

MINUTES

eThekwini Biodiversity Forum
14 February 2014
9h00 – 12h00
Palmiet Nature Reserve



PRESENT

Arnia van Vuuren	AV	Jabulani Khoza	JK	Nosipho	
Avrille Coen	AC	Cllr Jean Lindsay	JL	Ndzimbomvu	NN
Barry Lang	BL	Jean Rodel	JR	Preshen Banawari	PB
Brandon Abdinor	BA	Cllr Jean Senogles	JS	Rashieda Davids	RD
Chris Metherell	CM	Jenny Loughlin	JL	Reshnee Lalla	RL
Clive Walker	CW	Jessica Walsh	JW	Richard Boon	RB
Corrinne Winson	CW	Joan Porter	JP	Rodney Bartholomew	RB1
Denese Kock	DK	John Hinck	JH	Shannon Farnsworth	SF
Derek Ruiters	DR	Katherine Terblanche	KT	Survana Parbhoo	SP
Di Dold	DD	Kenneth Mabila	KM	Rob Jamieson	RJ
Errol Douwes	ED	Kerina Singh	KS	Stephanie Reynolds	SR
Esmeralda		Lesley Frescura	LF	Terry Stewart	TS
Ramburran	ER	Khumbuzile Luthuli	KL	Thami Kunene	TK
Cllr Geoff Pullan	GP	Lyn Archer	LA	Vanessa Meintjies	VM
Gerald Clarke	GC	Marion Spence	MS	Virginia Cameron	VC
Graham Cairns	GC	Mena Nxumalo	MN	Warren Friedman	WF
Heather Cairns	HC				

APOLOGIES

Angie Wilken, Bheka Nxele, Cllr Billie Prinsloo, Cllr Gillian Noyce, Judy Mann, Johann Vermeulen, Kirsten Williams, Leigh Richards, Roddy Ward, Kate Richardson, Ed Granger, Jo Boule, Suvana Parbhoo, Teddy Govender, Trafford Petterson, Tony Wint.

1.	WELCOME & INTRODUCTION	ACTION
1.1	RD welcomed all and facilitated introductions. She apologised for the last minute change of venue and expressed sincere thanks to all the attendees for coming. She noted that the two presentations to follow were on the MSc research projects being undertaken by two staff members of the Environmental Planning and Climate Protection Department (EPCPD). Both of which consider biodiversity within the eThekwini Municipal Area.	
2	PRESENTATION: <i>Functional Forest or Green Desert: Is Durban's Flagship Reforestation Project Meeting Stated Targets?</i> By Katherine Terblanche, EPCPD, University of KwaZulu-Natal (UKZN)	
2.1	KT presented some of the finding of her MSc dissertation, currently being undertaken through the University of KwaZulu-Natal, supervised by Prof Kevin Kirkman, and co-supervised by Dr Hylton Adie, Dr Debra Roberts & Mr Errol Douwes. A summary of the presentation is provided below.	

