



Report of the

Community Conservation Resilience Initiative



in South Africa

**Country report on South Africa
Community Conservation Resilience Initiative (CCRI)
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FINAL REPORT ON THE NATIONAL ASSESSMENT OF COMMUNITY CONSERVATION RESILIENCE INITIATIVE IN COMMUNITIES IN MARIEPSKOP AND THE HOUTBOSLOOP VALLEY, SOUTH AFRICA



1 NOVEMBER 2015

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INTRODUCTION

In South Africa, the Community Conservation Resilience Initiative (CCRI) has been being implemented by GeaSphere, a non-governmental organisation operating in Mpumalanga Province, South Africa, in collaboration with communities in the Mariepskop area of Bushbuckridge Local Municipality and the Houtbosloop Valley, both in Mpumalanga Province.



This report details how the goal of CCRI - *to sustain and strengthen the resilience of indigenous peoples and more general community conservation practices in light of existing or potential external and internal threats* - have been achieved in South Africa, the methodological approach, key issues identified, achievements, as well as ongoing projects and challenges, and the way forward. For the purpose of this assessment, community resilience is defined as *the ability of a community to respond to disturbance or change by resisting damage and recovering quickly*.

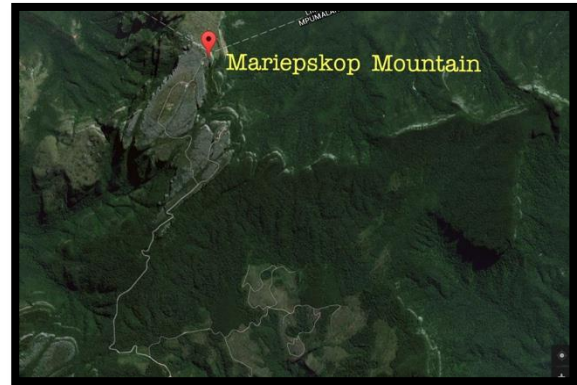
According to the CCRI, conserving biocultural diversity and respecting and promoting the rights and role of Indigenous Peoples, local communities and women in nurturing biocultural diversity is of fundamental importance to reducing and reversing deforestation and biodiversity loss in general. In South Africa, the main objective was to perform a bottom-up assessment of the resilience of local communities' initiatives and approaches to conservation and restoration, and to investigate community concerns and constraints and potential solutions and support that could be of assistance in sustaining and strengthening such initiatives and approaches.

COMMUNITY CONSERVATION RESILIENCE INITIATIVE IN SOUTH AFRICA

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 names of the villages participating in the CCRI include the Boalang Village, the Moloro Village, and the Maotole Village from Mariepskop, in the Bushbuckridge Local Municipality, and the Houtbosloop Valley Community, near Mbombela City, the capital of Mpumalanga Province.

Mariepskop is situated in the Lowveld of South Africa, Mpumalanga Province, on the border with Limpopo Province. The closest town is a small town called Acornhoek, and the area is seen as part of Bushbuckridge Local Municipality, an area with more than a million residents. 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

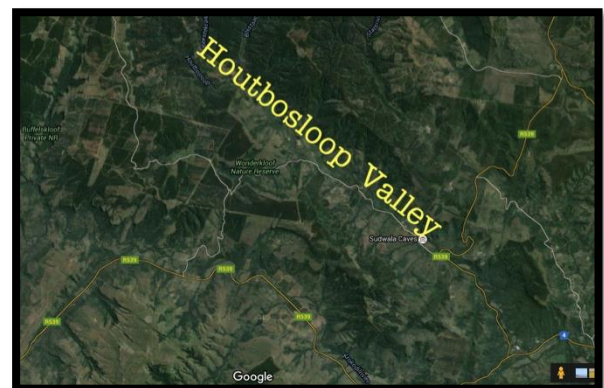
1800's. In 1836, there was an attempt from the Swazi people to invade this territory and to annex the cattle belonging to the Pedi people, but they were driven away. This area is comprised of savannah bushveld and grasslands in the mountainous upper catchment, and borders the Kruger National Park in 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.

Many community residents are unemployed, and settlement is primarily informal. Subsistence farming is widely practised, and some residents have livestock like chickens, goats and cattle.

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 2000 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 rumors 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 Republic' 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 African's 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 dependant on government grants.



Picture Credit: Liane Greeff

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.

Process of Developing Community Conservation Resilience in South Africa

The South African national project consisted of a number of project steps:

- To develop a strategic vision on and elaborate a baseline for the national CCRI process
- To select at least three assessment sites/communities
- To consult the relevant communities and seek their free prior and informed consent for the process
- Define the community in terms of location, history, environment and conservation practices
- Verify existing and potential threats
- Establish methods for assessing community resilience
- Determine how the community resilience can be improved
- To set up the coordination bodies for the national assessment
- To develop the national methodology, design the assessment and raise additional funds when necessary
- To conduct capacity-building where feasible and necessary
- To assist in the organization of a national capacity-building workshop.
- To facilitate a participatory assessment in at least three communities
- To facilitate a strategic visioning, planning and consolidation process amongst each of the three communities
- To submit an interim narrative report due 15 February 2015

- To design a strategic advocacy and engagement strategy, in close collaboration with the communities concerned to disseminate the outcomes of the assessment processes, and to initiate the implementation of this strategy
- To elaborate a draft report on the results of the national assessment before 31 July 2015
- To send at least one representative of the group to present the draft results in the global multi-stakeholder conference that will be organized by the Global Forest Coalition in September 2015
- To submit a final report of the national assessment before 1 November 2015
- To perform an evaluation of the national CCRI process and include the results in a final narrative report due 15 December 2015.

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.

In order to obtain FPIC in the Houtbosloop Valley, the majority land owners and businesses were informed either telephonically or by email. A brochure was developed (Annex 1) and circulated – explaining the basics of the project and process. Several stakeholders expressed interest in the project and agreed to be interviewed. There were no ‘objections’ and the ‘assessment process’ started with some valley residents being visited and interviewed in an informal setting.



At the Mariepskop site, this involved five meetings with community committee structures in three different villages in the area. 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. The assessments processes for both Mariepskop and the Houtbosloop Valley revealed unique internal threats for each site and many shared external threats.

This was followed by a National 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



Picture Credit: December Ndhlovu

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 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 National CCRI Workshop.

Strategic vision:

The two key aspects of the South African CCRI were to:

- Explore the resilience of socio-ecological systems in South Africa by facilitating an informed bottom-up assessment in collaboration with community members to identify key issues and their impacts.
- Contribute to the sustaining and strengthening of community resilience by investigating measures which could be instituted to improve management of socio-ecological interactions.

Baseline:

The baseline for the study confirmed that the focus of this assessment would be the summer rainfall valleys in the escarpment of Mpumalanga, and that this consists of original grassland biome with riparian forest that is suffering from bush encroachment.

