



CHAPTER 2 STUDY AREA

General location and baseline information

Maputaland is a region shared by Mozambique and South Africa, along the eastern coast of the southern African subcontinent (Figure 1). The region, previously identified as the Maputaland Centre of Plant Endemism (Van Wyk 1996), is now part of the Maputaland – Pondoland – Albany hotspot of biodiversity (Smith *et al.* 2006). The region is characterized by a high coastal dune cordon that reaches nearly 200 m above sea level (a.s.l.), followed inland by a low-lying coastal plain of undulating dunes that reach 129 m a.s.l., as measured on top of the Sihangwane dune cordon in Tembe Elephant Park. The coastal plain varies in width from 30 to 80 km from south to north and the dune cordons run along a north to south axis. These inner dune cordons represent littoral lines from the marine transgressions and regressions since the Miocene – Pliocene eras (for a condensed geological history see Matthews 2006). The Lebombo Mountains to the west of the coastal plain form the continental limit of the Maputaland region and reach an altitude of 600 m. The area evaluated in the present study is situated within a narrow strip of land approximately 20 km wide that runs along a north-south axis between the Pongola River to the west and the hygrophilous grasslands of the coastal plains to the east (Matthews *et al.* 2001).

People of the study area

The people of Maputaland are either called the Tembe or the Tembe-Thonga. Historically they settled the region that spans from Maputo Bay in Mozambique in the north to the Mkhuze River in the south, and the Pongola River in the west in the middle of the 16th century (Kloppers 2001). The Tembe people are named after Chief Mthembu, who arrived from Zimbabwe around 1554 and settled in the region around Maputo Bay. The word Thonga means dawn in Zulu and the Zulus referred to all people living north and east of the Zulu Kingdom as Thonga. The Zulus traded with the Portuguese colonial authority in Mozambique using Thonga people as intermediaries and slaves, and therefore the word Thonga also relates to slaves. As a result of this connotation the word is not popular in Maputaland and people prefer to be called Tembe (Kloppers 2001; Peteers 2005; Matthews 2006).

The ways of life of the Tembe people have always been based on an intense utilisation of natural resources inland and along the sea-shore (Matthews 2006). This

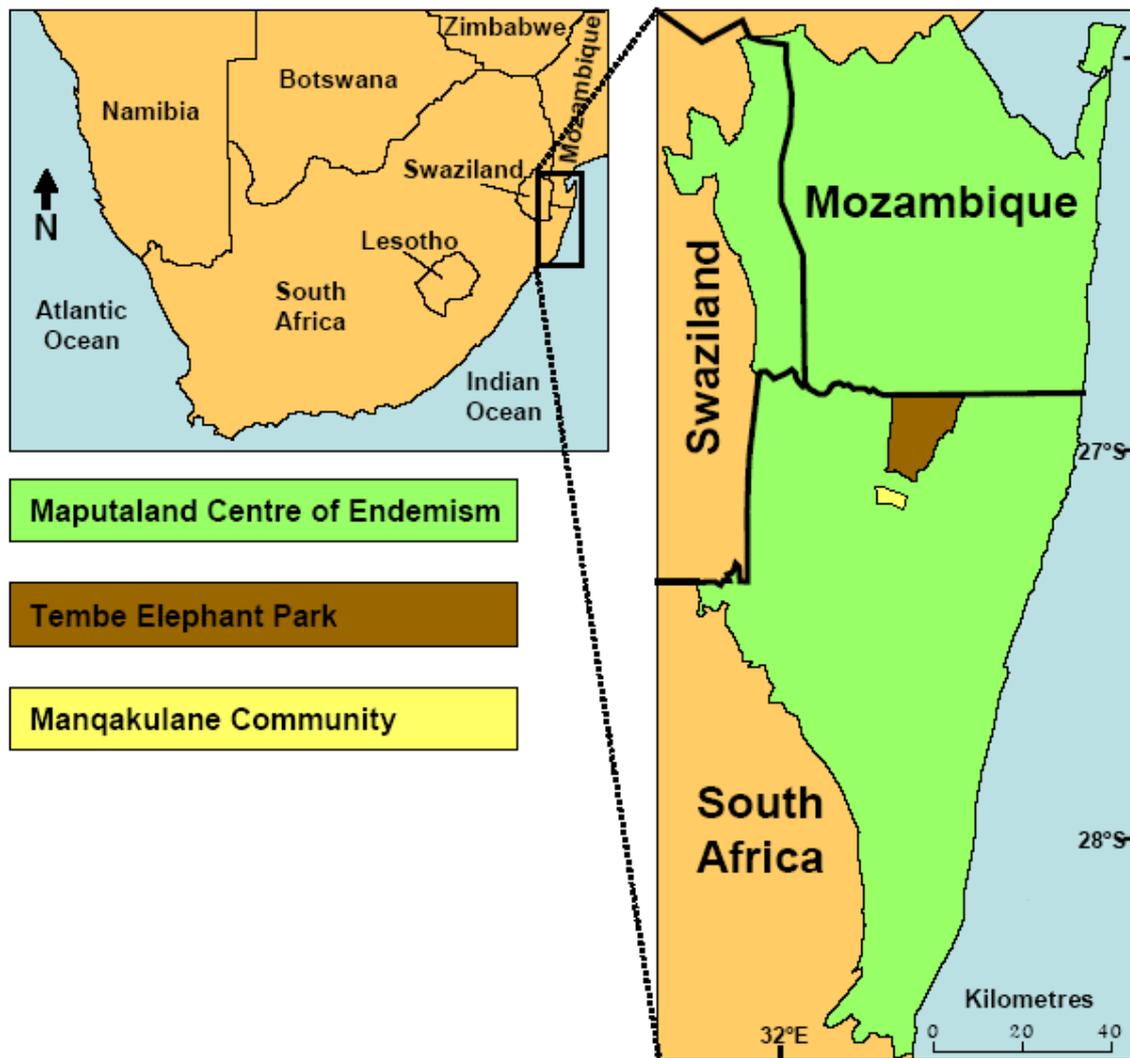


Figure 1: The Maputaland region and the study area location in the southern African subcontinent, the green area represents the Maputaland Centre of Plant Endemism (adapted from Gaugris *et al.* 2007).