	<p>The City of Durban (South Africa) is restoring indigenous forest and woodland ecosystems, in the 800 ha buffer zone surrounding the Buffelsdraai Regional Landfill site. The Buffelsdraai Landfill Community Reforestation Project (BLCRP) initially aimed to offset a proportion of CO₂ emissions, generated locally, during the 2010 FIFA World Cup™. However, the project's mitigation function has now been superseded by a climate change adaptation focus. The need to improve the City's resilience, in the face of increased uncertainty and risk, is considered urgent. Building functional ecological infrastructure, which includes indigenous forest ecosystems, can help bolster such resilience. The involvement of local impoverished communities, in the building of new forests, further strengthens the resilience objective, through local poverty alleviation and skills development.</p> <p>The paper examined the extent to which tree species composition, measures of diversity, and functional traits of restoration sites, are comparable with a local forest reference site. After 3-5 years, restored sites show low similarity with reference forests due to different species composition and poor diversity. Forty tree species were recorded in the reference ecosystem (Kenneth Stainbank Nature Reserve), while restored sites averaged only 28 species. Tree density in the study site is also considerably lower than figures suggested for restored forests.</p> <p>The above findings suggest that the project will not meet stated targets, and it is recommended that restoration activities be altered, in order to realign the current trajectory. Addressing these concerns could include, for example, ensuring a broader suite of propagated species, and higher densities of planting. This would ensure enhanced biodiversity, and increased canopy closure. The many pioneer tree species already planted on site would provide a better micro-environment for supplementary planting of additional climax species. Critically, improved and continuous monitoring over the coming years is required, in order to elucidate appropriate management responses.</p> <p>For more information contact: Kathryn E. Terblanche, Phone: 031 322 4312, Email: kathryn.terblanche@durban.gov.za</p>	
2.2	<p>RJ noted that in view of all the effort that went into the reforestation project, it is important to take the recommendations from the research seriously. KT responded that some of the recommendations have, in fact, already been implemented.</p>	
2.3	<p>VM noted that she had recently visited the Buffelsdraai Reforestation site and raised concern that hundreds of dead trees were being thrown away. KT responded that due to a lack of water caused by a failed borehole, there are some trees that die before they get planted. However, measures were in place to prevent this, including a new irrigation system.</p>	
2.4	<p>JP queried how the sugar cane land was prepared prior to planting. KT responded that sugar cane was cut and removed. She added that there are instances where sugar cane grows back between trees, but this is temporary.</p>	
2.5	<p>LF raised concern that too many <i>Erythrina</i> trees were planted and added that grassland was fast disappearing in the city, which has implications for birds. KT responded that the research had highlighted that a greater diversity of plant species was needed and the grassland patches that were present in the project area are being managed and maintained as grasslands.</p>	
2.6	<p>JB queried whether there was a difference between planted sites and other naturally seeded sites and whether alternative seeding was being considered. KT responded that the project was looking at active restoration, so passive restoration was not being considered. RB requested that a site be included to monitor the progress of passive restoration.</p>	

2.7	GP queried what the future of the local staff on the project was and if their skills could be used in the city once the project was complete. KT responded that the vision is for the site to become a nature reserve, where some of the staff could be employed once established.	
3	PRESENTATION: <i>Identifying Ecosystem Service Hotspots for Urban Conservation Planning in eThekweni Municipality.</i> By Rashieda Davids, EPCPD, University of Pretoria	
3.1	<p>RD presented the results of her MSc in Geography, undertaken through the University Of Pretoria and supervised by Professor Mathieu Rouget. A summary of the presentation is provided below.</p> <p>Ecosystems are considered vital to provide the goods and services needed to support human well-being and maintain life on earth and include i) provisioning services such as food, water, fuel and timber; ii) regulating services such as climate, flood and disease control; iii) cultural services such as spiritual, recreational and aesthetic benefits; and iv) supporting services such as nutrient cycling, pollination and soil formation.</p> <p>While considerable research has been undertaken into the importance of ecosystem services, little has been achieved to translate that research into management action that ensures the on-going provision of these services. Furthermore, increasing global and local rates of urbanisation tend to pose severe problems with respect to ecosystem services and human well-being. In an attempt to bridge the gap between planning and implementation for ecosystem services, the study identified ecosystem service hotspots and assessed their spatial congruence with critical biodiversity and protected areas and various ownership categories within the eThekweni Municipal Area. The study was also considered the relationship between ecosystem service hotspots and land use change, specifically related to strategic planning and development proposals, which are considered as significant drivers of land use change in the context of eThekweni Municipality. The study centered around the use of Geographical Information Systems (GIS) for analysis, and methods used included overlap and correlation analyses.</p> <p>Hotspots of 13 ecosystem services, namely, carbon storage, phosphorus retention (relative to dams and estuaries), nutrient retention (phosphorus and nitrogen retention relative to dams and estuaries), sediment retention (relative to the harbour, stormwater drains, sewer pipes and dams), flood attenuation (relative to public and private infrastructure and populations living within flood plains) previously mapped by Julia Glenday, as commissioned by the Environmental Planning and Climate Protection Department in 2012, were included in the analysis. These services were mapped using InVEST (Integrated Valuation of Ecosystem Services and Trade-offs), developed by the Natural Capital Project. InVEST has been applied in decision-support processes in a diversity of geographic contexts and has probably been the most extensively used GIS software tool for mapping ecosystem services (Nelson and Daily 2010, Nemeč et al., 2013).</p> <p>The study found moderate overlaps and generally weak correlations with ecosystem service hotspots and critical biodiversity areas and protected areas. All ecosystem services except phosphorus retention to dams were found to overlap with protected areas. However, the small percentages of between 1 and 14% overlap of hotspots with protected areas highlight that substantial proportions of ecosystem service hotspots lie outside these areas that are currently being formerly managed, leaving them vulnerable to human impact and natural degradation.</p> <p>Numerous opportunities exist to co-manage ecosystem service hotspots and terrestrial critical biodiversity areas. However, majority of ecosystem service hotspots areas lie within communally (41%) or privately owned (27%) areas, with 18% of hotspot areas unaccounted</p>	