The rivers central to each community originate from watersheds that are impacted by plantation forestry, causing degradation in the water quality and riparian ecosystems.

Informal settlements are characteristic of the area coupled with high unemployment rates and reliance on social grants. Subsistence agriculture and animal husbandry is common. There is extensive use of natural resources such as wood collection for fires and illegal poaching of wildlife for food.

THE CCRI NATIONAL WORKSHOP AUGUST 2015

The Community Conservation Resilience Initiative (CCRI) workshop was held on 26 August 2015 in Sudwala, Houtbosloop Valley, Mpumalanga. The aim of the workshop was to bring participants from the different assessment sites together to meet and share experiences and to further discuss the CCRI assessment findings, with an emphasis on developing solutions to the various issues identified.

The workshop also provided an opportunity to learn and exchange through dialogue about the other CCRI partners and their contributions to international advocacy.



Picture Credit: Theresa Loch

This was shared with Simone Lovera, the Executive Director of the Global Forest Coalition (GFC). See Annex 3 for a detailed description of the workshop.

Fifteen delegates were invited from the Mariepskop Community, with equal representation from each of the Boalang, Moloro and Maotole Villages, as well as an equal representation of men and women. In the Houtbosloop Valley Assessment site, community members who had participated in the assessment process were invited to attend.

The objectives of the National Workshop were as follows:

- To meet CCRI participants from various assessment sites
- To share experiences from the various national assessment sites
- To learn about the CCRI process internationally
- To learn about and discuss solution orientated initiatives, such as the Houtbosloop Environment Action Link (HEAL).

During the workshop, a number of presentations were made, including the following:

- Welcome and introduction to the program by Philip Owen of GeaSphere
- CCRI Process Internationally by Simone Lovera, Global Forest Coalition
- Resilience of wildlife locally and in Southern Africa by Philip Owen of Sudwala Caves (cousin of Philip Owen of GeaSphere)
- The necessity for the formation of Community Policing Forums initiatives and associated benefits of this cooperation between the different land owners / stakeholders and the police by Willie Coetzee, Chairperson of the local Community Policing Forum (CPF)
- Dimo Maki of the Association for Water and Rural Development (AWARD) regarding the resilience and research work done by AWARD in the Mariepskop area
- This was followed with a presentation by Johannes Masego of the HEAL regarding the work being done by the HEAL rangers to protect the environment and biodiversity.
- There was a joint presentation by Dr Alexander Mashile, Kamogelo Segodi, (Secretary, BMM Committee) and Johannes Ndlovu, (Chairperson, BMM Committee). Dr. Mashile introduced us to the concept of the three 'D's – which is applicable to the CCRI Process - "Discover", 'Develop' and 'Demonstrate'. These are phases the community and individuals need to go through when engaging with environmental matters in their communities.

The presentation focused on the assessment in the Mariepskop area, highlighting some of the issues such as deforestation, impacts of timber plantations, soil erosion and pollution. It was clear that the communities suffer from a lack of service provision – such as refuse removal and road maintenance. An issue which received much attention was the extent of plastic pollution – and how disposable nappies are discarded into local river systems.

The presentations emphasized the value of the Community Conservation Resilience Assessment in the Mariepskop community, and how community members have as a result become more aware of environmental issues and responsibilities. Some strategies were discussed regarding how to curb the 'littering' problem, which included raising the

awareness of community members, along with putting pressure on government and industry to assist communities to clean up this problem.

Workshop Achievements

Workshop participants developed a deeper understanding of how the CCRI processes were initiated and managed nationally and internationally. There was a realization that communities around the world are suffering due to a changing environment, brought about by climate change and industrial development. Workshop participants from different race and cultural backgrounds had the opportunity to meet and share experiences.

Participants from the Mariepskop Assessment sites were generally from a more impoverished background, and live in larger 'communities'. It was recognised that living in communities offer 'security' benefits, as neighbours can assist in times of crisis, whilst for some residents in the Houtbosloop assessment site who are land or business owners, they live in relative isolation, which does bring security risks. This had been illustrated by several violent home invasions' in the past two years.



Picture Credit: Theresa Loch

Workshop participants had the opportunity to discuss solution orientated strategies and actions, aimed at improving community conservation and resilience. It was agreed that as part of the 'solutions' there has to be more awareness raising and educations regarding the value of the natural environment and environmental services. More collaboration between various stakeholders was discussed, and the need to become involved in Government and Industry processes which impact on the local environment, such as ensuring attendance at the 'Catchment Management Forums' which had been set up by department of water affairs and sanitation. It was reiterated that participation must be 'informed' and again the need for capacity building was mentioned.

Out of the workshop emerged a sense of solidarity and 'ubuntu'. 'Ubuntu' is a South African expression often translated as "humanity toward others", or more commonly meaning "I am because we are". One white participant mentioned that she did not often have the opportunity to meet with a group of black people to discuss issues of common concern. She said that this interaction 'opened her eyes' to the potential of our country when different race and class groups unite to inspire change.

Workshop Conclusions and Recommendations

At the evaluation session at the end of the workshop, all participants expressed their satisfaction that the process was valuable due to the opportunity it provided to meet, share and learn from the various presentations and discussions.

There was a strong sense that there should be more similar workshops / exchanges, in order to further cooperation and involve more stakeholders. Further it was valuable to have Global Forest Coalition staff attending in order to gain direct experience and develop mutual understanding.

Testimony of Engemi Ferreira, Participant of the National Workshop August 2015

On the day we went to join familiar friends from the valley and afar, a car full of new friends from overseas, working with Phillip came to fetch me. They spoke about the weather, just as we ~ 'Africans' ~ always do. And I found it so inspiring to listen to voices asking about the when rains would come. In Europe rain is never such a talking point in the days of her inhabitants, as it is with us in Africa. But here they were, the 'visitors', already having adapted one of our habits. And it set me thinking as we drove on the gravel road to Sudwala Cave where we were going to spend the day; talking of water. And survival. And working together ... Issues which most of us in this country find important

There we were. 30/40 people, young and old, from all walks of life. I was amazed at the way in which we - strangers most of us - immediately leaned into one another's ideas and concerns. Nothing was too small to bring into the conversation, and none would deem themselves too big to step down to smaller issues. We were not there to save the world, well, not that day at least. We got together to each light our own tiny candle, to bring what we had in ideas and add it to the bigger picture, so that each of us could grow in comparison slight bigger that we were when we entered the room.

The speakers brought interesting even unknown facts to light and many individuals spoke sincerely about their problems. In the end there was a synergy of like-minded people wanting to move in the same direction. I am sure it could happen, if we all could meet again a couple of times in the future and report on our progress.

