asked about the changes they had seen in their lifetimes, a number of people initially said that there was not much change in land-cover or usage, that it had been this way for generations. When we discussed it further however, many of them noted significant changes, and some suggested reasons for these changes. Key Informant A pointed out boundaries along the community crop cultivation area in the KwaJobe community where some bush encroachment was occurring due to a lack of cultivation in recent years. He said that this land had been ploughed by “our forefathers [who] worked very hard clearing the bushes here. Now we are failing to plant.” He stated that people are now cultivating smaller tracts of land, saying that “*some old people were using the land from here up to that trees [sic], far away.*”

Other people in the community stated that bush was cleared as the community continued to grow: “We are expanding bit by bit. We are still clearing the bush bit by bit, according to the number of children.” They noticed that in certain areas bush had been cleared for the expansion of crop land. Some mentioned that changes in land-use were becoming more apparent as people increasingly chose to cultivate closer to their homes rather than work in communal fields. Key Informant A felt that people increasingly “*do not want to go down to the river; they are ploughing next to their homesteads.*” A local *Induna* noted that one of the major changes he had seen in his community since his childhood was the increasing numbers of homesteads and cattle. He noted that bush had been cleared in his community to make space for this.

In some parts of the community, residents felt that there was a lot of space for grazing and the land does not need management. In other areas, residents felt that their land has been over-utilised. One participant stated that the increasing number of cattle was a cause of overgrazing, a driver for degrading grassland. A man in Mnqobokazi said “*still my land it is as fertile as it was when I was grown up [sic]. But yes, there are some lands that are not fertile as before.*”

Expectations of Benefits

A key finding was that residents in communities around Mkuze Game Reserve felt that they were deriving few benefits from living near to a protected area. Being a legally protected area, entry into Mkuze Game Reserve is controlled. Activities in the reserve are generally limited to game viewing or general recreation at the visitor rest camps. Resource harvesting is strictly controlled by reserve management. Key Informant B informed us that reeds are at times harvested from the Mkuze River wetlands and during culling periods in the reserve, meat is sold cheaply to neighbouring communities. But local residents feel that they do not benefit in the way that they should. Some residents expected to be allowed to farm or graze cattle within reserve boundaries. Key Informant A said that the fertile alluvial soils inside the reserve should be used for farming. A local *Induna* made it known that his community had made a land-claim in the western portion of Mkuze Game Reserve because of their being evicted in the last century after the establishment of the reserve. He said that their intention was to return to the site of their historical homesteads and farm. Local residents’ expectations of farming the protected land were not met. In addition to the lands protected status, Key Informant C felt that farming in the reserve would not be possible as use by the community would negatively affect the biological resources. He felt that local communities would not manage the resources sustainably in the context of increasing population and competition for land. In contrast to the contentious side of this land issue, residents were also glad for the existence of a fence around the reserve. It has served to protect them and their crops from wildlife, but also prevents mixing of cattle and buffalo, a situation in which cattle diseases can be more easily spread.

Our discussions with people living around Mkuze Game Reserve showed that there was an expectation of direct economic benefits from reserve incomes. Several money-based themes developed in discussions with participants. These themes varied but were oft mentioned. Recurring themes were:

- **Bursaries:** Some residents also claimed that there were no students in their communities receiving bursaries. Key Informant B said that in contrast to Mkuze Game Reserve previously of-

fering bursaries to local communities, Isimangaliso “have just decided to offer the bursaries to everybody (around the park) and the people around Mkuze don’t like that.” This was a sore point of contention for several participants.