pattern was enforced because of the reduced agricultural possibilities of soils in the region and also because the region is not ideally suited for keeping cattle. The latter explains why the cattle herding Zulus did not stay in Maputaland (Matthews 2006). The traditional lifestyle of the Tembe people is now in jeopardy because of an increasing rural population, which threatens the resilience of the vegetation and forces the clearing of ever more land for households and their fields (Peteers 2005; Matthews 2006). The population increase (15.22% between 1996 and 2001) is considered inflated and is in all likelihood fuelled by immigration from Mozambique, as well as from within KwaZulu-Natal and further afield in South Africa. This immigration is linked to the current development of the region through the Lubombo Spatial Development Initiative, and a boom in tourism to the coastal resorts of Kosi Bay in South Africa, and Ponta Malongane and Ponta de Ouro in Mozambique (Peteers 2005; Matthews 2006).

The rural communities in this part of Maputaland are headed by a local iNduna, representing the king (iNkosi) of the Tembe Tribal Area. The iNduna is responsible for keeping the law and order in the community and has considerable power vested in him. He rules the community through advice and communication with a steering committee that is usually composed exclusively of men from his community. Gatherings of steering committees and the whole community at the iNduna's household are regular, often held on a weekly schedule. These gatherings are used to discuss and resolve important community matters but also day to day affairs (Gaugris 2004). The iNduna is a central figure regulating the access to the natural resources within the community, and he has the power to grant or restrict access to these resources to community members. The Tembe Tribal Authority is constituted of 46 communities, each with their own iNduna, and is headed by the iNkosi. This self-governing institution allows the local tribes to retain their traditional political structure, and maintains the hierarchy of local authorities in their respective areas of jurisdiction (Cowden 1996; Gaugris 2004).

Climate

Maputaland falls within the transition zone between the tropical and subtropical climate regimes. The region experiences a warm to hot, humid, subtropical climate (Matthews *et al.* 2001). Rainfall is concentrated during the hot summers, while winters are cool and generally drier. Rainfall varies considerably from east to west, with 1 000 – 1 300 mm per annum received on the coast, 500 – 600 mm in the drier interior, and 800 – 1 000 mm along the Lebombo Mountains that act as natural barrier where clouds collect. The predominantly northeasterly and southwesterly winds in the region are generally light although gale force winds and hurricanes with destructive effects have



been observed (Guldemond 2006). Rain-bearing winds usually come from the southeast (Matthews 2006).

The weather station referred to in the present study is that of Sihangwane (50 m above mean sea level, S $-27^{\circ} 02.12'$; E $032^{\circ} 25.00'$), located within Tembe Elephant Park at the park's administrative headquarters (Matthews 2006). The weather station is within 7 km of the central point of all three study sites evaluated in the present study and is therefore considered representative of the climate in all three sites

Rainfall and temperatures for Sihangwane have been recorded since 1959 and 1988 respectively. The mean annual temperature is 23.10°C , the mean summer months (October to March) temperature is 25.45°C with a maximum recorded temperature of 45.00°C and the mean winter months (April to September) temperature is 20.81°C with a minimum recorded temperature of 4.00°C (1988 – 2001 data) (Matthews *et al.* 2001). The mean annual rainfall for Sihangwane is 700.27 mm per year (1959 – 2006 data). The years 1999 – 2001 received above average rainfall (> 900 mm / year) but the years 2002 to 2006 received below average rainfall, with 2002 and 2003 being declared drought years with only 246.90 mm rainfall received in 2002 and 373.30 mm in 2003 (Figure 2). Humidity is relatively high, even during the drier months and is conducive to mist in the interdune plains in winter.

Geology and soils

The Maputaland coastal plain is covered by deep sands that lie over a cretaceous siltstone bedrock. The Miocene and Pleistocene formations are derived from marine sedimentation and are covered by a sandy topsoil of present and aeolian origin. The plain is the result of a succession of marine regressions and transgressions since the late Pleistocene that saw the sea level vary by amplitude of +5 to -130 m compared to current mean sea level (Matthews 2006).

Three main soil types are found on the coastal plain where the present study was conducted. The dystrophic regosols (Namib soil form) are the most common soil type and cover most of the region. They are moderate to well-drained acidic sands from Quaternary deposits. Of low fertility and found mostly on dune crests and slopes, they are considered unsuitable for agriculture (Matthews 2006). Histosols (Champagne soil form) underlie marshy areas and pans, and are acidic soils with an organic rich A horizon > 400 mm deep (Matthews 2006). Humic gleysols are observed in depressions in associations with a high water table. They are wet acidic sands where organic matter has accumulated (Matthews 2006). Also observed in depressions are duplex soils, which consist of a sandy horizon, underlain by a clay layer that becomes saturated