I was convinced everybody discovered something important amongst the small group of 'friends' with which we ended this day. We all stood in a big circle when (Makulu Ou oom) delivered a few words from his heart and then asked his choristers, to sing us a song. In the end a few songs to which all hummed along with the rhythm.

How much more intimate and real was this gathering than what we often see reported by cameras and media reporters on TV. Maybe this is the way to the future ~ together through our hearts. Congratulations to everyone who had anything to do with this forum. And thank you Phillip Owen for having invited me.

CCRI INTERNATIONAL CONFERENCE - SEPTEMBER 2015

GeaSphere together with five community members from Mariepskop attended events associated with the World Forestry Congress, held in Durban from 7 – 11 September 2015.

The main event they attended was the Community Conservation Resilience Initiative (CCRI) Conference. The Global Forest Coalition (GFC) has been facilitating the CCRI processes in 20 countries, including South Africa. This workshop brought together around a hundred members from more than 70 organizations, and from more than 50 countries, which provided a very rich forum to share ideas and experiences. It was great to experience the solidarity in this group. We heard from various assessments that had already been conducted, and it was clear that there were many commonalities among various local struggles for a functional integrated environment.



Photo Credit: Global Forest Coalition

Most prominent was the threat of 'industrialization' of the landscape, with large 'agribusiness' turning the land purely into a commodity to be exploited for financial gains. It was common to hear from participants about large-scale timber plantations of pine, eucalyptus, palm oil and jatropha – all resulting in the degradation of the landscape and ultimately leading to the impoverishment of soils, biodiversity and livelihoods.

The Mariepskop representatives who attended the event left motivated and enriched by the experience, having found courage in the knowledge that any communities around the world are facing similar issues, and are similarly working towards positive change.

Philip Owen of GeaSphere was asked to represent the GFC at 'The Forest Dialogue', which was a meeting of leaders in the industry, with representatives from Sappi, Mondi, WWF and other very large corporations and institutions. Generally in these circles the view is opposite to those held by environmental and social activists. Industry

representatives predicted growth of “Intensively Managed Forest Plantations” (IMFP’s) due to the rising demand for wood as a fuel for ‘bioenergy’.

Philip Owen argued against IMFP’s on the basis that they are not sustainable; that they impact extremely negatively on soil, water and biodiversity resources and that this is leading to a collapse in ecosystem integrity. He called for real change in the development model, stating that diversity should be incorporated within plantation compartments, that wider ‘ecological corridors’ should be established, that indigenous timber species should be cultivated for a longer rotation, higher value product.

Discussions were held about the need for a proper definition of ‘degraded land’ as often land which is termed ‘degraded’ can still be home to a vast biodiversity and can naturally recover once pressure is removed, for example where ‘deforestation’ had occurred in a natural forest landscape. Instead, ‘degraded land’ is often used as a justification for ‘improvement’ by plantations establishment – which leads to a complete landscape transformation and loss of biodiversity and natural services.



Philip Owen at the Global Forest Coalition Conference Durban 2015, Source GeaSphre Website

Industry representatives did raise the issue of ‘physical sustainability’ challenges – clearly illustrating that growing conditions are becoming less favourable, as successive plantations of high impact monoculture impoverish the soil. There is no amount of bioengineering or technological fixes that can substitute for living soil at the scale which will be required.

It was interesting to hear industry representatives discussing diversification, and the potential of using indigenous timber species, instead of the current focus on two exotic species – pine and eucalyptus. For example, there are more than 600 indigenous timber species in Brazil, yet plantations are still limited to exotic species.

The final activity GeaSphre participated in was the Civil Society Alternative Program (CSAP) which was organized by members of the TimberWatch Coalition. This provided an opportunity to learn from grassroots organizations involved in various struggles around land degradation – significantly due to ‘fake forests’ or large scale timber plantations. Philip Owen delivered a presentation at the CSAP, where he talked about the ‘forestry’ issues with which GeaSphre has been involved, the value of grassland, certification, alternative diversity-based forest models and the need for civil society to participate in industry and government processes.

THREATS IDENTIFIED THROUGH THE CCRI PROCESS

Many of the internal threats were common to both areas, including 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.

Loss of Grasslands and Grassland Services, and Bush Encroachment

This refers to the phenomena of more and more woody vegetation such as acacia trees encroaching and taking over and replacing the original grassland vegetation. This is indeed a huge threat and a subtle tragedy, as grasslands in Mpumalanga are very biodiverse, with an estimated 4000 plant species to be found. Thus 'bush encroachment' leads to many grassland plants becoming extinct and a great loss of biodiversity and environmental services. Reasons for this range from bad fire management practise to 'climate change' whereby conditions are generally becoming better for trees to grow in this region.

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 dependent 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



Photo Credit: Liane Greeff

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 act 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.

Invasive Alien Plants

Invasive alien plants are a massive threat to indigenous diversity, and plants like lantana camara – which was originally used for ‘hedges’ and as ornamental plants – are spreading almost uncontrollably through this environment. These plants have seeds which are eaten by birds, and therefore are widely dispersed, including into areas that are difficult to reach and contain. Bugweed, cromelina, argeratum, jacaranda, pine, and eucalyptus are just a few of the many invasive alien plants which are fast becoming a massive problem.

Several initiatives exist to try and bring invasive plants under control, but this often requires the use of expensive herbicides and continuous maintenance, as the seed base of these plants have become well established and will be problematic for years to come.

Road Conditions

Community members complained that there had been very little maintenance of the provincial road – the R539 - which carries a lot of traffic, including heavily laden timber trucks. This has resulted in the steady deterioration of the roads. Roadside vegetation is also not being maintained, and these hardy plants are growing into the tar, speeding up deterioration of the road. Some local businesses have taken it upon themselves to do some of the road clearing and maintenance.

Poaching of Wild animals and plants



Snaring – which is the practise of catching wild animals using wire cable ‘snares’ - has widespread throughout the Houtbosloop Valley. Snaring is practised by people who live or work in the area, and who see an opportunity to augment their income. Many wild animals fall prey to being trapped in this manner, and often these include animals which are on the red data list. Sadly, animals are often caught and never ‘collected’ thus dying a horrible death for absolutely no purpose at all. Snaring has led to areas becoming completely denuded of wildlife.

Poaching of plants is also a major problem, especially concerning plants such as the rare and threatened ‘*Encephalartos humilis* (Dwarf Cycad)’ these plants are harvested and sold to cycad collectors despite strict legal requirements to trade in cycads in South Africa. For example, the value of a 30 cm humilis cycad is between R2000 and R3000 (CycadFriends, 2015), about double the current Government old age pension of R1350.

HEAL is a local organization supported by valley stakeholders, which is actively trying to control the snaring problem by locating and removing snares, explaining to all residents why snaring is illegal in this country. This is elaborated in a later section of this report.