	<p>for with respect to ownership information. This highlights the threat of degradation of important ecosystem service areas relative to potential lack of management and land use change.</p> <p>The assessment of ecosystem service hotspots relative to strategic and local development and sand mining proposals showed that on average; should the eThekweni Municipal Strategic Development Plans be realised within the next 5 to 20 years, approximately 42% transformation of ecosystem service hotspots is expected to occur in the two municipal town planning regions assessed. With respect to development applications, approximately 36% of all environmental impact assessments and 84% of sand mining applications were made within ecosystem service hotspots within the eThekweni Municipal Area between 2009 and 2012.</p> <p>The ecosystem service hotspots identified will be included in the municipal Systematic Conservation Plan, with the view of including these hotspots in D'MOSS. This inclusion will allow for an additional level of protection of these areas.</p> <p>To view a copy of the presentation, visit: http://prezi.com/aww5cysrxuzz/?utm_campaign=share&utm_medium=copy</p>	
3.2	<p>It was noted that sand mining is a major problem in the city and queried how to stop it. RD responded that within EPCPD, there are only two enforcement officers who are dealing with illegal sand-mining and other non-compliance issues in the city. TS added that it was actually the mandate of the Department of Minerals and Energy to control this, but they too are under staffed. DD added that Coastwatch KZN was also monitoring sand mining activities and would put the findings up on their website.</p>	
3.3	<p>LT noted that lack of staff as a reason for failing to enforce compliance is being put forward far too often and appealed for a new solution. RB responded that if anyone was to take a helicopter ride over the city they would see between 200 and 250 sand mining sites at different locations. It's important to pick our battles. There was an illegal sand mining operation on council owned land, despite an interdict having been issued. It's important for council to at least protect municipal owned land as a start from illegal mining. The matter is being further in the courts. JL added that a Build-It truck was photographed picking up sand from an illegal mine. The owner of Build-it was shocked to hear about it. TK added that the Department of Minerals and Energy are willing to work with council towards compliance and a meeting will be held towards this. TK will update the Biodiversity Forum in the outcomes of this meeting in future.</p>	TK
3.4	<p>RB1 queried if there was a plan to engage with the landowners of ecosystem service hotspots. RD responded that the new EPCPD Biodiversity Stewardship programme has been initiated for this purpose and has already established relationships with some iziNkosi. The programme will also look at identifying incentives for landowners to manage their properties for conservation.</p>	
4	Updates from Natural Resources Division (NRD)	
4.1	<p>MS provided some background to Jubilee Park. She noted that about 5 years ago, Westville Conservancy was given some money to manage Jubilee Park. The management involved invasive alien clearing and the community, including herself and her husband, was working there five days per week to get it to the beautiful conservation worthy park that flourished with wildlife. Unfortunately, she was horrified to find out early in December that there was</p>	