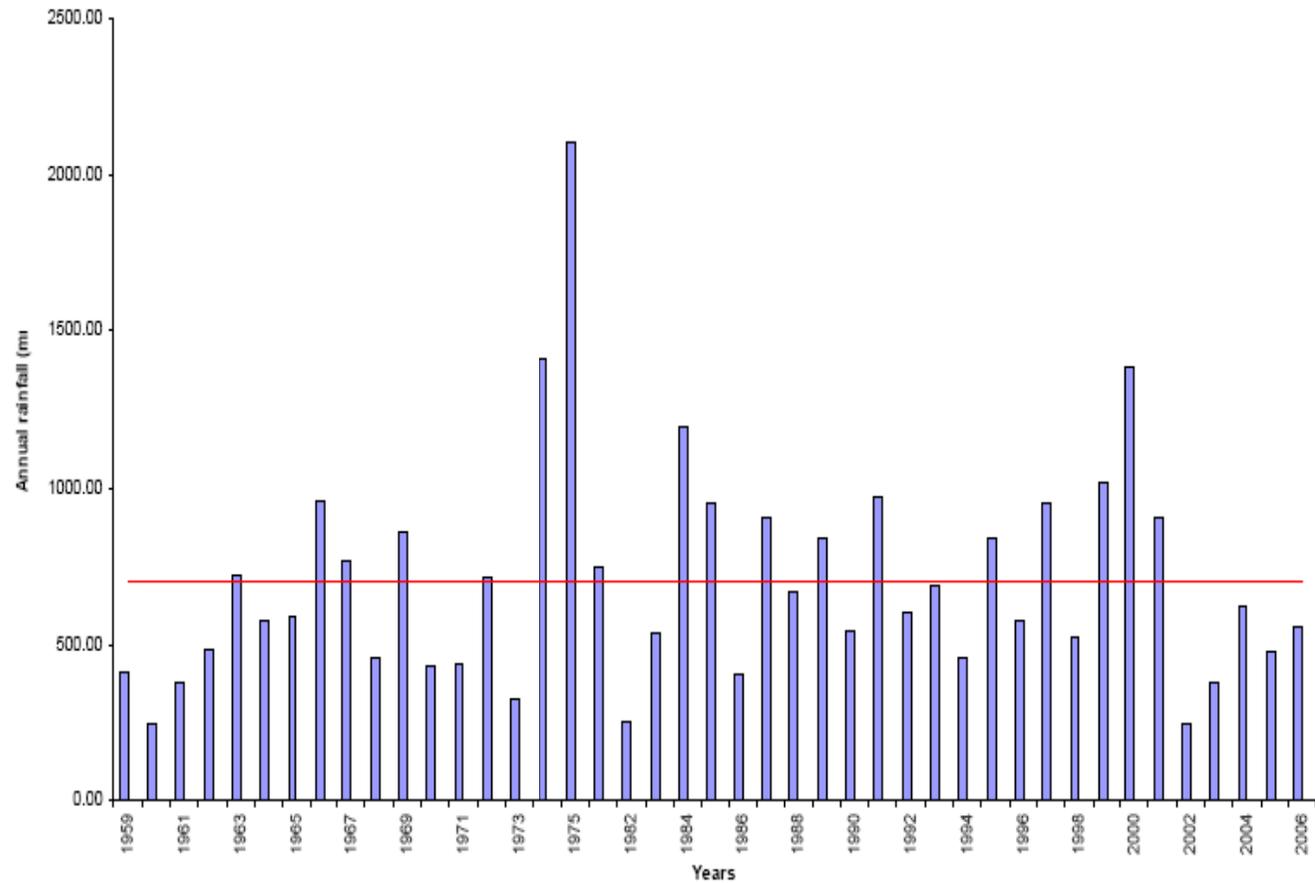


Figure 2: The annual rainfall in mm (blue line) observed at the Sihangwane Weather Station (50 m above mean sea level, 27° 02.12'S; 32° 25.00'E) in Tembe Elephant Park from 1959 to 2006, northern Maputaland, KwaZulu-Natal, South Africa. The red line represents the mean annual rainfall calculated over the same period.



during intense summer rainfall periods and sometimes form pans (Matthews 2006). For more details, a condensed description and interpretation of the geological history of northern Maputaland, based on a review of available geological literature is presented in Matthews (2006).

A note on biodiversity

The Maputaland region is considered a centre of plant endemism with approximately 9% of its 2 500 identified vascular plants endemic to the region (Van Wyk 1996; Matthews *et al.* 2001; Morley 2005; Matthews 2006). It is thought that most of these are neo-endemics, or of recent appearance, as speciation is considered an active process in this geologically young region at the interface between the subtropical and tropical climates (Van Wyk 1996; Matthews *et al.* 2001; Van Wyk and Smith 2001). The region's herpetofauna is composed of 112 species and subspecies, of which 23 species are endemic. In terms of batrachians, three frogs are endemic. The avifauna diversity for Tembe Elephant Park stands at 472 species, with five endemics and 43 near-endemics. The ichthyofauna of the region is represented by 67 species, eight of which are unique to Maputaland. A total of 102 mammal species occur in the region, of which one species and 14 subspecies are considered endemic. The number of insect species for Maputaland is unknown, although 257 butterfly species have been recorded (Matthews *et al.* 2001; Morley 2005; Matthews 2006). This exceptional biodiversity in Maputaland is also a result of the large diversity of habitats found in the region. Current research programmes conducted in the region are expected to bring forward new species (Matthews *et al.* 2001; Morley 2005).

The study sites

Three study sites were selected for the present study (Figure 3). Site one, Tembe Elephant Park, is the leading conservation area of northern Maputaland in South Africa. Site two, the Manqakulane commons under community village rule, is the eastern portion of the tribal land of this rural community. Site three is the Tshanini Community Conservation Area, located in the western portion of the land of the Manqakulane rural community.