Water Quality

Water quality in the local river has decreased significantly during the past few decades. This can be attributed to many factors, dirt road infrastructure, burning practise and large scale timber plantations which have been established in the upper catchment of the river. This has led to a loss of grassland and the grassland 'services' such as water retention and the prevention of soil erosion. Successive rotations of high impact alien plantations have led to more erosion, higher silt loads being carried by the rivers and much more turbidity in the rivers.



The high silt loads in the rivers in turn impacts on fish species and local community fishermen, as well as on local farmers. Some fish species have become locally extinct. In some plantation estates where the problems are particularly severe, 'silt traps' have been devised, but with no measurable effect on river quality. Recently, a farm producing vegetables could no longer export their produce due to high silt content in the water used for irrigation. See Annex 4 for an open letter to York Timbers in this regard.

In addition, unacceptable levels of the *Escherichia coli* (*E. coli*) bacteria have been detected in the river over the past two years. This is an issue of major concern, as many use the river for drinking or irrigation purposes. This has also forced local businesses utilizing the river water to apply more stringent chemical controls.

Impact of Dam Walls / Weirs on the Houtbosloop Rivers

A number of weirs have been erected in the Houtbosloop River which has affect it's ecological integrity. In particular, three weirs were erected at the Sudwala Lodge

approximately 20 years ago. These weirs are approximately three-metres high, and constructed in such a way that it forms an absolute barrier for fish species which used to migrate up and down the river.

Soon after the weirs' construction, river users upstream of the lodge started complaining about the 'absence' of fish, in particular yellow fish. The University of Johannesburg was approached and conducted a study which focused on the aquatic life in the river. The study found that the weirs were definitively responsible for the disappearance of yellow fish. This study was conducted before siltation from soil erosion became a significant problem.

Yellow fish used to be an abundant source of food, but now this resource has become locally scarce. Catching Yellow fish has also become a popular 'sport angling', catch-and-release species, but this 'eco-tourism' opportunity is no longer an option for local river users upstream of the weirs.

Apart from the impact on aquatic organisms, the weirs also affect the quality of the river in the area of the weirs generally. Debris gets lodged behind the weirs, and even during floods the river cannot scour the bulk of this material. The clear rocks which used to be visible are now covered with branches and sediment.

The various owners of the lodge have been approached at various times with regards to this problem, and potential river restoration projects discussed. Previous management commissioned research with regards to the viability of utilizing 'fish ladders' which could in theory allow some fish the ability to travel upstream. However, it was concluded that fish ladders are not an efficient solution. The best solution would be to break the weirs down and restore the original river flow, an action which would result in landscape changes at the lodge property.

The Houtbosloop River is vital in its supply of water to the residents of Mbombela and further down the Crocodile River system. The Houtbosloop River is a tributary of the Crocodile River, which in turn is a tributary of the international Komati River, which flows through Swaziland, South Africa and ultimately joins the sea near Maputo in Mozambique. It is therefore important that everything possible should be done to restore the integrity of the local river systems – by clearing alien vegetation, restoring grasslands, controlling erosion and breaking down barriers – to contribute towards the ecological integrity of our international rivers.

Abandoned Gold Mine

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 realize 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.

Inadequate Service Delivery, especially Water and Sanitation

Service delivery is poor, and many residents lack adequate water and sanitation provision. For this reason there is often 'service delivery protests' and the area is known as a 'political hot' area. GeaSphere did experience an incident when they were caught up in the violence on route to this project area. Fortunately, only the vehicle was stoned, and no-one was hurt. The one volunteer staff member was traumatised, and the windshield of the vehicle was cracked.



Photo Credit: Liane Greeff

During the Mariepskop Community Resilience Assessment, numerous issues were identified, including deforestation, loss of biodiversity, uncontrolled sand mining, littering and pollution, soil erosion, loss of indigenous knowledge and more.

Disposable Nappies/Diapers in Rivers and Streams

One of the serious issues raised during the assessment process was plastic pollution. This was clearly evident in the many areas within the broader Mariepskop assessment site, as one can see plastic pollution everywhere. Of major concern to local people is that people discard used disposable nappies in the rivers and streams, especially at bridges. This has significant health implications and participants in the workshop made a strong plea for this problem to be resolved. One approach to resolving this issue has been to hold several "river-cleaning" events, where local people get together and remove the rubbish from the rivers. This aims to both clean the river, and to set an example to community members and encourage them to not pollute.

Due to this issue being raised repeatedly by Mpumalanga water activists, as well as by communities in other parts of South Africa, members of the South African Water Caucus (SAWC), which is a network of organizations involved in the water sector, wrote a letter (see Annex 2) to the large corporations who are responsible for (i) the production of disposable diapers, calling for disposable nappies to be redesigned to be wholly non-toxic and compostable, and (ii) for collection points to be established from where used nappies could be collected, re-cycled and re-used in ecologically



responsible ways by the companies that produce, distribute and market them. This illustrates the power of cooperating with organizations and networks such as the SAWC, and the benefits this holds for communities in the CCRI assessment sites, who can engage more directly with these initiatives and thereby to improve the living conditions within the environment.

Industrial Timber Plantations

In both assessment sites Industrial Timber Plantations (ITP) have been established in the upper catchments. These plantations are common throughout the South African provinces of Mpumalanga, Limpopo, KwaZulu-Natal and the Eastern Cape, along the mist belt areas of the Drakensberg escarpment. As South Africa is dominated by non-forest vegetation types such as grassland, savannah and renosterveld, early timber requirements resulted in the existing forests being decimated for construction, until, with few exceptions, only fragmented forest patches remain.



In the early 1900's the establishment of plantations was primarily for use within South Africa, to provide building materials and support struts in the mines. From the 1960s onwards, the demand for timber grew with the establishment of pulp mills, especially in the provinces of Mpumalanga and KwaZulu-Natal.

The Ngodwana Pulp Mill at Ngodwana in Mpumalanga Province is one of the biggest pulp mills in Africa, and recently it converted some of its facility for the production of cellulose, thus driving future demand for raw timber.

Timber plantations have a high impact on biodiversity, as well as on water and soil resources. In South Africa, these plantations, mostly of alien pine and eucalyptus species, have been established primarily on what used to be grassland areas. The grassland plants cannot adapt to the conditions in a monoculture timber plantation. Significantly, the plantations 'shade out' the grassland plants, which are adapted to abundant sunlight. Gradually, the grassland plants get buried under a thick layer of eucalyptus leaves or pine needles. Plants create habitat for other components of the ecosystem, such as insects, birds, reptiles and mammals. These animals either have to move away or die with their environment. This results in timber plantations often being very quiet as they lack insect and bird life.