- **Resource benefits:** Several participants felt that tourism resources and the associated monetary benefits were being withheld from them by the Mkuze Game Reserve management authority. A participant said “we are not benefiting anything, maybe very little, so it’s end up [sic] giving the bad stigma to the people around the game reserve.” In contrast, reserve management felt that they did not have the expected monetary resources to share. Key Informant C noted that residents “see lots of busses and vehicles passing through the reserve. They think that the park is making a lot of money. They don’t realise these people are mostly just passing through to go somewhere else.”
- **Infrastructure provision:** A common point of discussion was the perception that government had become less involved in local infrastructural development. When asked about how the reserve is benefiting local communities one participant said “yes, game reserves we understand were formulated during the apartheid era and we were benefiting very little out of it, but now we are getting nothing. Things are not transparent at all.” Some residents felt sidelined by infrastructural development of the reserve, and one said “as soon as you enter the gates of the reserve, you get the tar roads. But in the community around the reserve, you get nothing.” Another said “if you enter the game reserve you get electricity, water and roads. Where the people are living in the communities around the reserve there is no water, no electricity.” Their hope was that a non-community authority was going to maintain and develop local infrastructure, be it local government or game reserve management, though they were not able to state who was expected to deliver this.

4. Discussion

Our mixed-method investigation of communities living around Mkuze Game Reserve showed the

entwined nature of relationships between population, local economies, livelihoods, land-cover and land use. In addition to local historical narratives, we show that these factors influence the perceptions local residents have of their socio-economic relationship with protected area management authorities.

4.1. Land-cover change and livelihoods

With the responses of residents from the various communities around Mkuze Game Reserve, it is demonstrated that land-cover and land-use change is occurring in combination with increasing competition for land and resources. In the study of land-cover change, communal agricultural land corresponded well with pixels of degraded land in the remotely sensed data. Analogous circumstances were found by Wessels et al. (2007) who discovered that communal areas were often associated with degraded land. Gathering fuel-wood and the increasing importance of pastoralism were cited by participants as reasons for land-cover change.

Land-use has been changing as residents reportedly rely increasingly on government grants and pensions for a source of monetary income. Crop planting areas were expanding and fragmenting in areas the community leaders have set aside for human habitation and cattle grazing. We were told that land is being cleared for building homes and planting crops near to homes, and we found these changes can be spotted clearly in the remotely sensed data. Giannecchini et al. (2007) found that growing human settlements in Bushbuckridge municipality, adjacent to Kruger National Park, have led to distinct land-cover modifications, noticeably a decrease in woodland and bush cover. In Benin, Houessou et al. (2013) found that natural land-cover around a protected area had changed significantly to farmland between 1995 and 2006. Their interviews with rural people living around the protected area revealed land clearing, logging, settlement and grazing as frequently quoted drivers of land-cover change. We found that as the number and size of households increased, subsistence agriculture was commonly cited as a reason for clearing land to make space, “according to the number of children.”

Along with the changes in land-cover and use there was a shift in livelihoods and resource priorities. As stated, some participants felt that local communities are increasingly relying on government grants and pensions. Moreover there was a perceived lack of jobs in the area, a recurring grievance in discussions with residents. It was said by a respondent that people leaving to find work in nearby towns most often returned after a fruitless search. Key Informant A stated that members of the KwaJobe community are among the wealthiest of the area, saying that their crops were sold to neighbouring communities in a form of small-scale commercialism. He informed us that because of this, residents are increasingly able to send their children to university, but that these graduates are commonly unable to find work and so return home. Rural populations are outgrowing local economies, increasing reliance on rural livelihoods for sustenance. Pillay et al. (2013) similarly found growing population and a stunted local economy as reasons for receding bush-land in northern KwaZulu-Natal.

4.2. Perceptions of socio-economic benefits

Residents felt that they are receiving less support from reserve management authorities than in years gone by. A recurring point of contention was the recent availability of bursaries for tertiary education. The Isimangaliso bursary scheme is an example of a top-down community development project that serves best the interests of protected area management, alienating local communities (Child, 2013; Karanth, Nepal, 2011). While Key Informant C said that the bursary scheme was to encourage co-management between authorities and communities, local residents felt that there was little co-operation. One respondent summarized the point succinctly:

“Before, because we are looking to the past, they were building schools for our children. Before, they were supporting traditional council, and any activity that is taking place in the community they were just planting. But now it’s not like that. Like now in Mkuze there’s [sic] no students with a bursary. KwaJobe, Mngqobokazi, Nsinde, and up here, there is nothing from the game reserve. You know the competition is very high. The thing is they should have done it according to the game reserve, like before, with KwaJobe they should have done

their own thing, and Mngqobokazi they should have done their own thing”