Tembe Elephant Park

This relatively small park (30 013 ha / 300 km²) on an African scale was created in 1983 following negotiations between the Tembe Tribal Authority with Chief Mazimba

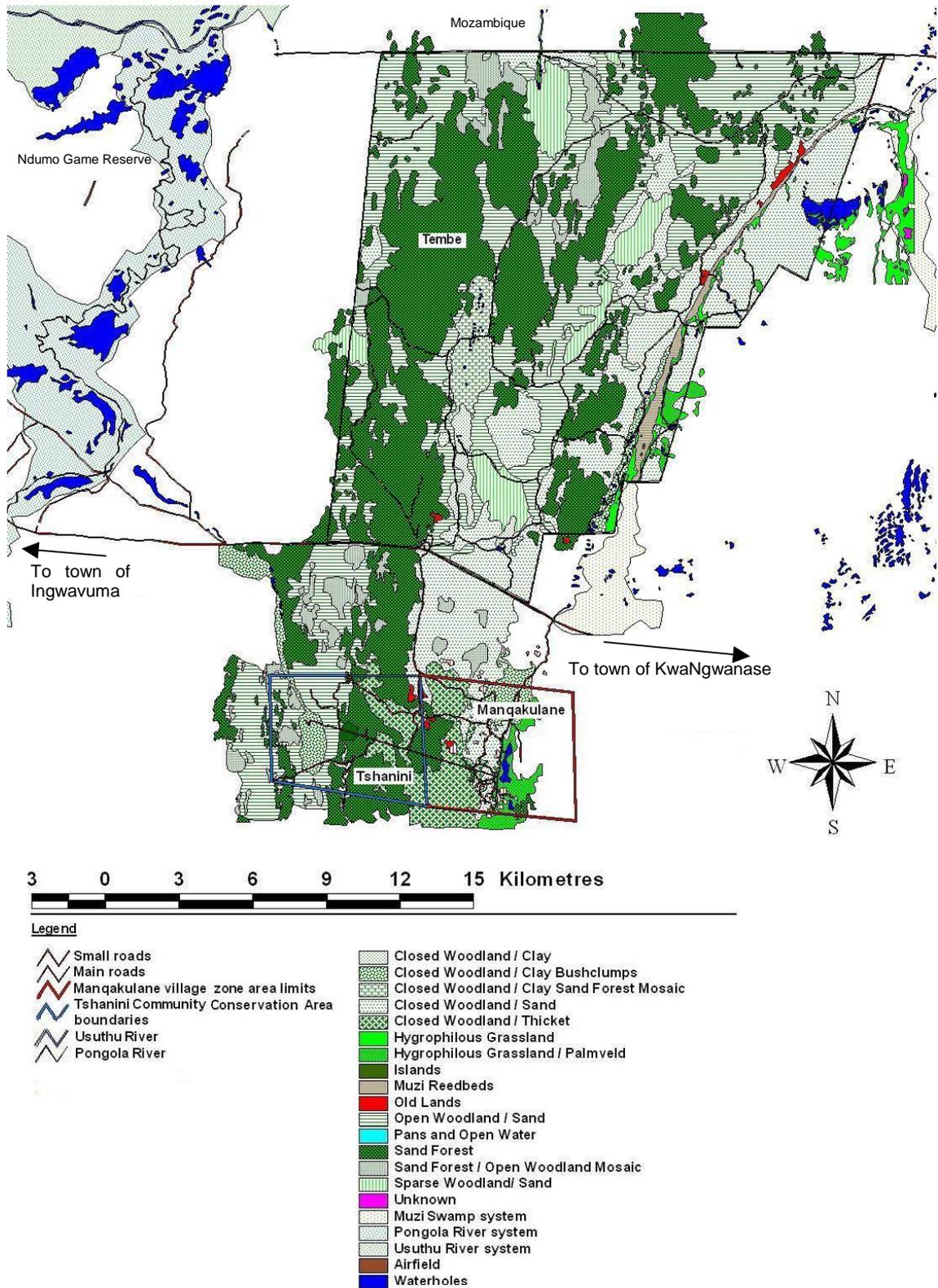


Figure 3: A map of the three study sites in northern Maputaland, showing the main vegetation units and main roads, northern Maputaland, KwaZulu-Natal, South Africa (map adapted from Matthews *et al.* 2001 and Gaugris *et al.* 2004).



Tembe and the then KwaZulu Bureau of Natural Resources (Matthews 2006). The park was created to fulfil the following conservation mandates:

- Protect the local people and their crops from wild animals, especially African elephant *Loxodonta africana* (Blumenbach 1797).
- Protect the few remaining elephants of the Maputaland coastal plain in South Africa, as well as the suni *Neotragus moschatus* (Von Dueben) population.
- Protect the rare Sand Forest vegetation.

Following its proclamation the park was fenced on the South African sides and became a closed system in 1989 when the northern boundary fence with Mozambique was closed to prevent poaching and illegal immigration (Kellerman 2004; Guldemand 2006; Matthews 2006).

Tembe Elephant Park is not a mass tourism destination. Tourism access is limited to the southern third of the reserve and is only accessible to 4x4 vehicles (Figure 4). The northern section or two third of the park is considered a wilderness area and only three tracks allow management vehicles through. All visitors and management access roads in Tembe Elephant Park are sandy tracks that follow old elephant paths in the interior or the fence line along the boundaries (Matthews 2006).

