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The Spekboom

2016 RUESPPA Bursary recipient

My name is Ntuthuko Mbhele and I come from a small town called Dimbaza just outside King Williams Town in the Eastern Cape. I spent most of my life in fact all my life with my grandmother Nosingili Selina Mbalula. I went to high school in Dimbaza at a government school called Richard Varha high School and matriculated there in the year 2013. I started at Rhodes in the year 2015 doing a B.Sc. degree. Now I am currently doing second year in B.Sc. majoring in Geology and Environmental science and I do Anthropology 1 for interest. The subjects I do now will assist me in building a career in environmental geology because in order to understand environmental problems, it is essential to understand humans and their behaviour which is where Anthropology comes in. I enjoy playing soccer and therefore a captain of Phoenix football club here at Rhodes and we compete in the internal league. I am also a member of Botha house committee as the sports representative.

I chose Environmental Science because it is interdisciplinary, this means that theory, ideas and general material I learn from this course incorporates information from many disciplines and therefore as an Environmental Scientist, I can be involved in projects involving many disciplines. The course also teaches about the importance of involving different stakeholders in problem solving to come up with solution that benefit everyone equally and that is the most important skill I will need in the field of Geology.

As an Environmental Geologist I aim to bring fresh knowledge and methods in the mining sector. My aim is to transform the mining sector from the economical idea of mining and exploration that mainly focuses on mass production. The mining sector is mostly focused on profit and therefore they try to make use of economies of scale accelerating the impact to the environment. Since the mining sector contributes a lot to our countries GDP, the government therefore provides licences for such. For an example the idea of fracking shale gas in the Karoo region of South Africa. The government had already licenced it when Environmental Scientists and other concerned locals came forward and reviled another ugly side to fracking that mining companies were probably not aware of or chose to ignore.

This is thus the kind of thinking I want to bring into the mining sector in hopes to make it more better, more environmentally friendly and more inclusive of local people where the mining shafts are based. With the help of Environmental Science as a course now, I believe all these necessary skill I need to be an Environmental Geologist will be acquired and will continue to develop as I progress to honours level.



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Important Environmental dates

- October 24th : International Day of Climate Action
- December 5th: World Soil Day



Shakief Hoossein & Mercedes Stickler outside the offices of the World Bank in Washington DC.

DES goes international

A message from Shafiek Hoossein: Environmental Scientist at the World Bank. Shafiek completed his Masters in 2006, while Mercedes finished hers in 2009.

“Greetings from Washington DC. It is with great pleasure that I inform you that one of the latest recruits at The World Bank is an Alumna of Rhodes University and the Environmental Science Department . Mercedes Stickler has just joined the Bank and I have been assigned as her mentor in the Environment and Natural Resources Global Practice. What a pleasant surprise it is have a fellow Rhodes graduate at the Bank and moreover in the same Global Practice.

Mercedes is mapped to the South Asia Region, whilst I have completed my rotation to the Latin Americana and Caribbean Region (had to learn Spanish in a year) and start my rotation to the Middle East and North Africa Region (have to now learn Arabic). However I also cross-support to the South Asia Region, where Mercedes and I will be part of the same project team for a regional Bank project in Pakistan, Bangladesh and India.

We shall certainly do you proud and fly the Rhodes flag very high. We hope to visit Grahamstown and share our experiences with your current students soon!!”

“there is a need for cardinal research ethics to steer knowledge co-production to ensure transparency and respect for community shared values.”

Nana & Thoza go to Austria

Towards the end of April this year, two of our PhD students, Nanamhla Gwedla and Thoza-mile Yapi visited the IIASA headquarters in Laxenburg, Austria. Having recently joined the Southern African Systems Analysis Centre (SASAC) together with 17 other PhD students and their supervisors from universities across the country, the visit was organised to expose these students to Systems Analysis research and for possible research collaborations with IIASA.

The IIASA is “an international scientific institute that conducts research into the critical issues of global environmental, economic, technological, and social change that we face in the twenty-first century”.