Key Informant C stated that the purpose of bursaries offered by the Isimangaliso Wetland Park authority had become focused on environmental and conservation education, working towards buy-in to conservation objectives by residents in local communities. Their bursary program had enabled 57 students to enroll for tertiary education between 2010 and 2014 (<http://isimangaliso.com/newsflash/isimangalisos-bursary-recipients-now/>). Numerous participants felt that the apparent lack of bursary support from reserve management is an indication that reserve management is unwilling to share resources. Local residents stated that since the bursary opportunities had opened to all communities around the Isimangaliso Wetland Park, they had not benefitted from the program.

One of the concerns that residents expressed was their perception that Mkuze Game Reserve did not offer jobs to local community members. While a number of participants expressed this view, it was found by the researchers that some of the staff at Mkuze Game Reserve were sourced from the adjacent communities. A lack of job creation in Mkuze Game Reserve estranged communities from reserve management. Administrative positions involving more complex reserve management responsibilities were typically Ezemvelo employees who had worked at different reserves around the province with several years of experience, such as Key Informant C. He explained that as a government organization they are required to advertise posts in local newspapers. Residents felt sidelined by this practice, serving to further their perception of being alienated from benefit sharing practices by Mkuze Game Reserve.

Protected land in this region is contested as it is thought by residents to contain the richest resources available. The legacy of exclusion from certain resources and areas of land has led rural communities around Mkuze Game Reserve to a set of resource use and livelihood perceptions that Key Informant C feels will not be easily changed. Conservation is of little importance in these under-resourced communities where the first priority for each day is food (Bennet, Dearden, 2014). In addition, livelihoods in communities of the Mkuze region have been altered due to a lack of trust in public reserve management,

causing residents to assign little value to conservation style resource management (Snyman, 2012). The dearth of funding support from government impacts the perceptions of residents because with little funding, not much can be done to support socio-economic development in local communities. While Key Informant B believes that perceptions of conservation are changing, he also states there remains a substantial lack of support for resource protection practices in communities around Mkuze Game Reserve. It is possible that residents' expectations of benefits are disproportional to what the protected area can provide, both financially and biologically. It would be beneficial to understand the benefit sharing capacity of the reserve, and to use this knowledge in working to improve communities' understanding of what is possible.

4.3. Differences between a public and private reserve

One of the key findings resulting from our discussions with residents was that the benefits derived by those adjacent to the private reserve seem to be greater than those derived by communities adjacent to the public reserve. In KwaJobe, KwaNsinde, and KwaNgwenya, the three communities adjacent to Mkuze Game Reserve which is a government managed protected area, local residents have expressed the concern that the current brand of management's conservation-style resource management has had little measurable impact on development in their communities. They feel the Mngqobokazi community receives more benefits from the adjacent Phinda game reserve, a privately owned and managed luxury tourism destination. Mullins and Mulder (2003) found that money spent on private nature tourism in this part of KwaZulu-Natal was a greater multiplier of local gross domestic product and employment than spending on publicly administrated nature tourism.

Key Informant C said that Mkuze management was not able to keep abreast of the tourism services offered by an increasing number of more luxurious reserves nearby such as Phinda Game Reserve. He stated that this was problematic because decreasing tourism to public reserves translates into limited funding as they are largely expected to generate

the complement of their financial resources from wildlife tourism. Key Informant A stated that this had a direct impact on the amount of money available at a municipal level for rural infrastructure development. Key Informant A directly associated the presence of Phinda Game Reserve with better living conditions in Mngqobokazi. When asked why some rural communities do not have running potable water or electricity Key Informant A said:

“Only in Mngqobokazi and Makasa, they have water and it is provided by the municipality... They don't have enough money... and if you can just look, Makasa and Mngqobokazi are much better than us [in KwaJobe] because they have got Phinda Game Reserve, and Phinda is a private game reserve.... And it's one of the things that the community is challenging us on. Why our neighbours they are getting enough money [and] we are getting little here”.

