South Africa

Introduction


Participants at the Mariepskop CCRI workshop. Philip Owen/CIC

The Community Conservation Resilience Initiative (CCRI) took place within two communities in two areas in Mpumalanga province, South Africa, namely the Mariepskop area and the Houtbosloop Valley. These sites were chosen as they reflect the biodiversity and land use practices common throughout the country.

The traditional inhabitants of Mariepskop site are descendants of the Pedi people, specifically the Mapulane tribe, who have been in the area since the early 1800's. In 1836, there was an attempt from the Swazi people to invade this territory and to annex the cattle belonging to the Pedi people, but they were driven away. This area is comprised of savannah bushveld and grasslands in the mountainous upper catchment, and borders the Kruger National Park in the east. Towards the west is Mariepskop Mountain, which forms part of the Drakensberg Mountain Range, and is home to indigenous forests and species-rich grasslands.

Since the 1930's, a large part of this territory was converted to industrial timber plantations of alien timber species, primarily eucalyptus and pine. Land is owned by the state and under traditional authority with local chiefs deciding on land use. State owned plantations in the Mariepskop area are being claimed by the traditional leadership.

In the Houtbosloop Valley site, there is evidence that the San people, or Bushmen, inhabited this area as far back as 40,000 years ago. The San people left almost no footprint, except for their paintings on granite boulders in the area. Further evidence of human habitation in the valley comes from a number of stone ruins that are several thousand years old. Additional research evidence suggests Dravidian Indian influence about 2,000 years ago, and that considerable amounts of alluvial gold were mined in the area for export to India.

When the European farmers arrived in the 1800's, the area comprising the 'Houtbosloop Valley' was used as a 'buffer area' separating the Swazi Kingdom from the northern tribes. The area was sparsely populated, with rumours that 'cannibals' lived in 'these wild hills'. Documents archived at the Lydenburg Museum detail that a large area, including the Houtbosloop Valley, was bought from the Swazi Kingdom by the 'Transvaal Republick" during Paul Kruger's presidency. In the early 1910's, some land in the area was provided by the British-controlled government to soldiers who had fought in the Anglo-Boer War.

Currently, land in the Houtbosloop Valley is owned both privately and by the state. During the Apartheid era, land was owned primarily by white South Africans and multinational corporations, such as SAPPI and Mondi. Since democracy was established in 1994, some land has been acquired by black South Africans, and some of the larger farms in the valley have been redistributed to black communities through the government's land redistribution initiative. For example, the Mankele community farm had 150 beneficiaries, and created a community of several hundred members, who largely work at local businesses or are dependent on government grants.

Land use in the area is comprised primarily of timber plantations owned by small private growers, large multinational corporations, and state owned plantations. Macadamia and pecan nuts are also produced in the valley, along with cattle and poultry farming. Several timber-processing plants have been established and there is a range of tourism-oriented businesses. There is a relatively high percentage of semi-wilderness areas in the valley, enabling many small mammal species, reptiles and birds to thrive.

In both project sites, free, prior and informed consent (FPIC) was obtained from community members to inform them about the process and the CCRI assessment. At the Mariepskop site, this involved five meetings with community committee structures in three different villages in the area. In the Houtbosloop Valley, an email was sent to landowners in this assessment site and key community members were approached in person and informed about the process.

Alien invasive plant, *Lantana camara*. Philip Owen/CIC

Community Conservation Resilience in South Africa

In the initial stage of CCRI, a one-day workshop was held at the Mariepskop site with fifteen community members, half of which were women, while at the Houtbosloop Valley site one-on-one interviews were held with community members. The assessments revealed unique internal threats for each site and many shared external threats.

This was followed by a capacity-building CCRI workshop, where members from the various assessment sites could share experiences and reflect upon the issues that had been raised. Of particular concern was the need to be gender sensitive, and to ensure that women's participation was facilitated. This is especially important in rural areas because these communities are traditionally very patriarchal, and women are often not heard. All meetings and workshops aimed to have at least 50% women, and ensured that the women participants could share their views.

Few women are represented in traditional tribal authorities, and women are expected to be the

Alien invasive plant, Pompom Weed. Philip Owen/CIC

primary home care-givers which places extra responsibility on women. In lower income communities and families this is a struggle due to unemployment and many people living below the poverty line. Furthermore, their struggles have been exacerbated by a collapse in ecosystem integrity. Some women in rural communities have been 'called' to become traditional health practitioners. These women often command more respect than other women, and as a result have more confidence and experience, as exemplified by the valuable inputs of Patricia Mdluli at the capacity-buiding CCRI workshop.

Internal threats in the Mariepskop assessment included soil erosion, deforestation and water pollution. For example, the wide use of wood for cooking has led to deforestation, and the lack of waste removal services has resulted in plastic pollution in the rivers, especially disposable diapers.