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Nana & Thoza outside ILASA

A view of the Blauer Hof Castle, now ILASA headquarters



Menelisi presents at the 2016 Southern Africa Adaptation Colloquium

The colloquium was organised by the Global change and sustainability research institute (GCSRI) of the Witwatersrand (Wits) in collaboration with African Climate and Development initiative (ACDI) and the Adaptation Network. It brought together stakeholders from the academia, non-governmental organisations and the government. The colloquium used three thematic areas: Knowledge co-production and learning; solutions space and visioning the future and transforming adaptation. The 2016 colloquium built on the 2013 Southern African Adaptation Colloquium which addressed key adaptation, such as the growing vulnerabilities caused by climate change impacts and the need for intra-disciplinary action and processes. Mark New of the ACDI gave an overview of how transformation is defined in literature. He distinguished between transformation and transformative, explaining that adaptation can act as a double edged sword; a tool for transformation and adaptation, and also for generating transformation. In a session of knowledge co-production, Sheona discussed some forms of knowledge co-production such as citizen science, indigenous knowledge and traditional knowledge, saying there is a need for cardinal research ethics to steer knowledge co-production to ensure transparency and respect for community shared values. I presented one of my key objectives from my master's thesis and the title of my presentation was; *Rural livelihoods, learning and visioning under a changing climate: An Eastern Cape experience*. This presentation explored future participatory scenarios for adaptation to current and future change, using downscaled climate projections (2040-2050). This was my first 'big' conference presentation and I was so anxious. However, my supervisor, Sheona told me words of comfort "Are you ready? Go and do your best". Luckily enough, it all went well.

Lastly, I was one of the youth panellists at the colloquium. Some of the panellists represented the South African Climate Coalition, Young women in climate change, Environmental Monitoring Group and Youth@SAIIA. We shared and explored different communication strategies that can be used by practioners who are looking to engage young people. One interesting highlight came from the young women in climate change organisation run a project the slogan "keeps it natural like your hair". In this program the organisation believe that climate change adaptation should be modelled from a personal perspective. The main aim of this project is to encourage "eco-feminism" (women who believe in a fossil free future). Such initiatives show that young people therefore need to be an integral part of the climate change adaptation conservation. To all those who wish to attend the next adaptation colloquium, see you in Grahamstown, 2018 during the Arts festival.

From page 2

Both Nhana and Thoza had an opportunity to interact with IIASA researchers in the Ecosystem Services and Management research programme. The programme was packed with presentations from various members of staff at IIASA and from the students. The student presentations were their proposals and these were given to allow researchers from the institute time to get to know the various research projects planned by the students and their supervisors over the next three years.

The students stayed in Vienna for the duration of the visit, and in between all the learning and engagements, they got an opportunity to explore the city of Vienna. This included a tour around the St. Stephen's Cathedral in the Stephansplatz, visits to the various markets around the city and to museums. Other students visited the United Nations headquarters in the city. A tour around the castle, which is where IIASA is situated, was organised. This tour included a "walk in the park" where the history of the Blauer Hof castle and how it became IIASA was explained. Overall, the visit was "very informative, engaging, and motivating", and hopefully the relationship between this prestigious institute and our students will prosper.



Menelisi during his presentation

Honors community engagement: food for thought

Gladman promoted to senior lecturer



Lesego Molobi interviews Glad on his promotion:

Gladman did his undergrad up to Masters at the University of Zimbabwe and a PhD at Rhodes. He holds an BSc Honours degree in Geography, a Masters degree in Environmental Policy and Planning and a PhD in Environmental Science. Gladman knew he wanted to be an academic in 2007. After teaching high school Geography and working a not-so-fulfilling job in the mining sector, he decided to pursue his dream of getting a PhD. He hated the routine (Standard Operating Procedures) that came with working in a mine. He was asked what the journey leading to where he is now has been like? It was tough due to financial constraints. He was lucky enough to have a research interest (Conservation/ Economic Resource Use) that was in line with the SANParks core which made it possible. It's had it's ups and downs but in general, it has been fulfilling. He has been rewarded for all his hard work with numerous publications- including in an ISI rated journal. (contd on next page...)

By Angela Chappel

This year the 2016 Environmental Science honours class chose the Eluxolweni Youth Centre as our community engagement project. The previous honours class established a vegetable garden at the centre and it was up to us to continue to grow this garden and spend some time with the boys who live there. I really enjoyed the experience and am grateful for the opportunity but I think in some ways our project may have missed the mark and there may be a need for some considerations for future community engagement projects.