Timber plantations have been established in the higher rainfall areas of South Africa, primarily the 'escarpment' or 'mist belt' area, which is the transition from the 'high veld' to the 'low veld'. These areas receive generally more than 650mm of rainfall per annum – which is the minimum needed for timber production.

Plantations trees (pine and eucalyptus) are 'evergreen' indicating that they utilize water throughout the year, with deep rooting systems capable of reaching groundwater

resources. The most severe impacts can be observed during the dry winter season, when fountains and streams can dry up completely. In timber growing areas, many of the small fountains high up in the valleys have dried up completely, and only start flowing once the timber plantations had been removed and the groundwater table had sufficient time to be replenished.

The Klaserie River flows through the Mariepskop assessment site. Stream flow in this river had been measured from 1935, when the first timber plantations were established in the area. The table (Van der Schyff and Schoonraad, 1971) clearly shows how much water had been lost from the system – purely due to the impact of high impact plantations. For instance, between 1935 and 1940, the mean annual rainfall measured at the Mariepskop forestry station was 1729 mm, and yielded a mean annual runoff of 143 million cubic metres, measured at the Klaserie River. The higher rainfall of 2060 mm between 1955 and 1960 yielded only 20% of the runoff.

Period	Mean Annual Rainfall (mm)	Mean Annual Run off (m3)
1935 - 1940	1729	143.07 million
1941 - 1945	1122	48.72 million
1946 - 1950	1332	38.43 million
1955 - 1960	2060	28.72 million
1961 - 1964	1308	16.58 million

Table: Mean Annual Rainfall and Mean Annual Runoff 1935 – 1964
(Van der Schyff and Schoonraad, 1971)

Timber plantations replace grassland, destroying the inherent water retention service. This leads to increased erosion and siltation of the river systems. This problem is made worse by ‘clear cuts’ and burning of ‘slash’ which is the material left behind after the logs had been removed. These fires burn hot and have the effect of ‘baking’ the soil, which makes soil more ‘hydro-phobic’ thus preventing penetration of water and leading to increased erosion.

Diverse soil ecology with abundant micro life and nutrient recycling is a requirement for sustainable ‘productivity’ of soils. These conditions cannot be maintained in a monoculture timber plantation, where the absence of diversity causes a gradual soil impoverishment. In recent years, more chemical fertilizers are being added to boost tree growth. With each successive rotation of timber, more damage is being inflicted on the

soils, which would have disastrous long term Implications, and impact negatively on soil sustainability and environmental resilience.

Timber plantations operations are heavily mechanised and provides much less employment opportunities than a diverse form of agriculture with crops being grown and harvested annually. Tree plantations in the CCRI assessment areas are on 15 – 25 year rotation cycles, thus there are long periods of time where minimum physical interventions are necessary.

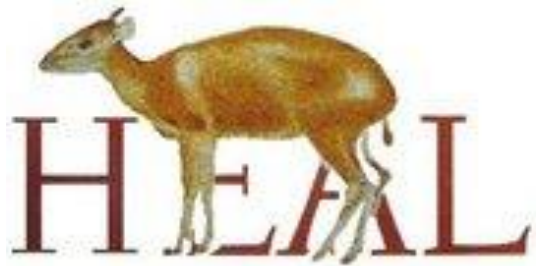
Generally in South Africa and especially in the Mariepskop assessment site areas the lack of employment is an issue which leads to a reliance on meagre social grants and a struggle to survive. A forestry model which is diversified and supplies a multitude of services and benefits to nature and people is needed.

POSITIVE INITIATIVES IN THE SITES OF THE CCRI

Houtbosloop Environment Action Link

HEAL, which stands for the Houtbosloop Environment Action Link, is a local non-profit environmental organisation, operating in the Houtbosloop, Stadsriver and Schoemanskloof Valleys, an area approximately 30km west of Mbombela. Four rangers are employed on a full-

time basis and they patrol members' properties searching for snares set by poachers and anything untoward which may impact upon the environment, such as dumping of litter and illegal harvesting of indigenous plants and trees. They are well trained and do their utmost to guarantee an intact environment in these three valleys.



The HEAL organization is funded by different landowners in the mentioned valleys including private persons as well as companies such as SAPPI, Komatiland (Uitsoek), TRAC N4, Joubert and Sons Citrus, Bundu Poles, Sun Pallets, Mikon Chickens, Pine Valley Timbers and others. The members of HEAL contribute to a collective fund that enables the organisation to employ rangers and buy equipment like uniforms, bicycles, etc.

The Rangers submit a monthly report about their work which includes information on the number of snares found and what animals have been seen. Since HEAL started in 2001, more than 14000 wire cable snares have been removed from the valleys, and there has been a noticeable increase in wildlife. HEAL rangers spread awareness amongst the local people that snaring is illegal and not sustainable.

The potential establishment of the Central Escarpment Reserve (CER)

The Mpumalanga Tourism and Parks Agency (MTPA) announced in 2013 that plans were underway to establish the fourth largest protected area in South Africa - the 120 000 ha Central Escarpment Reserve (Hes, 2013).

In May 2013, a consultative process was launched to ask residents of the Houtbosloop Valley and the broader community to support the development of the Central Escarpment Reserve (CER) Initiative, which would involve the establishment of a 120 000 hectare 'fenced reserve', with the main borders and fence lines being defined by the major national roads – which are existing wildlife barriers. The reserve could extend roughly from the Schoemanskloof Road in the south to the R37 'Long Tom Pass' in the north. The western border could be the R36, the Bambi-Lydenburg Road, and the eastern border could be the N4 / Stadsriver / R539 (Osberg, 2013).

One of the challenges for a project of this scale, it is that it is essential that there should be comprehensive consultations amongst the communities and stakeholders who would be affected, and that a detailed project plan should be developed in a multilateral way.

The target area for the CER includes the entire Houtbosloop Valley which is one of the CCRI Assessment sites, as well as some adjoining valleys. Though much of the area has been converted to industrial timber plantations, there remains a significant amount of wilderness and semi-wilderness, comprised primarily of riparian forest, mountain forest, savannah and grassland, known as the North-eastern Mountain Sourveld.

Much of the wilderness area is compromised due to alien invasive plants, bush encroachment, fire management practices and the absence of megafauna, such as eland, wildebeest, elephant and buffalo. These animals fertilize the bush, and also 'open up' areas, which make it easier for smaller mammals to move around. The CER provides an opportunity to bring these larger herbivores back into the environment where they belong (Osberg, 2013).

The CER project recognize the challenges that human development in the area pose. There are a variety of land uses current in the target area, including fruit and nut farming, timber plantations, timber processing plants, chicken production facilities and tourism sites and ventures. It is envisioned that all these diverse land uses will be accommodated within the reserve. Measures would be taken to mitigate any human wildlife conflict.

