

# Being a voice for the Bragspruit Wetland: Context and new knowledge

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Action Voices



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## Who are we?

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Action Voices is a project of the Benchmarks Foundation. It houses the Mpumalanga Community Monitors, a group of volunteers based in the Upper Olifants Catchment in the Highveld region, who monitor the management of clean and safe water use. Three members of Action Voices participated in this course: Lorraine Kakaza, Susan Moraba and Collen Jolobe.



## Introducing our Change Project

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Our project will be conducted in the Emalahleni, Vosman area, which is next to the N4 and the KG Mall, and between Vosman location Ext. 3 & 5 and Emsagweni location. The main issue of the project is the level of pollution of the stream/wetland in this area. The main goal is preserving the water sources for future use by keeping them clean, protected and maintained, as we believe 'Water is Life'.



Our project will focus on the rivers, wetlands and spiritual water users. The project's biggest challenge is that the communities are not aware and don't care anymore about keeping streams/wetlands clean; they dump waste next to it, such as plastic bags, nappies etc. But the mines and the KG mall are also causing heavy pollution of the stream/wetlands. According to the communities, the municipality is not doing anything, besides making promises. For activist's it's often difficult to really change anything, due to a of lack of funds. Since our change project is supported by the Environmental Monitoring Group, we can really try and make the change we want to see happen.

We chose an awareness campaign on the importance of wetlands to try and change people's mindsets, so people stop polluting the wetland by throwing in waste.

### **What are the main questions guiding our action research?**

The main questions our project addresses are:

- What does a clean and a destroyed wetland or stream look like and how can we spot the difference between a clean and a damaged wetland or stream?
- Why are clean wetlands so important; what are their functions and benefits?
- How do we clean, monitor and preserve a wetland, apart from cleaning up (and preventing the dumping of) waste: which chemicals in the wetlands are we dealing with; what does the IDP and other laws say about the stream/wetland?
- What is the relationship between the community and the stream/wetland, including the spiritual water users?

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## What is the context? What has already happened?

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The water that flows through the wetlands and the stream comes from the Brugspruit River and joins up with the Olifants River and other segmented small tributaries and dams. The flow of the stream/wetland is narrow and has changed due to rain and other natural degraders, such as soil erosion and drought.

In 2014-2015, when Action Voices was working with the Mpumalanga Youth Against Climate Change and the Ihawu Lemvelo, together with the Bench Marks Foundation lead researcher David van Wyk, samples of wetlands water were taken and tested. The total dissolved solids were 5000 times higher than normal required levels, and the water was full of acid mine drainage. This comes from the abandoned mine from the Transvaal & Delagoa Bay Coal Mine that closed over 50 years ago. So, this problem has been going on for a long time.

Apart from the acid mine drainage, the wetlands and stream at Vosman are very dirty with waste material, animal skulls, sewerage flowing through from the residents' houses and yards, from the main drainage pipes on the streets and from the sewerage pipes from the KG Mall. Since the water is so polluted, the stream is no longer used for rituals, baptisms and other (traditional) uses by the nearby community, not even for washing clothes. Small gardeners are complaining that their crops are dying when they water them from the stream or are flooding and then dying when the rainy season starts. The water smells bad of sulphur dioxide and runs into the shacks when the wetland is overflowing, which makes the steel sheets of the shacks rust. People have been reporting this stink and claim they get skin rashes from the water – but still children like to play next to it. When people have no drinking

water, they can't use the stream/wetland's water, as that is too polluted with sewer chemicals, acid mine drainage and other waste material chemicals.

For our project, we have chosen to focus on one issue at a time. We started by mapping the area and looking at the history of the place: what has happened, how do people live next to the stream/wetlands, what did the municipality do to service and develop the place? We walked around, made observations and interviewed people about their lives and their use of and experiences with the stream/wetland. We looked at relevant laws and regulations, including the constitution, the National Water Act and the NEMA Act. We strongly feel that the municipality is letting the communities down by not adhering to the wetland-related policies in place (as under the National Water Act of 1998, and the National Wetland Inventory developed for the South African National Biodiversity Institute) and not developing or servicing the area at all: no proper roads, electricity, sanitation or waste removal. The communities have seen ward councilors come and go, making promises that they will address the issues, but nothing happens. As a result, people dump their waste in and next to the stream/wetland.

Since the waste is partly coming from the communities themselves, we've chosen to firstly work with communities and try to educate them about the importance of wetlands and how to keep and preserve the water for future generations.

We've talked to the councilor about how she would be able to assist us in this project. Besides building up trust with her, we are also going to formally write her a letter and keep minutes of the meetings. In addition, we have held a meeting with the ward committee members, educating them on the environment, ecosystem, climate change and global warming, aiming to create understanding about the importance of keeping the wetlands clean. We've put up signs saying: 'No dumping please, save our wetlands!' As alternatives for the communities' dumping of waste, we've suggested weekly burnings or burying it in a hole. We've also suggested that a committee be set up to monitor the situation. Finally, we are trying to engage with Mpumalanga Water Caucus to clean the stream on a set day as an awareness campaign to emphasize the project.