I believe community engagement is a very important aspect of all students study program. If, by gaining degrees, we are hoping to meaningfully contribute to society than community engagement is a good place for us to take cognizance of our privilege and to use our time and skills altruistically. This is particularly true of Environmental Science where so much of our learning is based around understanding the socio-ecological nexus and integrating and engaging with communities. Furthermore, it is an opportunity to learn how to interact with different people from varying backgrounds and develop our communication and interaction skills.

I was very excited about this project because, although I am an amateur, I thoroughly enjoy gardening, particularly growing edibles. I believe connecting with the earth through growing our own food is our best hope for self-sufficiency and food security. It is also a great sharing, learning and bonding activity. It was a great time for our class to come together in the sun on a Monday afternoon and put our hands in the soil whilst engaging with boys from troubled backgrounds.

On a side note it has been proven that putting your hands in the soil makes you happy; this is because there are little microbes in the soil that stimulate serotonin which makes you relaxed and enhances your mood (similar to antidepressant drugs).

We planted a variety of vegetables including spinach, lettuce, cabbage, beans, and onions. We also replanted some succulents and shrubs donated by people in the Environmental Science department to enhance the appearance and 'greenness' of the grounds.

The concern that I have about our project was the communication between the centre and the class, despite Rozeena's best efforts to keep email contact between them and us. It was not anyone's fault in particular but I was constantly under the impression that the centre did not 'buy in' to our project. Most of the boys were young, easily distracted and did not appear to be interested in gardening, this is understandable and we tried to combat this by splitting up so that some of us played ball games with them while the rest of us gardened.

As we could not all attend every single week there were some periods of time where the weeding and watering of the garden was not kept up to standard by us, although we constantly reminded the boys to water the garden in between our visits. The people running the centre were rather angry with us about this. I think this shows a misconception and miscommunication of our project, which I believe was to encourage the boys to get involved and take ownership of growing their own food rather than us working as gardeners for them. Furthermore, unless we picked the vegetables and took them into the kitchen it did not appear that they harvested any of the plants themselves. In some ways this felt as though we were planting veggies for our own satisfaction and for the sake of the project rather than engaging with the boys, sharing gardening ideas and supplementing the food the boys were eating.

Therefore, while I believe our class meant well and I do think everyone engaged in the project, to me, the outcome was slightly disappointing. If this project is to be continued in the future, I think the approach and goals of the students needs to be rethought and discussed with the centre to ensure that both parties understand each other.

Gladman interview contd..

What does this job/promotion mean to you?

“Research is addictive” so being a lecturer means marrying his love for research with his passion for teaching. Gladman says he likes contributing too other people’s lives. He feels that lecturing contributes directly to this because he sees his efforts and hard work through his students which is very satisfying and valuable to him.

What next? Where do you see yourself in the future?

Balding with thick glasses (like a typical professor, he jokes). He sees himself working towards becoming an associate professor and ultimately a senior professor.



Trading live for Mandela Week



By Yondela Norman

On the morning of Wednesday the 20th of July the Honours Class of 2016 kicked off the Trading Live for Mandela Week event by going to Eluxolweni Child and Youth Centre (which is also the focus for the class’ community engagement initiative) to spend the morning tending to the vegetable garden. The purpose of the initiative was not only to give 67 minutes of one’s time to give back to the community but to also work with the staff and learners at Eluxolweni in establishing and maintaining an organic garden from which everyone who calls the youth centre home, can harvest quality food.

The class, along with a few of the lecturers, planted a variety of food crops in the garden; ranging from spring onion and sweet corn to cabbages and spinach. Earlier on during the year, the existing crops were not doing so well owing to the long drought experienced nationwide as well as the cold winter temperatures. The Hon-

ours class and Eluxolweni alike planted the recent crops in the hope that they, along with the crops planted earlier this year, will do better.

It was a morning well spent for the class as they got their hands dirty in giving back to the Grahamstown community (and learning about vegetable gardening) and it was a morning well received by Eluxolweni as the

centre’s food security has been further improved. It is seemingly small contributions like these that, as a movement, can capture the essence of Mandela Week, which is “to take action to help change the world for the better, and in doing so build a global movement for good.”

Recent visits to Eluxolweni on the week of the 12th of September revealed that the rains and warm weather have boosted the recovery and growth of the crops, so much so that most of them are ready for harvest, notably the kale, spinach and spring onion (the maize and sweet corn still has a ways to go, though).