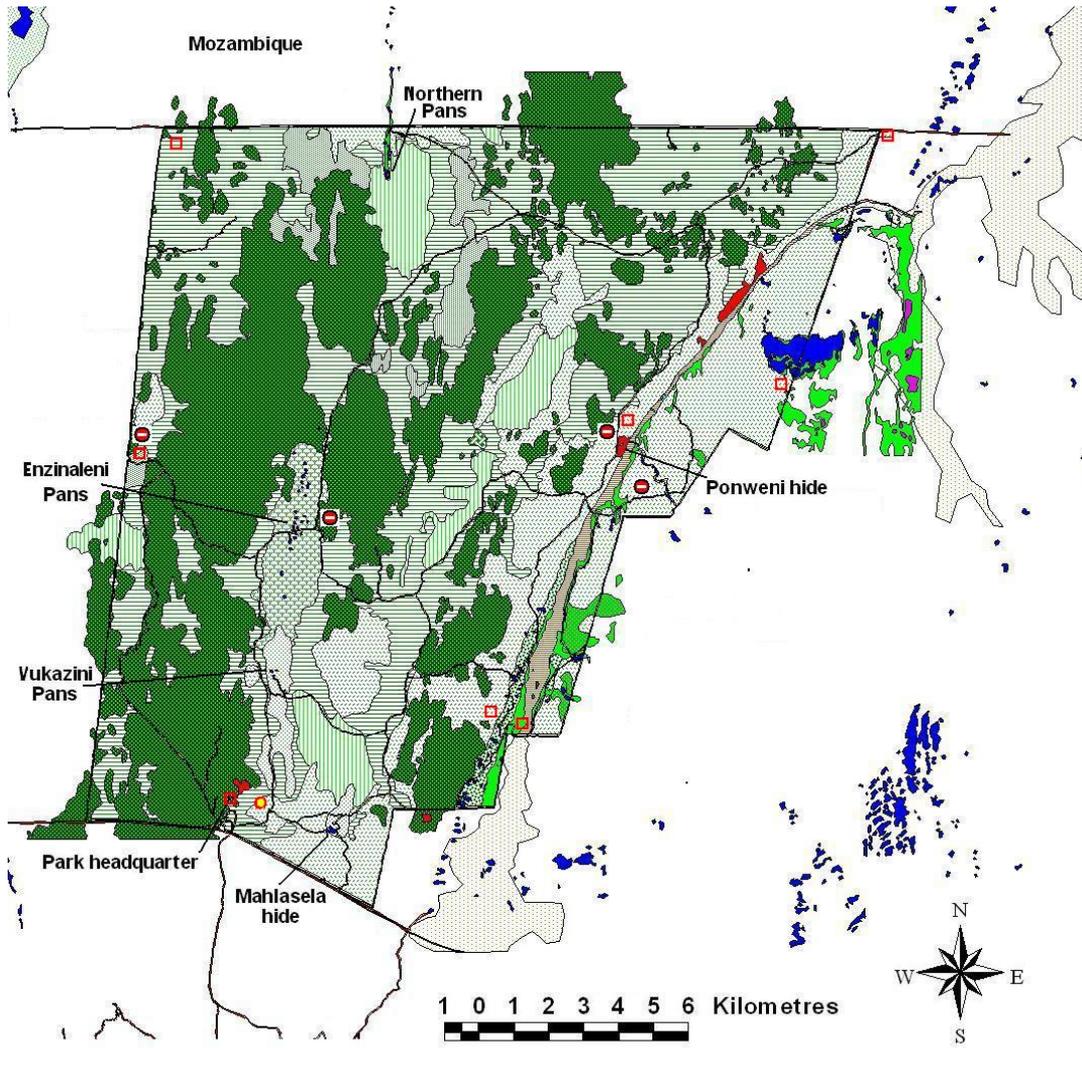
The mammal populations in Tembe Elephant Park are composed of species originally present at proclamation as well as re-established species. The larger mammals (re-established species are marked with an asterisk) encountered in the park are the following (scientific names follow Skinner and Chimimba (2006), numbers in brackets represent: 2000 census (Matthews 2000) - 2005 census (Matthews 2005)):

- African elephant *Loxodonta africana* (130¹ – 179² (195³))
- White rhinoceros* *Ceratotherium simum* (35 - 43)
- Black rhinoceros* *Diceros bicornis* (22 - 20)
- Giraffe* *Giraffa camelopardalis* (100 - 131)
- Hippopotamus *Hippopotamus amphibius* (14 - 20)
- Plain's zebra* *Equus quagga* (200 - 176)
- Eland* *Tragelaphus oryx* (40 - 0)
- Buffalo *Syncerus caffer* (60 -100)
- Kudu* *Tragelaphus strepsiceros* (290 - 532)
- Blue wildebeest* *Connochaetes taurinus* (130 - 434)

¹ Educated guess from a 2000 survey, not a true count

² Estimate of 2002 population from a mark recapture method by Morley (2005), for the known and identified number of animals was 167 individuals at that date

³ Combination of known group count, total area count and informed guess (Matthews 2005)



Legend

- | | |
|----------------|---|
| Tembe tracks | Closed Woodland / Clay |
| Main roads | Closed Woodland / Clay Bushclumps |
| Ranger outpost | Closed Woodland / Clay Sand Forest Mosaic |
| Lodge | Closed Woodland / Sand |
| | Closed Woodland / Thicket |
| | Hygrophilous Grassland |
| | Hygrophilous Grassland / Palmveld |
| | Islands |
| | Muzi Reedbeds |
| | Old Lands |
| | Open Woodland / Sand |
| | Pans and Open Water |
| | Sand Forest |
| | Sand Forest / Open Woodland Mosaic |
| | Sparse Woodland / Sand |
| | Unknown |
| | Muzi Swamp system |
| | Usuthu River system |
| | Waterholes |

Figure 4: A map of Tembe Elephant Park in northern Maputaland, showing the vegetation units, roads and infrastructure, KwaZulu-Natal, South Africa (map adapted from Matthews *et al.* 2001 and Gaugris *et al.* 2004).