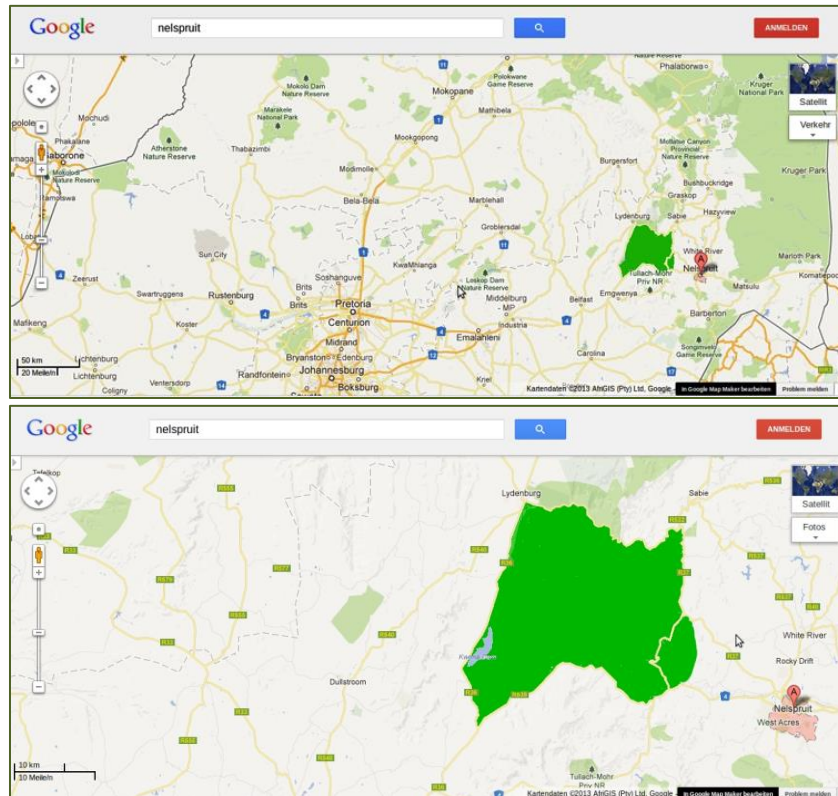
It is envisioned that special value crops in the target area, such as macadamia nut, pecan and avocado orchards be fenced in order to keep out wildlife. There is a major regional road that is located within the eastern part of the proposed reserve, and it is likely that parts of the road would be fenced in. Where possible, roadsides would be kept open for visibility and safety.

The proposed reserve would have manned and monitored entrances, where information regarding the reserve could be available to visitors and travelers. Such monitored entrances would add to security in the region generally, where violent crime has been on the increase. The Central Escarpment Reserve will also be able to utilize appropriate technology to monitor wildlife movements in the area.

The Central Escarpment Reserve is a bold initiative, only possible if there is comprehensive cooperation between the many and diverse stakeholders. If this project is realized, it would hold obvious benefits to the integrity of the environment, and assist in building 'resilience' in nature. The CER Initiative would motivate all landowners and

stakeholders in the area to agree to an integrated management plan, for example to engage in alien plant control projects and general land rehabilitation and restoration.

The timber industry – which makes up the majority of landowners in the area – would have to potentially consider opening ‘migration corridors’ through some plantations to allow free movement of animals in the area. Any such action to make available habitat to wildlife would be beneficial to the resilience of the integrated environment.



Map showing the location and size of the Proposed Central Escarpment Reserve, Google

The primary obstacle to the realization of the CER project is funding. The infrastructure required is extensive, including over 200 kilometres of wire fencing, costing over 20 million South African Rands. This would need to be raised.

Even though the idea is still in its very early phase of development, it does allow for increased awareness of the benefits of cooperation and integrated land management and planning, and inspires a vision of a diverse community of people living in a mutually beneficial relationship with nature.

Community Policing Forums

As a result of escalating crime and uncertainty with regards to personal safety among residents of the Houtbosloop Valley, a Community Policing Forum (CPF) was

established in 2010. This forum meets every month to discuss crime and to receive feedback from private security companies operating locally and from the South African Police Service (SAPS) representatives.

Most residents in the Houtbosloop Valley assessment site live in isolated locations, relatively far from each other. From experience, residents know that the police service is very slow to react and it can take many hours for the police to arrive after an incident has been reported.

In recent years, there have been several cases of 'home invasions' where violent attackers have caught families by surprise, have tied them up and robbed them of any valuables or weapons. Fortunately, in both cases neighbours or private security companies could be alerted before any serious injuries could be inflicted. This is particularly notable because the murder rate in South Africa has increased for a third consecutive year, and in the recent statistics fact sheet published by the Institute for Security Studies, 17 805 people were murdered in South Africa over the one year 2014/2015 cycle. This translates into an average of 49 people being killed in South Africa every day, and a further 48 cases of attempted murder every day, making South Africa's murder rate more than five times higher than the 2013 global average of 6.2 murders per 100,000 (Newham, Lancaster, Burger and Gould, 2015). According to the same report, visible policing has been proved to reduce crime.

At the establishment of the CPF, residents all bought two-way radios, to enable community members to be in touch with each other in case of any emergency. These radios are tested on a daily basis. Local women are responsible for the coordination of the 'radio check'. The radio system is the most reliable way of ensuring assistance in case of emergency, as the system ensures neighbours will arrive long before the police. Using these radios build a form of trust and solidarity among the community of users.

The CPF in the Houtbosloop assessment site indicates a significant polarity of race groupings and racial relations in the valley. The CPF is almost exclusively used and operated by the designated 'white' community members. The goal of the CPF is to facilitate the security of all communities in the valley, and therefore, it is necessary that community members of all races should be stakeholders in the CPF. The current chair, Mr. Willie Coetzee, has stated his intentions that the CPF become more in line with the demographics of the Houtbosloop Valley's stakeholders and that he will actively work towards this end.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

The Mariepskop site is known as a political hotspot, civil society is active and has high organizational 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 utilization and management of the local river systems. More community participation should be encouraged, and 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 combatting invasive species in grassland areas. Additionally, they have founded an organization 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, including implementation of the CCRI. 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: CHIEF MARIPE MASHILE



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 finalized, people will again become stewards of the land.

He speaks of rehabilitating and diversifying the Mariepskop Mountains and investing in local ecotourism opportunities.

WAY FORWARD – THE FUTURE OF CCRI IN SOUTH AFRICA

As a facilitating organization, GeaSphere is aware of the value of the CCRI processes, and the need for sustained interaction and cooperation with various stakeholders. It is necessary that participants are able and capacitated to disseminate solutions to the challenges.

During December, 2015 a second national CCRI workshop will be held where solution strategies to the issues identified will be discussed and developed. The aim of the second National CCRI Workshop is to examine the community projects and proposals aimed at providing solutions to the issues identified at the first workshop held in August 2015. Whilst there have been a number of preliminary results from the different community meetings, these will be further investigated and discussed, in order to clarify final project results.