Honours exchange student at Leeds University



Angela Chappel, an Honours student in the dept, received an opportunity to go to Leeds University as part of an exchange program. She reports that she is settling down very well. She says that the campus is massive and really beautiful with fantastic libraries (pictured below) and places to work, eat and gym. She has hired



a bicycle so that she can cycle around the campus and the city of Leeds. Her subjects are :

- Climate Change Science and Impacts
- Atmospheric and Oceanic climate change processes
- Business and sustainable development environmental governance and policy
- Palaeoecology, Palaeobiology and Evolution

Eight years after Rhodes: Trying to save the world

By Akeel Hajat

It's strange to think that 8 years can go by so quickly. It was not so long ago that we were badgering Charlie in his office, playing a didgeridoo, while trying to make a short film called 'The Long Walk to Bangor'. As I recall, we were most put out by the shift in location of the department which had robbed us of an extra 10 mins of sleep in the mornings. Such was the height of our concerns, back when we believed that we would stay students forever.

Since then I have walked a wandering path. It started with an NGO called IPI in Malawi looking at Environmental Impacts in the mining sector. Two years later I moved to IDASA, a South African organisation where my remit was climate change policy and broader environmental management. Despite a wonderful time there, which culminated in the opportunity to attend and make



once more with issues that affect us all. Having experienced the NGO sector already, the situation called for a different take on things. How to still relate to the sector, yet work in an environment with more of a cutting edge? The formation of C12 Consultants is what followed; a development consulting firm made up of like-minded individuals with complementary skills. Since then it has been a whirlwind of projects, evaluations, research and activities. From rural villages listening to communities, to sitting in closed conference rooms in Paris negotiating a make or break deal on behalf of my country. It has been an incredible way to engage with the development sector as a whole.

a documentary about the COP15 conference in Copenhagen, I found the NGO sector to be stifling. I decided to take a break from the sector and spent a couple of years managing a Primary School back in Blantyre, Malawi. The environmental still beckoned however; an opportunity to attend an International Summer School course in Oslo (you should check it out, it's awesome), was shortly followed by a full scholarship to do a Masters at the ACDI in UCT.

Plunging back into Academia was not easy. Yet after an intense year I returned to Malawi with renewed determination to engage

Still, despite the efforts of many people, organisations, and programmes, Malawi is on the ropes. One year of flooding followed by an El Nino related drought has left around 6-8 Million people in need of food aid. Climate change, rampant deforestation and poor farming practices over generations has seen the rivers silt up and run dry. In the midst of the current drought, we only have electricity and water for 5 hours each day. It's a sobering situation, and a prime example of a nation where mismanagement of the Environment has led to disaster. Those of us who are here will keep plugging away, in the hope that our efforts will make a difference. It's the little wins that count – for example; making changes to development programmes that result in improvements for even a few people is worth it. Enough little wins, and maybe we'll be able to win big one day.

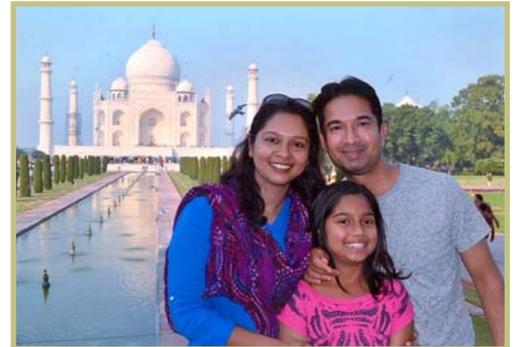
DES welcomes our new post-doc Deepa

Deepa was born in India, but grew up in Tanzania and Lesotho. She went on to do a degree in civil engineering from India, got married in 2001, and moved to Lesotho following her husband's job. She shifted her career from civil engineering to environmental management due to a chance field trip that happened in 2003 in Lesotho. At the time, she was lecturing in civil engineering at a polytechnic in Lesotho and took her students on a field trip to look at a road construction project. She noticed effluents from garment factories being released untreated into streams which later on joined the Caledon River. Realising that not much was done to address this issue, Deepa wrote a proposal to study the impacts of the pollution and received a grant from African Technology Policy Studies network. Her study was published in International Journal of Environmental Engineering and also received much attention from NGOs in Lesotho and foreign journalists, who advocated for industries to treat their wastewater before releasing to the environment. The study inspired Deepa to shift her career into environmental management.