- Waterbuck* *Kobus ellipsiprymnus* (360 - 419)
- Impala* *Aepyceros melampus* (600 - 694)
- Nyala *Tragelaphus angasii* (300 - 1800)
- Bushbuck *Tragelaphus scriptus* (unknown - 40)
- Reedbuck *Redunca arundinum* (880 - 268)
- Grey duiker *Sylvicapra grimmia* (unknown - 200)
- Red duiker *Cephalophus natalensis* (unknown - 400)
- Suni *Neotragus moschatus* (unknown but estimated at > 500)
- Warthog *Phacochoerus africanus* (260 - 300)
- Bush pig *Potamochoerus porcus* (unknown)
- Lion* *Panthera leo* (4⁴ – 18)
- Leopard *Panthera pardus* (unknown)
- Spotted hyena *Crocutta crocutta* (unknown)
- Side striped jackal *Canis adustus* (unknown)

The Tembe Elephant Park landscape is typical of the central Maputaland plain, which is formed by interdune plains and high, forested dune cordons. It is crossed along its entire north – south axis by the Muzi Swamp along the eastern boundary. The swamp represents the water table level and is fed during the rainy season when it flows irregularly towards the north. Sections of the swamp are permanently wet, while other sections, especially in the south, become dry during drought years (Tarr *et al.* 2004).

The park is covered by dense woodland vegetation, with large tracts of Sand Forest, wooded grassland and swamps, which form a diverse and aesthetically pleasing mosaic of vegetation. The vegetation management of Tembe Elephant Park allows irregular burning of woodland areas and reed beds. The Sand Forest is considered as fire intolerant and is not included in the burning programme, although, because of mechanical opening of the forest edge by elephants, some sections and isolated small patches have burned within the past 10 years. These sections are not regenerating as Sand Forest, and mostly woodland species are observed growing back (Matthews 2006). The vegetation of Tembe Elephant Park is described in great detail by Matthews *et al.* (2001).

Tembe Elephant Park will form part of the Lubombo Transfrontier Conservation Area, a Peace Parks Foundation initiative (Kloppers 2001; Guldemond 2006). To that

⁴ Lions were re-introduced in 2002, 2 males and 2 females formed the seed population



purpose several areas are being evaluated as links between conservation areas in South Africa, Mozambique and Swaziland. The first link, and oldest in the debate, will join Ndumo Game Reserve, approximately 5 km to the west of Tembe Elephant Park's western boundary. This link was given the go-ahead by the end of 2006. However, due to the presence of many people in the link section nearest to Ndumo Game Reserve (Jones 2006), and the lack of a satisfying solution with regards to the Tembe Elephant Park lion population, the two reserves will remain separate a while longer, although the fencing of most of the corridor between these two reserves is scheduled for late 2007. The next link of most significance is the planned Futi corridor. This corridor will join Tembe Elephant Park to the Maputo Elephant Reserve, approximately 60 km further north in Mozambique. The corridor agreement has been signed and its implementation in the field should follow before 2010. Issues that have not yet been resolved are whether elephant-proof fencing is needed and how to deal with the threat of the Tembe Elephant Park lion population. Another link, of less direct influence for Tembe Elephant Park is the link between Ndumo Game Reserve via its direct neighbour the Usuthu Gorge Community Conservation Area in South Africa, to the Hlane National Park and Mlawula and Ndzinda Game Reserves in Swaziland (W. Matthews, pers. comm. 2006)⁵.

Manqakulane rural community

The Manqakulane rural community rules a portion of land in northern Maputaland that covers approximately 5 000 ha (Peteers 2005). However, based on some studies this could also be up to 7 000 ha (Gaugris *et al.* 2004; Gaugris *et al.* 2007). This flexibility is a peculiar feature linked to committee members from the various rural communities setting and adjusting the boundaries of their communities depending on the various agreements in place at the time between neighbouring communities. While in theory the boundaries should be fixed and not subject to changes, the actual location of the boundary markers for Manqakulane have changed on at least four occasions since 2000 by up to 1 km. The core area is unlikely to change and can therefore be considered as representing the smaller size presented above, but the possibility that the larger area could be correct cannot be discounted. For the present study, the smaller area is used to define the community's tribal land. This area is divided into two near equal sections (Figure 5). The eastern section represents the zone under village rule, while the western section is occupied by the

⁵ Wayne Matthews, Regional Ecologist for Maputaland, Ezemvelo KwaZulu-Natal Wildlife, Tembe Elephant Park, Private Bag 356, KwaNgwanase 3973.

