

CEPF FINAL PROJECT COMPLETION REPORT

I. BASIC DATA

Organization Legal Name: Nelson Mandela Metropolitan University

Project Title (as stated in the grant agreement): *Land Stewardship and Acquisition Within the Central Little Karoo Based on a Private-Public Partnership, Fine-scale Cost-effective Assessment and Connectivity Analysis*

Implementation Partners for this Project: Western Cape Nature Conservation; Leslie Hill Succulent Karoo Trust

Project Dates (as stated in the grant agreement): November 1, 2007 - December 31, 2008

Date of Report (month/year): 22 January, 2009

II. OPENING REMARKS

Provide any opening remarks that may assist in the review of this report.

This project facilitated land acquisition and stewardship programs in the little Karoo. It enhanced a private-public partnership. It provided a fine-scale conservation assessment that considered cost as well as ecological considerations. One of the ecological considerations explicitly considered was connectivity of high conservation value lands.

III. ACHIEVEMENT OF PROJECT PURPOSE

Project Purpose: *To assist stakeholders in the region in making land-use and management decisions that are beneficial to biodiversity.*

Planned vs. Actual Performance

Indicator	Actual at Completion
Purpose-level:	
1. <i>Provide decision support information to LHSKT and CapeNature about how to get the most biodiversity benefit from their pooled resources.</i>	Provided a variety of maps, tables, GIS layers, and a report that provided decision support. Primary maps were ones that identified properties that would be most beneficial for acquisition, and which ones would be best if the management costs were not considered in addition to the purchase costs.
2. <i>Provide spatially explicit decision support that systematically incorporates the ecological premise of connectivity.</i>	A complex connectivity analysis was successfully incorporated into the decision support system. Further, individual maps were created that showed the different corridors, their priorities for conservation, and the priority locations within them.
3. <i>Provide training and support to personnel that will be able to keep the decision support system (DSS) living.</i>	The staff position that the two organizations identified as being responsible for maintaining the DSS is the conservation planner position at CN. However, the position is currently vacant. Detailed

	methodology has been created for the eventual person. See below discussion in outputs for further details.
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Describe the success of the project in terms of achieving its intended impact objective and performance indicators.

By far, the most important objective and indicator was number one. It was completely successful. It feels good to have helped in the effort and created a product that can help in other decisions as well. Objective two was more successful than anticipated, and a connectivity software package can be created from the results. Unfortunately, objective three was not completed as originally envisioned, but should still achieve its goal of sustainability. In addition to the written methodology provided, I am going to volunteer my time to introduce the DSS to the conservation planner, once they are hired.

Were there any unexpected impacts (positive or negative)?

Two unexpected benefits of the project: the DSS itself has the potential of improving the way conservation planning is performed. It operationalizes a new "marginal value" approach, which can get around the arbitrary setting of targets and make the resulting process more transparent. This potential will be pursued in upcoming research if funding can be secured from other sources. Secondly, the connectivity model was not possible using Modelbuilder alone, so I learned Python programming language. The resulting product has the potential of being provided as a standalone connectivity software package. This will be pursued in further research if funding can be secured from other sources.

IV. PROJECT OUTPUTS

Project Outputs:

Planned vs. Actual Performance

Indicator	Actual at Completion
Output 1: The LHSKT/WWF/CapeNature Conservation Assessment	
<i>1.1. Comprehensive GIS Database for conservation in the Little Karoo. Target is to have one or several shapefiles for at least 25 themes (e.g. vegetation, transformation, land-use) that are of good enough quality and resolution to be used for fine scale conservation planning.</i>	Collected over 200 shapefiles for about 40 themes (e.g. vegetation layer, transformation layer, land-use, etc) mostly from SANBI, with a few coming from CapeNature.
<i>1.2. GIS datalayer of acquisition cost for all properties. (Based on actual and modeled data). Cost will be a function of several attributes (e.g. opportunity cost, assessed land value, management cost). Actual or modeled values will be used, and documented as such.</i>	Gathered hedonic model of property cost from M. Rouget. (Based on 20 variables, and reported as cost per hectare in the year 2000). Then created an actual property cost database structure and taught the CN team how to fill it in. They provided cost information for known properties. This was then used to re-scale the hedonic model output to better reflect 2008 prices.
<i>1.3. Gap analysis of the Private Conservation Areas in the region (i.e. how well are private conservation areas</i>	No doubt about it: private conservation areas (PCA) play a critical role for conservation in the Little