The problems identified in the assessment sites are relevant to a large area with similar eco-sociological dynamics. There is a need to disseminate information regarding the initiative to more communities. It is envisioned that an 'information campaign' could be launched where various media will be used to stimulate awareness.

In the Mariepskop Assessment site, representatives from the three villages formalized a committee in order to facilitate CCRI initiatives and projects in the area. The committee is drafting a proposal for support to facilitate an activity in the community to strengthen community conservation resilience.

In the Houtbosloop Valley, the CCRI will be discussed when all stakeholders of the Houtbosloop Environment Action Link (HEAL) gathers for the organizations' AGM in December. The work of the HEAL organization is invaluable with regards to strengthening community environmental resilience, and HEAL provides an appropriate forum for collaboration.



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Annex 1: Community Conservation Resilience Assessment Brochure South Africa

Community Conservation Resilience Assessment



Project Goals

To sustain and strengthen the resilience of community conservation practices

Project Steps

- Request free prior and informed consent from the community
- Define the community: location, history, environment and conservation practices
- Verify existing and potential threats
- Establish methods for assessing community resilience
- Determine how the community resilience can be improved



What is Community Resilience?

The ability of a community to respond to disturbance or change by resisting damage and recovering quickly.

A community is a system that includes:

1. all the members of the community
2. the environment they interact with

A disturbed system with low resilience may lose **ecosystem services** – the things that people use from their environment.

Examples of Ecosystem Services:

- Wood for fires or building
- Clean water to drink
- Clean air to breathe
- Soil in which to grow food
- Biodiversity for system resilience

What are community conservation practices?

How the community is managing the way the people interact with and use their environment.

Good practices can help a community avoid losing important ecosystem services – to be more resilient.

What can threaten community resilience?

- Fire or Flood
- Clearing of natural vegetation
- Over-harvesting (plants/animals)
- Invasive alien plants
- Pollution
- Soil Erosion

Annex 2: South African Water Caucus Letter re Disposable Nappies in our Rivers and Streams

To Whom It May Concern:



Disposable Nappies in our Rivers and Streams

We write on behalf of the members of the South African Water Caucus (SAWC).

The Water Caucus is a broad coalition of Civil Society Organizations involved in monitoring the water sector.

During the past few years, water quality in South Africa has decreased dramatically. This is as the result of pollution from various sources including such as drainage from mining sites, chemical run-off from large scale agriculture, industrial effluent and inadequately treated sewage from under performing waste water works, as well as from the direct disposal of human waste into water courses.

The situation is further worsened by the deterioration of natural ecosystems, such as wetlands and grasslands, reducing their ability to act as 'filters' for our water systems. This has led to a situation where most of South Africa's rivers have lost their 'dilution capacity', and many fresh water and marine aquatic organisms are under threat.

The Water Caucus regularly hosts meetings in rural areas with participants from local communities. A common concern in these areas is the way disposable nappies are being discarded into local river systems. At almost all bridges where rivers are being crossed, people are 'disposing' of their disposable nappies. This in itself is an action which is thoughtless and irresponsible. As the Water Caucus we are committed to a campaign to raise awareness regarding this issue, and to explain to people that disposing of nappies in this way is harmful to the environment and to downstream communities living close by or dependent on the rivers for their water.

Of significant concern are the non-biodegradable and/or toxic materials found in 'disposable' nappies, especially the absorbent gel (sodium polyacrylate) and zinc, found in the skin protecting cream of some nappies

We strongly believe that the producers of these products should take responsibility, and therefore demand that measures be implemented to curb this pollution problem and health hazard:

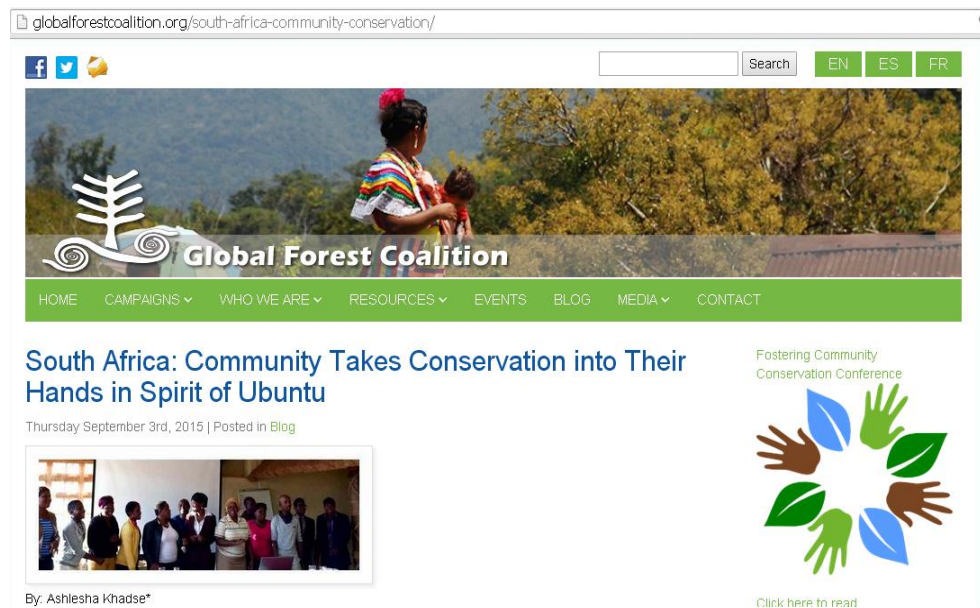
Disposable nappies should be redesigned to be wholly non-toxic and compostable.

Collection points should be established from where used nappies could be collected, re-cycled and re-used in ecologically responsible ways by the companies that produce, distribute and market them.

For the sake of ecological integrity, the corporations that profit from these products should take the lead to solve this problem. Currently the costs are 'externalized' and carried by the natural environment and our peoples that depend on these products.

We look forward to your full co-operation in taking steps to eliminate this growing problem.

Annex 3: GFC Press Release and Blog: South Africa: Community takes conservation into their hands in spirit of Ubuntu by Ashlesha Khadse



The screenshot shows the Global Forest Coalition website. The header includes the URL globalforestcoalition.org/south-africa-community-conservation/, social media icons for Facebook, Twitter, and YouTube, a search bar, and language selection buttons for EN, ES, and FR. The main banner features the GFC logo and the text "Global Forest Coalition". Below the banner is a navigation menu with links for HOME, CAMPAIGNS, WHO WE ARE, RESOURCES, EVENTS, BLOG, MEDIA, and CONTACT. The featured blog post is titled "South Africa: Community Takes Conservation into Their Hands in Spirit of Ubuntu", dated Thursday September 3rd, 2015, and is attributed to Ashlesha Khadse. The post includes a photo of a group of people and a graphic for the "Fostering Community Conservation Conference" which consists of hands and leaves in a circular arrangement. A "Click here to read" link is provided below the graphic.