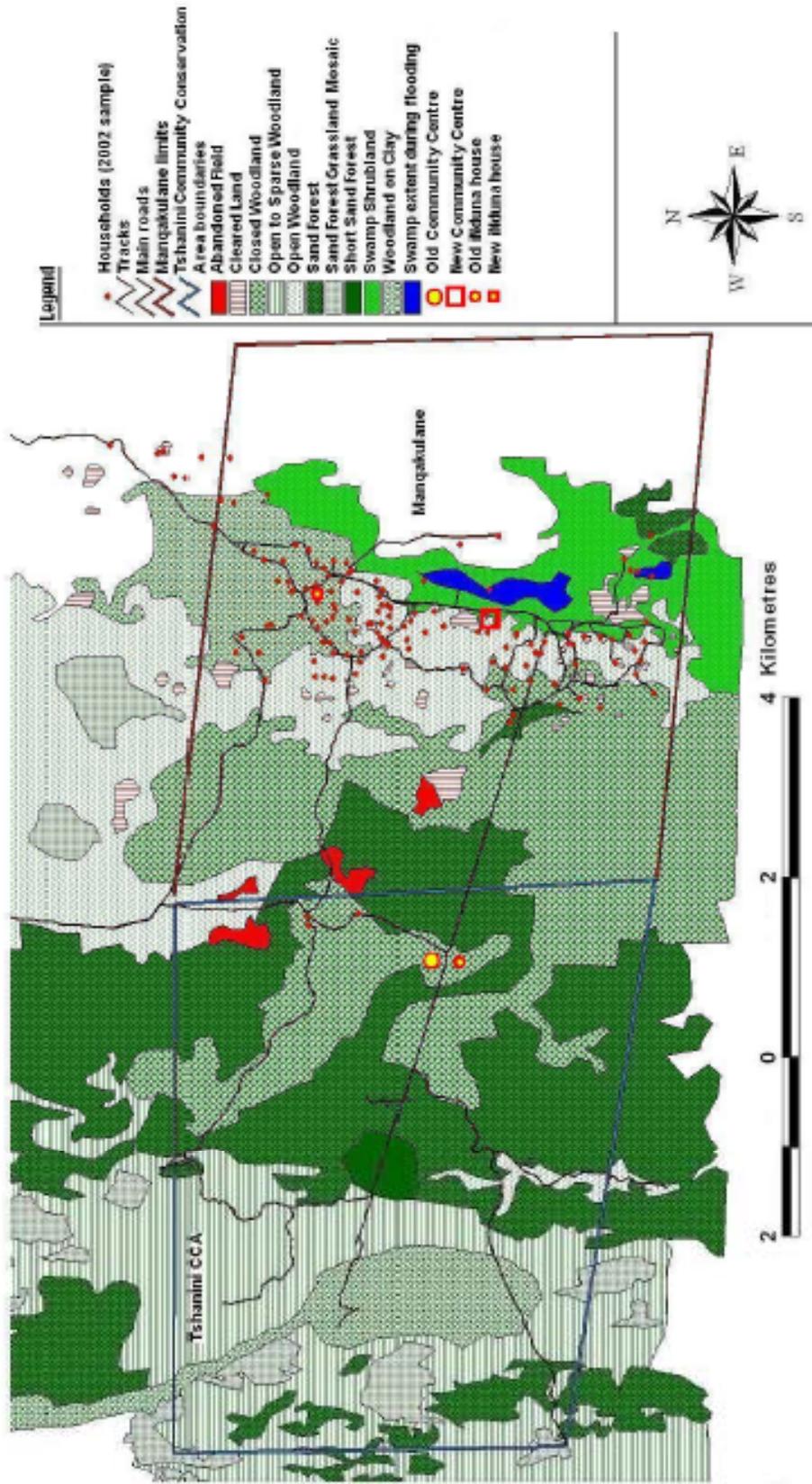


Figure 5: A map of the Manqakulane community in Maputaland, northern KwaZulu-Natal, South Africa, showing the village zone and the Tshanini Community Conservation Area locations, as well as vegetation units, roads and infrastructures (map adapted from Gaugris *et al.* 2004).



Tshanini Community Conservation Area described below. The northern boundary of the community's land is approximately 6 km due south of the Ingwavuma – KwaNgwanase main road that forms the southern boundary of Tembe Elephant Park. Only one main access road bisects the eastern portion of the community along a north – south axis and leads to the Ingwavuma – KwaNgwanase main road 6 km north. Households are connected by simple sandy tracks, rarely wide enough to accommodate a vehicle.

A total of 898 people were considered as Manqakulane community members in 2004. Of these people, 778 lived in the village permanently while the remainder were living elsewhere usually for work purposes. A total of 124 active households were counted during a 2004 household census. This represented an increase of five active households (+0.95%) compared to a 2002 household census study (Peteers 2005).

The village zone consists of the following three types of land-use:

- Land cleared for dwellings and access roads
- Land cleared for subsistence farming
- Uncleared land used for resource harvesting and cattle grazing.

Households in the Manqakulane community consist of one to 13 structures (Gaugris *et al.* 2007) erected within a cleared area on the community land. The structures in the households are either full houses (Figure 6), or what could best be considered as rooms (Figure 7), that belong to the various household members and communal facilities such as a kitchen (see Figure 7), maize store (see Figure 7), and storage rooms (Figure 8). Most structures are built with wooden main frames that support the walls and the roof. The walls can either be made fully with wood (7.3% of structures in 2002), or with wooden lattice panels that may be covered in mud or cement (65.7% of structures in 2002). A relatively newer building method is to fill the wooden frame with stones (Figure 9) and plaster the outer and inner walls (6.1% of structures in 2002). Alternatively, the wall panels can be made of reeds later covered with mud or cement (13.1% of buildings in 2002). The wealthier people of the community use brick walls (7.8% of structures in 2002, see Figure 10) and imported gum poles for the roof beams (Gaugris 2004; Gaugris *et al.* 2007). The study of 2004 concluded that the majority of recently built houses had walls made of reeds and corrugated iron sheets on the roof (Peteers 2005) thus confirming a trend predicted by the study of 2002 (Gaugris 2004; Gaugris *et al.* 2007).

The households are not connected to water or electricity directly. A water supply line runs along the main road between Ingwavuma and KwaNgwanase and brings water pumped from the Pongola River. A fork in the water line runs south along



Figure 6: A complete house with several rooms. This house consists of two bedrooms (one of them visible to the left with a glass window) separated by a common room to which is attached an unclosed veranda style room to the right that also serves as a kitchen. The walls are made entirely of small wooden poles stacked between larger supporting poles. The roof consists of corrugated iron sheets supported by wooden beams. Note the single room house in the background to the left, built in the same style. Photo by J. Gaugris: Manqakulane community, northern Maputaland, KwaZulu-Natal, South Africa, 2002.