Now we need a specialist to help us properly understand the wetland's situation and help us test the water. Mr David Van Wyk promised to put us in contact with a specialist from the University of North West who can help us rehabilitate the wetland and bring the water back to user friendly conditions, so the community can use the water again for their daily needs.

**The total dissolved solids were 5000 times higher than normal required levels, and the water was full of acid mine drainage.**

## Building a knowledge network

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For our change project several organisations have proven to be very helpful. We list them here and indicate why they are so useful to us: which information (sources) they provide, which links or access to other stakeholders they can facilitate or how they can help raise awareness for our cause or assist in putting our cause on the agenda. We also list useful media sources and documents. We hope our reader finds them useful too.

### Government

**Department of Water Affairs and Forestry (DWAF) from Free State Department of Tourism, Environment and Economic Affairs and the Department of Water and Sanitation (DWS)** have been good sources of information on relevant policies and legislation on wetland conservation and rehabilitation. We learned from this that even though many water policies and guidelines are in place, it doesn't mean that they are followed at municipal level. The project also realised that without knowledge, one cannot understand or know about the laws implemented in the country. We also realised that we tend to shy away from our traditions in keeping sacred places safe, such as the wetlands and its inhabitants.

**Department of Environmental Affairs**, especially Dr. Piet-Louis Grundling, deputy director for the program implementation, working for wetlands, explained how chemicals from industries are a threat to wetlands and the ecosystem, as is climate change.

### NGOs/CSOs

**AWARD** is a NGO, based in Hoedspruit, that is working with environmental issues. Derick Du Toit really helped us to sharpen our thinking in this project. He asked us what we thought needed to change and what we wanted to change. He taught us to really look at the problem and find the root causes. He also said that if you can't change a situation, you can still make it better. But for change to happen, we need to start changing mindsets. And if we want to do that, what kind of information do we then need?

We learned that we needed to know about our project area (mapping it out, getting to know the area, its actors and its problems: how do we know when a wetland is dirty or healthy and who exactly is doing the polluting (and how can we hold them accountable)?). Derick Du Toit was also able to inform us about the factory that is the main polluter of the acid mine drainage:



it is a steel and vanadium mine and those heavy metals are now flowing into the stream. The factory is located about a kilometer from the community and about 300 meters from the flowing stream/wetland.

We also understood that we needed to know about legislation around water and the environment.

**Benchmarks Foundation**, is the NGO that Action Voices falls under. Dr. David Van Wyk has been very helpful in making us understand how water sampling works, how you can tell what levels of chemicals are present in the water. He also spoke to us about climate change and how we, as a country, urgently need to start being more aware of how we can save water and which alternative sources we can use, like rain water and underground water.

**Groundwork** is an NGO, focusing on environmental issues. Victor Munnik, who also works for Rhodes University and Wits, also gave interesting insights into the importance of wetlands and how a healthy wetland can benefit people. Wetlands can be restored after having been polluted, and then need protection.

## Networks

**Mpumalanga Water Caucus** is a network of civil society activists, focusing on water issues, like how to clean up polluted water sources. That is very useful to our project. We also learned about the importance of clean wetlands/streams, as they provide communities with clean water - which also serves the traditional healers and spiritual water users - and nurture living organisms. We also learned that it is important to keep the area around the stream/wetland clean, as that will also benefit the communities.

The **Save Mapungubwe Coalition** have given our project continuous support. Dr. Ndakuyankhe Ndlovu is a senior lecturer in Archeology at the University of Pretoria and a member of the association of Southern African Professional Archeologists. Yolán Friedman is the CEO of the Endangered Wildlife Trust, Melissa Fourie is executive director at the Centre for Environmental Rights and Dean Muruven is the water source areas programme manager at World Wildlife Fund for the Nature South Africa, Matshaya Mathiva Seremane is a descendant of Mapungubwe and a committed Lemba from Vhemmbe district of Limpopo. They all strive for healthy and clean water sources in a healthy environment that the next generation will inherit, as is their right. We've also learned that the South Africa freshwater systems have been mapped and classified into National Freshwater Ecosystem priority areas. These show that 60% of our river ecosystems are threatened and 23% are critically endangered. The

health of our rivers is measured by the diversity and health of the species we share these resources with. Mine pollution remains a major threat to all of South Africa's water resources and extends to human and animal health and crop production.

## Legislation

**Legislation on IDP, NEMA and the Constitution** taught us how government, at all levels, is functioning and what legislation they need to adhere to. For instance, municipalities need to audit and plan according to the IDP rules, and they have to be open and transparent about what and how they have done this, but it is not always easy to get the information you are looking for.

## Media sources and documents

**Rand Water (Water wise) Johannesburg** ([www.waterwise.co.za](http://www.waterwise.co.za)) has helped us in answering many questions on wetlands, causes of water pollution, classifications, types, benefits and destruction of wetlands. We learned that wetlands provide habitat to many birds and fish, function as natural filters capable of storing and degrading many pollutants, such as phosphorus and heavy metals, creates natural dams and prevents flooding after heavy rains.