At least 20 representatives from 3 communities of Boelang, Moloro, Maotole in the Mariepskop region as well as local NGOs like HEAL, AWARD and GEASPHERE gathered near the Sudwala caves to talk about some of the major problems that forest communities face and the solutions to these issues.

The main concerns that came up were poachers operating in their areas, the serious pollution to water sources as well as the increase in alien tree plantations. A wide range of issues, they represent the reality that local forest communities deal with on a daily basis. Their aim they said is to conserve the plants, animals and water systems in their areas, which will also directly improve the quality of their lives.

Plantations undoubtedly stood out, not just in the conversations but also the in the landscape that surrounded the meeting venue. These usually bring invasive alien species like the water guzzling eucalyptus and acacia. They wipe out local indigenous tree species. Plants like lantana, a highly invasive species, are spreading like wild fire and are dangerously uncontrollable. Many of these wipe out medicinal plants and trees that form a fundamental part of community health systems and traditional medicines, putting peoples well-being at risk.

While many blame community members for killing wild animals, a park ranger clarified that the real problems did not arise from subsistence poaching that community members did for their own food by setting up one or two traps. Rather, it was gangs that operate and decimate entire animal populations in a small area by setting up to 300 traps in one night. Community members, they suggested could play a big role in policing this and also managing areas for their own use. A local community organization HEAL is doing that, and have in the past removed up to 14000 snares saving the lives of countless animals from poachers.

The local rivers that provide the main source of water have been seriously threatened. On the one hand they get run off from the plantations that are salting the water sources, killing fish and making it unusable. There are also a lot of used cans and plastic bottles that are being strewn about by people. Community member showed great resolve to do something about this.

Littering remains a daunting problem. Disposable nappies topped the list. It literally comes up in every meeting on water issues said the participants. People expressed that their rivers are blocked with nappies, in fact some local groups said that they found such large quantities of nappies that it even seemed like they were coming from an industrial source, maybe a hospital. Others said that people just came in trucks and threw their bags here and left.

Some even held the corporations like Coca cola and Kimberly Clark partly responsible. The companies actively set up distribution points for selling their products, making serious profits, but no collection points for their waste. While a blame game was not deemed productive, the house agreed that a variety of solutions had to be proposed including demanding rights from governments whose responsibility it is to provide trash clearance facilities so people don't have to secretly dump waste.

The Kumalanga valley communities have found some interesting local solutions to this problem. Besides their efforts to work with local officials, they also have local communication tools like WhatsApp groups that have proven useful for sharing photos of culprits who dump their trash to stop them in the future.

The meeting ended with a real sense of *Ubuntu* – a South African term for cooperative and generous spirit. Everyone left with a strong resolve to continue their ongoing efforts to make their communities, territories and nature a place they can proudly call home.



Annex 4: Open letter to York Timbers regarding Siltation

Dear York Timbers Management

On your web site www.york.co.za, we find the following text:

"York Timbers is located in the heart of Mpumalanga, "Place of the Rising Sun," a place rich with forest plantations, clear running streams and national parks where animals such as lions, elephants, zebras and giraffes roam free. At York Timbers, environmental conservation and the sustainable management of its forestry operations are critical to its corporate responsibility. York Timbers promotes its commitment to the environment through its sustainable forestry practices, protection of biodiversity, preservation of natural heritage sites and sponsorship of several environmental education initiatives. York Timbers takes pride in its membership in the Forest Stewardship Council and wholly supports the Forest Stewardship Council's principles of environmentally appropriate, socially beneficial and economically viable forestry management."

The description above does not describe the reality truthfully, and we believe you are misleading the public.

We are concerned about the environmental integrity of the Houtbosloop River, a tributary of the Crocodile River in Mpumalanga. Since the start of the rainy season this river has been running red like blood due to soil erosion, a far cry from the 'clear running streams' described on your web site. The source of this massive soil erosion is from York Timbers Plantations, in the upper catchment of the Blystaanbospruit, a tributary of the Houtbosloop River. We understand that some of this is due to the massive fire experienced in York plantations (Blystaanhoogte), close to Long Tom Pass, where more than 900ha top soil / organic matter was destroyed by the intense heat.

We are afraid that the siltation of the river is causing severe problems to the river ecology, potentially destroying one of the few remaining healthy river ecosystems in Mpumalanga. The impact is not restricted to river ecology, fauna and flora, but also to the local communities, causing pumps to clog and forcing farmers, lodge owners and river water users to use alternative sources such as boreholes if available, or are forced to use the 'dirty water' if no filtration systems are available.

We understand that York timbers had already implemented some mitigation measures, such as the erection of some silt traps. However, it is very clear that the mitigation measures implemented have had little effect, and we thus urge you to do more. We understand that it is possible (and has been done before) that seed of an annual grass such as tef could be sown from the air. This may have the effect of stabilizing the soil in the short term.

York Timbers should establish a 'rehabilitation fund' - which should be used to rehabilitate the areas where the soil has been degraded and biodiversity impoverished by successive rotations of high impact alien timber plantations.

In the longer term, implementation of grassland ecosystem rehabilitation is of vital importance if there is any hope of ecosystem integrity. Furthermore, York Timbers management should have the foresight to implement management models which will change the monoculture timber plantation industry – towards a diversified production model with logical natural sustainability principles, such

as organic diversity, multiple level use, incorporation of animals and zero chemical use. True land stewardship is needed. FSC certification of high impact plantations where valuable grasslands have been destroyed is not appropriate.

Affected people downstream should be compensated for the inconvenience the dirty river causes, and river rehabilitation measures should extend beyond the borders of York Timbers properties. A good start could be a comprehensive study to determine the impacts and long term consequences of this siltation.

Fire has been part of the natural ecosystem for hundreds of millions of years, and is in fact vital to the integrity of indigenous grasslands. A healthy fire does not affect grassland negatively and the grassland soon recovers, because most of the plant biomes in a grassland is underground. In this area fire can be ignited naturally such as by lightning strikes, and it can never be completely eliminated as a threat to plantation companies. Planting crops which use less water (such as indigenous trees for saw-logs and industrial hemp for pulp) will lead to less dehydration of the general environment and less fires burning out of control.

It is thus not reasonable to blame the fire for this catastrophe, but rather the blame must be on the high impact monoculture production model which have been imposed upon and is degrading our environment.

Please let us know urgently if you plan on implementing any of the mitigation measures described above, or if you are taking any additional steps to halt this erosion.

We look forward to your response.

Philip Owen
GeaSphere