One participant involved in the administration of Phinda Game Reserve told us that they make payment to the local communities living adjacent to the reserve, according to their lease agreement with them. Participants from other communities failed to mention this fact, perhaps because they did not know this detail of the lease agreement or they did not know about the lease at all. This, and the several projects being run by Phinda Game Reserve, is a significant multiplier of community development ability and the under-funded Mkuze Game Reserve may, to the uninformed, appear less focused on local socio-economic development. A better understanding of Mkuze Game Reserve's benefit sharing capacity would be useful information to disseminate to stakeholders in the area.

Some of the participants felt that private game reserves were better than publicly managed reserves in their interactions with local communities. Participants living adjacent to Mkuze Game Reserve felt they were not benefitting from work opportunities in the reserve. They felt unfairly dealt with by Ezemvelo KwaZulu-Natal Wildlife, which they said advertises their posts in Pietermaritzburg, a town approximately 378 kms from the reserve. In contrast, their perception of Phinda Game Reserve was that local communities were afforded job opportunities more fairly. Key Informant A pointed out a crèche in KwaJobe that had been built by the Phinda Game Reserve. Others reported that Phinda offered local

bursaries and supported local schools. We noted that land claim judgments in Mkuze and Phinda Game Reserves effected community relations: communities who had made land claims within Mkuze Game Reserve received a once-off monetary compensation, while those who had made land claims in Phinda Game Reserve got ownership of the land and a lease agreement resulting in various benefits. Seeing the benefits being shared by Phinda Game Reserve has been one of the causes of tension between local communities and Mkuze Game Reserve management. Communities living adjacent to Phinda Game Reserve are more positive about their relationship with Phinda management.

5. Conclusion

Modern ideas of protecting wilderness and wildlife through exclusion emerged from the 19th century decimation of wildlife populations. The notion of restricting access to wilderness and wildlife resources is a contested topic in the Mkuze region where livelihoods are largely rural and the Mkuze Game Reserve encompasses rich biodiversity. A history of exclusion from land and resources has left local residents feeling negatively about western conservation ideals. In the context of an increasing population in the region, natural land-cover has come under pressure as communities expand in search of more grazing land, fuel-wood, building materials, and food resources. Due to this increasing competition for resources residents have been adapting their livelihoods. People living in the area were generally aware that Mkuze Game Reserve management should be involved in local socio-economic development, but they feel that this is not occurring as they receive few benefits from living near to the game reserve. Management has countered that they are not well funded enough to provide much development support. This, and residents' observation of a nearby private reserve, that has been more involved in benefit sharing with the community adjacent to their property, has negatively impacted their view of the way Mkuze Game Reserve has been engaging with communities. Negative perceptions can

adversely impact the perceived importance of conservation objectives in local communities. Around Mkuze, negative perceptions of the reserve were linked to resistance against conservation objectives. If reserve management is to affect a meaningful buy-in to conservation objectives among local residents, expectations in nearby communities should be clarified and targeted, with interventions aimed at improving their understanding and implementation of conservation objectives and sustainable resource use.

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Notes

The quote used in the title was taken from the community research which formed part of this study. A resident of the KwaJobe Community was relating the story of how, after severe flooding in 1984, the Mkuze River diverted and now no longer flows through the KwaJobe but flows instead into the Mkuze protected area. He related the event as follows: "The Mkuze River it has crossed the fence and now the river is inside the game reserve. You would think that the fence could be that side of the river, but it goes with the boundaries. That thing it's diverted in 1984 of which the boundaries were done already" (Personal Communications with Study Participant in KwaJobe Community, 5 December 2012). The quote was selected because it echos some of the feeling among participants about the lack of access to resources in and around Mkuze Game Reserve.

For a detailed history of the Mkuze reserve region the book by Reg Gush, 2000: *Mkuze the Formative Years* is particularly useful. It is available online: <http://www.mkhuze.co.za/Book/index.html>.

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