**Benefits of wetlands (YouTube, published 12 December 2012 by Oklahoma gardening host OSU Consumer Horticulturalist Tim Toscana and Dr. Jason Vogel, associate professor of biosystems and agricultural engineering)** provided much information on cycles of wetlands, what wetlands provide, the importance of insects and plants in the water and how that is an indication of the health of the wetland, and in general how to tell when a wetland is in good condition.

**Working for wetlands, wetlands and rehabilitation of benefits occurring from the wetlands** mentioned these benefits: improved livelihood, protection of agricultural resources, cleaner water, reduced impacts from flooding, sustained base flows in rivers. The 2011 National Biodiversity Assessment reveals that 65% of our wetlands that are under threat (48% critically endangered, 12% endangered and 5% vulnerable) only 11% of wetland ecosystem types are well protected at all. Consequences for wetlands if they are not protected well: diminished water security, desertification, reduced food security, reduced biodiversity, losses in livelihoods, increased vulnerability to natural disasters, especially floods and droughts. With climate change predicted to change rainfall patterns, our wetlands will play a more important role than ever before in reducing the impacts of floods and droughts.

***The Conversation: How farmers in Africa are finding ways to sustainably use wetlands***, by Adrian Wood, gave insights into how farmers rely on wetlands to do farming and for the reduction of floods and droughts.

***The Conversation: Why restoring wetlands is more critical than ever***, by Bruce Stutz, explained the importance of wetlands, how they provide habitat to several animals, provide water, mitigate the effects of floods and droughts. They need to be protected, and there is legislation in place for that.

***As communities rebuild after hurricanes, study shows wetlands can significantly reduce property damage***, by Siddarth Narayan and Michael Beck. It speaks about how wetlands can protect us from disasters, like floods. The vegetation and water within the wetlands can slow the damage of the storm and the wave energy. Just don't build right next to a wetland.

***Nutrient impacts on wetland: Field studies New Zealand effects on nutrient on wetlands*** ([www.gallery.usgs.gov/videos/540](http://www.gallery.usgs.gov/videos/540)). This video showed that wetlands have a nutrient that is able to store carbon and to generate peat formation, which is mined for commercial purposes.

***Wetlands restoration helps you*** ([www.thankyouocean.org](http://www.thankyouocean.org)). This showed how wetlands act as a filter to industrial pollutants and provide water storage. It can also have economic benefits by generating jobs, such as fisheries.

***Things you should know about wetlands*** (<https://africageographical.com>) talks about the WWF Mondi Wetlands program, which has been working to conserve our wetlands for 25 years now. We learned that although a lot has already been done, over a long period of time, more can and needs to be done, especially in educating the public. We should start in schools and on TV, so more people know and can get involved. The Department of Water and Sanitation should give out bursaries and learnerships in water conservations and wetlands.

***Wetlands cuts*** by Katlego Moeng (28 January 2011) also speaks about the Mondi wetland program project. Coordinator Vaughn Koopman spoke about how the increase of hard surfaces in urban areas leads to increased risk of flooding. Wetlands can reduce the risk of flooding by their capacity to store water and slower discharges over longer periods of time.

***A spirit of wetland poem***, YouTube video by Carrie Ann Golden, stressed that we should all share our knowledge and engage with government and the private sector to ensure environmental justice is taking place.

## Learning from new knowledge

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Wetlands can protect us from natural disasters and store carbon. They are not only sacred due to the role they play, but also act as heritage areas and are an important source of water for future generations when kept well and cared for.

We learned that wetlands come in different types that can be identified by their appearance or form and the types of plants or reeds in it, and that some wetlands are deep while others are not. Wetlands can be used in a positive and a negative way (for water and fisheries to feed communities; or to dump waste in, over-fishing, destructive tourism etc.). Wetlands can protect us from natural disasters and store carbon. They are not only sacred due to the role they play, but also act as heritage areas and are an important source of water for future generations when kept well and cared for. The relationship of wetlands and people is important, as people use wetlands, its water and natural healing herbs downstream for traditional purposes such as performing rituals, baptism and other spiritual healings. Such plants also purify the water.

Taking care of a wetland requires knowledge of natural processes and procedures, but also a behavior change to be respectful towards our environment and not throw waste materials in the wetlands. It takes collective action and a lot of patience to really make a change, but it is hope giving that so many people are already involved and trying to change the situation. Communities that are directly affected by (the results of) mining activities can be the main agents of change, as they experience the most acute harm and will see the most direct benefits. But these communities also need to know more about avenues of recourse for violations of environmental rights.

The Changing Practice: Olifants project is designed, coordinated and implemented by the Environmental Monitoring Group accredited by the Environmental Learning Research Centre, Rhodes University and funded by AWARD through the USAID: RESILIM O programme. The 'work away, work together' design is based on the Environmental Learning Research Centre's 15 years of environmental learning support which have resulted in numerous partnerships and courses to support different sectors of society. The Changing Practice course, run by the Environmental Monitoring Group, is a continually evolving variation of this design with a particular focus on supporting civil society action.

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