	<p>a massive backactor in the wetland that had done a huge amount of damage. At that point she contacted Kenneth Mabila, who has made significant progress towards arranging for the wetland to be rehabilitated.</p> <p>KM aded that the Roads Department found that water was not seeping through and decided to dig out the wetland to allow the water to flow. KM and his team have since initiated rehabilitation of the wetland including the collection of grass seeds that are being planted in the wetland.</p> <p>KM also noted the following updates:</p> <ul style="list-style-type: none"> • Numerous calls were received from university students noting that certain medicinal plants could no longer be found in the wild. In response to this, the NRD is establishing nurseries to grow medicinal plants that is intended to mitigate illegal harvesting of these plants in conservation areas. • During the World Wetlands week, the NRD removed water hyacinth from rivers in the city. 	
4.2	It was noted that a list of medicinal plants to be propagated needs to be compiled and made available to all.	
4.3	SP noted that SANBI would be very interested to work with the NRD in establishing the medicinal plant nurseries. KM responded that with would be welcomed.	
4.4	LF noted that she has been part of a team monitoring birds, including warblers, at Jubilee Park and is interested to see whether these birds will return.	
5	Updates from Environmental Planning and Climate Protection Department (EPCPD)	
5.1	<p>RB provided the following updates from EPCPD:</p> <ul style="list-style-type: none"> • The State of Biodiversity Report for 2012/2013 was complete. RD is to distribute electronic copies of this report along with the minutes. • The EPCPD Biodiversity Stewardship programme, led by Lyle Ground and ably assisted by Bheka Memela and other staff, is busy finalising the local level framework document, which includes the vision and objectives of the programme, guidelines on incentives to landowners, levels of legal protection, the establishment of partnerships, management guidelines etc. Two pilot stewardship areas have been identified, namely Inanda Mountain and Giba Gorge Environmental Precinct. Bheka Memela of EPCPD and other task team members have already made good progress towards establishing a relationship with the amaKosi at Inanda and the Ingonyama Trust Board for the protection of the grasslands in the area. The intention is to proclaim GGEP as a nature reserve. • The Systematic Conservation Plan (SCP) is being reviewed and it is anticipated that a new critical biodiversity areas map will be produced around April 2014. The ecosystem service hotspots identified through RD's research will also be incorporated into the SCP. The team is also looking at historical vegetation mapping to guide conservation and restoration activities. • About 100 ha of grassland are being acquired this year, pushing the total up to over 250 ha of grassland acquired in one area of the Outer West. 	RD
5.2	DR reported that the public participation process for the Roosfontein Nature Reserve did not commence in January 2014. This due to the fact that in order to save costs, Ezemvelo wants to advertise a number of proclamations together, however, there was a delay with one of the other nature reserves. The expected date for advertising is now April 2014. For the remaining nine reserves, progress has been made with the finalisation of reserve boundaries, zonation plans and the management plans.	
5.3	RD provided the following updates on the Giba Gorge Environmental Precinct (GGEP)	

	<p>management, on behalf of Lyle Ground:</p> <ul style="list-style-type: none"> • The trail to McIntosh Falls has been open for a few months and has been well received. • The increase in patrols has resulted in no muthi harvesting or poaching in the last three months. • Leigh Richards of the Natural Science Museum completed a small rodent survey in January and one of the key findings was the first recording of the 4 striped field mouse, that close to the CBD since 1987. There was also a small but healthy population of vlei rats noted in the St Helier wetland. All findings and associated management recommendations will be included in the management plan. 	
6	General	
6.1	<p>JL noted that the conservancies have long tried to establish a working relationship with the Parks Dept. This started with a workshop in 2007, however, nothing transpired from that. Then in 2012, Vuyi Radebe arranged a conservancies meeting but unfortunately she is no longer with NRD to take this further. JL added that for 12 years she has undertaken the Froggie Operatics event at Alfred Park, where over 100 frogs could be viewed. However, at the last event held last year, only about 5 frogs could be found due to the invasion of <i>Pontederia cordata</i> (Pickerel weed). This is a result of the lack of implementation of management and the lack of management plan. JL stated that conservancies are willing to assist wherever possible but appealed to the NRD and Parks Department to please engage with conservancies to work together. KM responded that very recently, he had a meeting with his staff to discuss the same issue of working with conservancies. He added that he was aware that Vuyi had started this and was keen to pick up where she left off.</p>	
6.2	<p>HC stated that she had concerns about the Parks Department that was not managing parks appropriately. She had tried many times to engage with this department to no avail. TK responded that he would be willing to assist HC with her issues in the park in her area.</p>	
6.3	<p>JS raised concern that the Department of Transport was doing blanket herbicide application along road verges and this was resulting in indigenous trees being killed. Many of the attendees echoed this concern and felt that something must be done to stop it.</p>	
7	Meeting closure	
7.1	<p>RD thanked all for attending. The next Biodiversity Forum will take place on 29 May 2014.</p>	