<p><i>currently conserving biodiversity?). This will use the revised Private Conservation Areas database, the vegetation database, the transformation database, and vegetation targets. After the overlay, there should be information for at least 10,000 small polygons. This will be aggregated to the parcel or property level.</i></p>	<p>Karoo. Conservation target achievement for the vegetation variants was assessed, as was the degree to which PCA complemented statutory conservation areas by representing different landscape characteristics. The number of targets achieved <i>nearly tripled</i> if private conservation areas were considered in addition to statutory conservation areas. Further, private conservation areas significantly complemented statutory conservation areas in the types of biomes, elevation classes, and threat status classes conserved. Private conservation areas were especially important in conserving lower elevation habitat, and by association, endangered vegetation. These findings were presented at the GI Forum and at the SANBI Biodiversity Planning Forum.</p>
<p><i>1.4. Draft output of conservation priority properties of the entire study region, and if only considering the Succulent Karoo. The output will be based on systematic conservation planning and use the comprehensive GIS database to model how the partners can get the most conservation "bang for the buck." The output will have at least 2 GIS layers and maps for each for each emphasis (the entire region and Succulent Karoo). These will correspond to at least two different conservation assumptions. The output will be evaluated and revised by the end-users.</i></p>	<p>The conservation priorities for the region were mapped and listed under two different guiding goals: 1) the goal of preserving biodiversity in general, and 2) the goal of conserving succulents especially, and biodiversity secondarily. These were modeled based on ecological considerations alone as well as including costs. The outputs were reviewed by the end-users before they were submitted as part of the final report to the Leslie Hill Board and Cape Nature Directors.</p>
<p><i>1.5. A report (with maps and associated GIS layers) of the conservation priorities for the region, including a special chapter, map, and GIS layer for just the Succulent Karoo. This will be an internal document, not for dissemination, with the terms of reference defined by the partners (LHSKT/WWF/CapeNature).</i></p>	<p>This report was created for the Leslie Hill Succulent Trust Board Meeting on November 28. I also gave a powerpoint presentation of the findings. Also present were representatives from CapeNature and WWF.</p>
<p>Output 2: Landscape connectivity analysis and recommendations component of the DSS</p>	
<p><i>2.1. A landscape connectivity analysis model that is fine scale, updateable via automatic processing, and that can operate on a stand-alone basis or be integrated into the overall decision support system as another criterion for consideration.</i></p>	<p>I successfully created a landscape connectivity analysis model that is fine scale, updateable via automatic processing, and that can operate on a stand-alone basis or be integrated into the overall decision support system as another criterion for consideration.</p>
<p><i>2.2. Quality assessment of the model, and parameter refinement, performed with the help of advisers.</i></p>	<p>This was done during the review phase of the entire project. An opportunity for additional improvement in the future was identified: being able to give a relative importance value to the individual core</p>

	zones being connected.
<i>2.3. Integration of the analysis into the overall decision support system.</i>	This was a challenge, but was finally successful. Now, the biodiversity value of a cell, determined by the representation and rare species analyses, feeds into the connectivity model. The output is then computed with these to inputs to get the final biodiversity value.
<i>2.4. A special chapter devoted to the analysis in both the methodology report and the conservation priorities report.</i>	Special sections in both of these documents were created for the connectivity analysis.
Output 3: Ensuring Project Sustainability	
<i>3.1. Report on the methods of the conservation priorities assessment and how to update it with new data and different weights. Internal Document.</i>	This report has been created, and includes an improvement to the original output design: it provides hotlinks to the exact help pages on the ESRI ArcGIS website for the relevant and challenging issues.
<i>3.2. Provide training for conservation assessment updates, and for how to update the DSS.</i>	An initial training presentation was given to CapeNature personnel and some of the other potential long-term end users. However, two problems arose. First of all, it took an extra nine months for CapeNature to approve the purchase of the ArcGIS 9.3 (ArcView) software license that they had been conceptually planning on for years. This software is required for running the DSS. Secondly, the person that has been chosen to make the big time commitment in learning the DSS and how to update it, has not been hired yet. The job announcement has been released, and I am hopeful that I will get to work with this person before I return to the U.S.. If this does not happen, the methodology report should work. Further, I will be available via e-mail and Skype.