Figure 7: A single room round house (middle), flanked by a maize store raised on a platform (left) and a kitchen (right). The walls of the house and maize store are made of a wooden lattice stacked between larger supporting poles. The kitchen walls are made of planks. The roofs of the house and maize store are thatched while the roof of the kitchen consists of corrugated iron sheets supported by wooden beams. Note the chicken pen under the maize store. Photo by J. Gaugris: Manqakulane community, northern Maputaland, KwaZulu-Natal, South Africa, 2002.



Figure 8: A round storage house. The walls of the house are made of a wooden lattice stacked between larger supporting poles and partly covered in mud. The roof is thatched. The storage house is no different from other constructions except that it usually has no windows. At 12 years since construction, this particular house was among the oldest wooden structures sampled by Gaugris (2004). Photo by J. Gaugris: Manqakulane community, northern Maputaland, KwaZulu-Natal, South Africa, 2002.



Figure 9: A rectangular single room house in construction. This picture illustrates the packed stones within a wooden frame wall structure, a new building method observed in the Manqakulane community. The roof structure is also clearly seen and shows the corrugated iron plates resting on a minimalist plank frame. Photo by J. Gaugris: Manqakulane community, northern Maputaland, KwaZulu-Natal, South Africa, 2002.



Figure 10: A rectangular multiple room house of a wealthier household. The roof beams are gum poles bought in the trading store of the nearby town of KwaNgwanase. Photo by J. Gaugris: Manqakulane community, northern Maputaland, KwaZulu-Natal, South Africa, 2002.



the western side of the Muzi Swamp. The provision of this water supply in 1998 led to the full resettlement of all households along the north – south axis represented by the water line in the community’s land (Gaugris *et al.* 2007). People have to walk or drive to three distribution points where they can buy clean water for one cent per litre (Peteers 2005). Most households do not have toilets or ablution facilities and people use the surrounding environment for their natural needs, which represents a serious health hazard that requires urgent attention (Gaugris *et al.* 2007). This is currently being addressed by the Lubombo Spatial Development Initiative, charged with developing northern Maputaland. Waterless toilets are being installed throughout the region in an effort to improve health and sanitary conditions (Peteers 2005).

No power line serves the community, although one is planned for the near future (2010) (Peteers 2005). The wealthier people use generators or gas to power household appliances, and some households have solar panels. Most households, even those with electricity-generating devices, use wood for cooking and heating (Peteers 2005), a trend also reported in other locations of South Africa (Madubansi and Shackleton 2007). A detailed description of the Manqakulane community village zone appears in Gaugris (2004) and Peteers (2005).

Tshanini Community Conservation Area

In 1983, when Tembe Elephant Park was created, the steering committee and iNduna of the Manqakulane community were enthused by the concept. From these early beginnings, the idea of using a section of their tribal land with little value, as a game reserve grew steadily. In 1992, the majority of people decided to relocate from the central section of the tribal land to the eastern section along the Muzi Swamp. The former village area was therefore returned to nature and the land left fallow, with only a few fields that remained cultivated until early 2001. The migration of the village created the opportunity for the steering committee to declare the land west of the Sihangwane dune where the old village was located as a “game reserve” for the benefit of the community (Gaugris 2004).

The land was declared out of bounds for wood harvesting but remained available for hunting, fruit and honey gathering, as well as cattle grazing. While some wood harvesting did take place despite the ban, it was kept under control by the steering committee members. In 2000 the steering committee sought assistance from the University of Pretoria for establishing the reserve officially and evaluating the best utilisation possibilities. The Centre for Wildlife Management and former Centre for Indigenous Knowledge of the university led a conservation-based community



development programme in the community, which was later expanded to the neighbouring communities as well. By the end of 2000 the name Tshanini Game Reserve was coined and the reserve under ecological study, while its boundaries were recognised for the first time. Funding for the first phase of development of the reserve was obtained in 2004 from the Poverty Relief Fund, a government programme that assists community-based initiatives. The reserve was gazetted by the end of 2005 as the Tshanini Community Conservation Area and was fenced subsequently. Some herbivores (nyala and impala) donated by Ezemvelo KwaZulu-Natal Wildlife (EKZNW) were re-established when the fence was completed (Gaugris 2004; Matthews 2006).

The future of the reserve is uncertain at present as no further development plan has been proposed. Tshanini Community Conservation Area is in the unfortunate position of having to compete with Tembe Elephant Park, but is much smaller, has no animals of mass tourism interest and offers similar landscape as Tembe Elephant Park. The fencing of the reserve and money obtained has motivated neighbouring communities to join their unused land to Tshanini Community Conservation Area to create a larger community-run conservancy of approximately 15 000 ha that would be able to compete with Tembe Elephant Park or offer real alternative options. In 2006, negotiations between communities, EKZNW, the Peace Parks Foundation and the Poverty Relief Fund for such a conservancy were ongoing.

At present the reserve is 2 420 ha in extent and offers a landscape of dune plains between relatively high old sand dunes. The vegetation is similar to that of Tembe Elephant Park except for the absence of the wetland component. The best asset of the reserve at present is probably the fact that it preserves a further 1 045 ha of the rare Sand Forest, in a location where animal utilisation is nil and where human utilisation was remarkably low from 1992 to 2000. This tract of “intact” Sand Forest could be of interest to several organisations searching for conservation concessions in hotspots of biodiversity. The latter could represent a novel and undemanding way of obtaining funds for these cash-limited rural communities (Ellison 2003). The reserve is described in detail by Gaugris *et al.* (2004).

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