Deepa moved to Malawi in 2009 following her husband's job and life there was challenging, yet fulfilling. Her daughter, Sharika had problems adjusting to her new school and so Deepa used to go with her to school and sit throughout the school session, every day, for a whole school term. During that period, she volunteered her time to write a "Bird Activity" book for the Wildlife and Environmental Society of Malawi. This book was distributed freely to 400 primary schools in Malawi and at the launch of the book, Deepa met with the Regional Director of Leadership for Environment and Development (LEAD) Southern and Eastern Africa, an NGO that was based in Malawi. The chance encounter led to Deepa working on a short term contract with LEAD to run the international LEAD Fellows training in Port Elizabeth in 2010. LEAD Fellows from over 150 countries came together to talk about leadership in sustainable development and the energy was electrifying.

Deepa then went on to get longer contracts and worked with LEAD for five years. She had the opportunity to run training programs in Malawi and South Africa, manage projects in Malawi on ecosystem management and integration of population and health into climate change adaptation.

LEAD managed a large climate change adaptation project in the Lake Chilwa Basin located in Southern Malawi. Abnormally low rainfall in 2011 and 2012 caused the partial drying of Lake Chilwa, which triggered large scale migration of fishermen to other areas for fishing, leaving behind women and children in the Basin. Deepa joined her colleagues at LEAD to undertake a survey to assess the impacts of migration. She was touched by the desperate coping mechanisms undertaken by the community, comprising eating only one meal a day for several months, girls being forced to marry at young age and children dropping out of school to support their families. This environmental shock caused a cholera outbreak and increased vulnerability for women and children. In addition, many women had no access to family planning services and had on an average seven children. Deepa became convinced that integrated development approach (integrating population, health and environment) was necessary in the wake of climate variability and change. Deepa advocated for this integrated approach at Woodrow Wilson Center and Capitol Hill in Washington DC and she had a chance to contribute as part of the women's major groups at the open working group for development of Sustainable Development Goals at the UN Headquarters in New York. The experiences from Malawi showed that communities who are dependent on natural resources from the ecosystem need to manage these resources for their well-being. Understanding ecosystem services and poverty alleviation became a passion for Deepa and this brought her to Rhodes University, where she is doing a Post Doctoral Fellowship focusing on this area.



RRRG goes Hi-tech

The Rhodes Restoration Research Group (RRRG) has been assisting the Department of Environmental Affairs (DEA), and specifically the Natural Resource Management Chief Directorate (NRM) with carbon and biodiversity baselines, thicket restoration plans and thicket research generally since its inception in 2007. Over the last few months the RRRG team has been wheeling and dealing to build some capacity and outdoor facilities on campus to make it easier for third year students, honours and masters to conduct trials and experiments in the realm of restoration. Thanks to the generosity and support of Professor Martin Hill and the Zoology Department, the Environmental Science now boasts a 300m² hi-tech plant propagation facility at the top of the hill (between the 1820 Settlers Monument and the SPCA), where the old Tick Research Station was previously located.

The propagation facility was donated to RRRG by the Zoology department in lieu of assistance with the planning of the landscaping and development of the Waainek facility – with a special focus on sustainability, low maintenance and water-wise gardening. Unfortunately, the structure did not come with air-conditioning and the summer time temperatures exceed 50°C, which is not healthy for man/woman nor beast – let alone young delicate seedlings awaiting the trials and tribulations of drought experiments. Enter Tunnel no 2.

A second propagation facility was planned, designed and estab-

lished at the old Botany Dept trial site. This is a 600m² plant propagation facility with automatic irrigation, heat and humidity regulation and has three different shade cloth roof and sides to allow variable degrees of sunlight, and one section that prevents rainfall from reaching the plants undergoing drought trials.

The RRRG team is slowly building the capacity, tools and resources to assist DEA NRM in some of the challenging questions related to their Working-For-Ecosystems projects (see https://www.environment.gov.za/branches/environmental_programmes). Anybody is welcome to come and take a tour and consider using these resources in their projects. Any queries – please contact Mike



The RRRG tunnel No 1 at Waainek Research Station



Landscaping of Waainek facility by RRRG staff



Before and after photos of the area where tunnel no 2 now stands



Water security measures taken to buffer the research against the unreliable water supply