Describe the success of the project in terms of delivering the intended outputs.

Overall, the project was a success. It met or exceeded expectations for 10 of the 11 outputs. It remains to be seen how sustainable it is, however. Much of this depends on the initiative of the organizations that it is meant to benefit. Fortunately, CapeNature, the partner that has been identified as the logical custodian of the DSS, has finally approved purchase of the ArcGIS software, and has advertised for the conservation planner position that would be responsible for maintaining the DSS.

Were any outputs unrealized? If so, how has this affected the overall impact of the project?

If the conservation planner that is hired (discussed above) is enthusiastic about the DSS, then it will be maintained and there will be no overall impact to the project. If they are not enthusiastic, then it is possible that they will not invest the time and concentration required to learn the DSS. This will not be catastrophic, as the outputs of the DSS and all the GIS shapefiles will still be available to all the end-users. In this respect, it will be like a conventional conservation planning project. However, as conditions change over the years, these products will slowly become outdated and not as relevant. If the planner maintains the DSS, then the long term impacts of the project have the potential of dwarfing the current impacts, which are already significant.

V. SAFEGUARD POLICY ASSESSMENTS

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

As planned, the conservation priority maps were not provided to developers or the general public.

VI. LESSONS LEARNED FROM THE PROJECT

Describe any lessons learned during the various phases of the project. Consider lessons both for future projects, as well as for CEPF's future performance.

Personal lessons learned: data collection takes time regarding months elapsed, not personal time invested. Put in your initial data requests as early as possible. GIS programming takes twice as long as you plan. If your computer is acting up, get to the bottom of it rather than just doing a quick fix or coming up with a workaround for the problem at hand. If partner organizations require software to use your product, put the purchase of that software into the initial grant budget in case they do not acquire it in time.

Lessons for CEPF: You may want to seriously consider investing in an alternative to the grant writer software program. There were several instances where CI staff, SANBI staff, and I had to spend extra time searching for documents that should have been on the system. Or at least clarifying some of the terminology used. For instance, when you submit a quarterly report, you are required to make sure that your "proposal" is complete (which cannot be resubmitted), which is confusing.

Project Design Process: (aspects of the project design that contributed to its success/failure)

See above regarding the budgeting of ArcGIS software in the original proposal.

Project Execution: (aspects of the project execution that contributed to its success/failure)

Involvement of the stakeholders from the start was especially helpful.

VII. ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount	Date Received	Notes
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Table Mountain Fund	A	\$1,000	October, 2008	Paid for additional scientific expertise in both natural and social science
		\$		
		\$		
		\$		
		\$		
		\$		
		\$		
		\$		

***Additional funding should be reported using the following categories:**

- A** *Project co-financing (Other donors contribute to the direct costs of this CEPF project)*
- B** *Complementary funding (Other donors contribute to partner organizations that are working on a project linked with this CEPF project)*
- C** *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF project.)*
- D** *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Provide details of whether this project will continue in the future and if so, how any additional funding already secured or fundraising plans will help ensure its sustainability.

In addition to all of the above, I plan on trying to raise further fund to make the DSS into user-friendly software.

VIII. ADDITIONAL COMMENTS AND RECOMMENDATIONS

Thanks again to Conservation International and the Critical Ecosystems Partnership Fund!!

VIII. INFORMATION SHARING

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned and results. One way we do this is by making programmatic project documents available on our Web site, www.cepf.net, and by marketing these in our newsletter and other communications.

These documents are accessed frequently by other CEPF grantees, potential partners, and the wider conservation community.

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