In the Houtbosloop Valley, participants identified bush encroachment and decreasing water quality as major threats. Grasslands are extremely bio-diverse and home to an estimated 4,000 plant species. Only 11% of the plant species in grasslands are 'grasses', with the bulk of the floral diversity being comprised of 'forbs' or 'wild flowers'. Grasslands are dependant on fire for their formation, which takes place over millions of years, and also for their management. Some species of plants in grasslands are only able to propagate after the land has been burnt. Some flowers, called 'pre-rain flowers', do not need rain to bloom but instead need fire, which catalyses the reserves of water in their root structures, so they often flower within days of a veld fire. The grassland is not negatively affected by fire, as the bulk of the plant biomass is underground, thus recovery happens extremely quickly. As an extreme example of fire adaptation, there are trees known as geoxyle found in the grassland biome that are almost entirely underground, with only their leaves protruding above ground. These trees can grow to cover large areas and are known as 'underground forests'.

Grasslands provide many natural services invaluable to people and nature. Significantly, grasslands provide a 'water retention' service, where the grasslands acts as a sponge to retain rainwater, allowing it the opportunity to slowly seep into underground aquifers and rivers. When the grasslands are

transformed to other land uses, this service is compromised and massive soil erosion results.

Grasslands locally have become extremely fragmented, primarily due to the introduction of large-scale alien timber plantations, as well as mining and agricultural development. Natural bush encroachment compounds the problem, and has led to a further loss of biodiversity and reduction in grassland services.

Additionally, the water quality of the local river has decreased significantly due to soil erosion, which has been caused by the loss of grasslands, extensive dirt road infrastructure, burning practices, and timber plantations. This causes high silt loads in the rivers which in turn impact on fish species and local community fishermen, as well as on local farmers. Recently, a farm producing vegetables could no longer export their produce due to high silt content in the water used for irrigation. Elevated levels of the *Escherichia coli* bacteria have been detected in the river, which forces local businesses utilising the river water to apply more stringent chemical controls.

In the Houtbosloop Valley there is an abandoned gold mine situated right next to the river. The mine dumps have never been rehabilitated and provide a constant source of pollution to communities living close by. The community is divided about the plans to 'rework' the mine dumps to extract the remaining gold, as they realise that the mine dumps need to be rehabilitated but they fear the long-term impacts associated with additional mining.

The common external threats that were identified by the two communities included climate change, environmental degradation, a growing population, and crime. Additionally, in both assessment sites the municipalities lacked the capacity to provide basic services, such as waste removal and road maintenance. Vast industrial timber plantations have been established in the upper catchment of both assessment sites and are placing serious strain on water quality and quantity. In both assessment sites the poaching of wild animals by illegal hunting and the prolific use of wire cable snares negatively impacts biodiversity in the areas.

Mariepskop CCRI process. Philip Owen/CIC

Preliminary Conclusions and Recommendations

The Mariepskop site is known as a political hotspot, civil society is active and has high organisational capacity, and therefore a comprehensive participatory process is critical to obtain consensus regarding any solution strategies. Some community members actively participate in government-sponsored forums where decisions are made regarding the utilisation and management of the local river systems. More community participation should be encouraged, and the government should facilitate this by providing transportation assistance.

In the Houtbosloop Valley there is more financial capacity amongst landowners, and several private landowners and businesses have focused significant energy and resources on combating invasive species in grassland areas. Additionally, they have founded an organisation focused on controlling wire snare wildlife poaching.

In both project sites, community policing forums have been established to counter escalating violent crime, and care must be taken to ensure the participation of community residents in these forums. The lack of job opportunities in the timber industry contributes to crime as unemployment is high. A more diverse farming economy would provide more jobs.

Communities in both sites identified the need for further environmental education, increased awareness and enforcement of environmental regulations, and more community involvement in state processes that aim to foster natural resource management. Furthermore, high value natural areas should be identified and protected and more initiatives should be developed and integrated for invasive plant management. Support for these recommendations would promote community conservation resilience.

Testimony

The Mariepskop Mountains are named after Chief Maripe Mashile, and the Klaserie River was named after Mohlasedi Mashile, the grandfather of Dr Alexander Mashile who was born in the foothills of the Mariepskop Mountains. Dr Mashile is an educator and a respected community leader. The Mashile family formed a trust and has lodged a land claim over the area. According to Dr Mashile, the community is divided due to community property associations established by the government, which complicates and delays the land claim process. Dr Mashile believes that when the land claim is finalised, people will again become stewards of the land. He speaks of rehabilitating and diversifying the Mariepskop Mountains and investing in local ecotourism opportunities.

Philip Owen/CIC