CEPF FINAL PROJECT COMPLETION REPORT

I. BASIC DATA

Organization Legal Name: The Cape Leopard Trust

Project Title (as stated in the grant agreement): *The Namaqualand Uplands Cape Leopard Trust Conservancy Project: Using Leopards to Unite Farmers in Conservation*

Implementation Partners for this Project: Conservation International South Africa, Department of Tourism and Environmental Conservation (DTEC), South African National Parks (SANParks); Biota

Project Dates (as stated in the grant agreement): January 1, 2008 – July 31, 2009

Date of Report (month/year): August 2009

II. OPENING REMARKS

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

The Cape Leopard Trust (CLT) was launched in August 2004 as an active predator conservation working group in the Cape and is a registered NGO, IT 2720/2004. From the outset the objectives of the trust have revolved around adopting the leopard as a 'flagship species', to study, understand and highlight the plight of these animals, and other threatened predators, and to find effective and sustainable ways to alleviate farmer-predator conflict in the Cape.

Leopards *Panthera pardus* are a flagship species for conservation in that they invoke an emotional response and are essential to the functioning of the ecosystem through their role as an apex predator. They are opportunistic feeders and will prey on whichever species are available and most abundant. As a result, they are often in conflict with local sheep and cattle farmers through depredation of their livestock. Consequently, farmers often take matters into their own hands using indiscriminate predator control methods, such as "gins" or leg-hold traps. These traps are cruel and cause excessive by-catch of non-target species, which again impacts on faunal diversity and abundance as well as ecosystem functioning. Therefore, for biodiversity conservation to be successful within the SKEP domain, this conflict has to be addressed and resolved. The CLT uses rigorous scientific research aimed at understanding the ecology of the predators and dynamics of the environment in question to persuade resident farmers to change their ways.

The SKEP domain has been highlighted as a core area of interest for biodiversity conservation in that the succulent Karoo region, a highly diverse system, is under constant threat due to farming pressure. This increase in the demand for land for farming puts additional pressure on local carnivore species, such as leopards. This change in land-use can impact on the resident leopard population, bringing them into direct contact with the livestock farmers. A lack of understanding of leopards and other predator behaviour often leads to these animals being labelled as "problem animals". So-called "problem animals" are often unjustly persecuted where cases of conflict occur.

The aim of this Leopard Stewardship Project was to engage the local farming communities to accept leopards and other predators as a part of the natural biological heritage of the region and manage their livestock in a way that benefits both themselves and predator conservation. This was achieved through the collection of baseline data on various aspects of leopard ecology (presence/absence, population status, prey availability and prey preference). With the use of digital infrared cameras (Cuddeback Expert), we were able to provide photographic evidence of leopard presence as well as to identify resident leopards in the area. These data helped to create awareness around leopard conservation, where farmers are now interested in altering their farming methods to a more holistic predator-friendly approach. Only once this understanding had been achieved, could farmers be approached about the idea of establishing the Namaqualand Leopard Conservancy. The conservancy would focus on leopard conservation and encourage alternative farming methods.

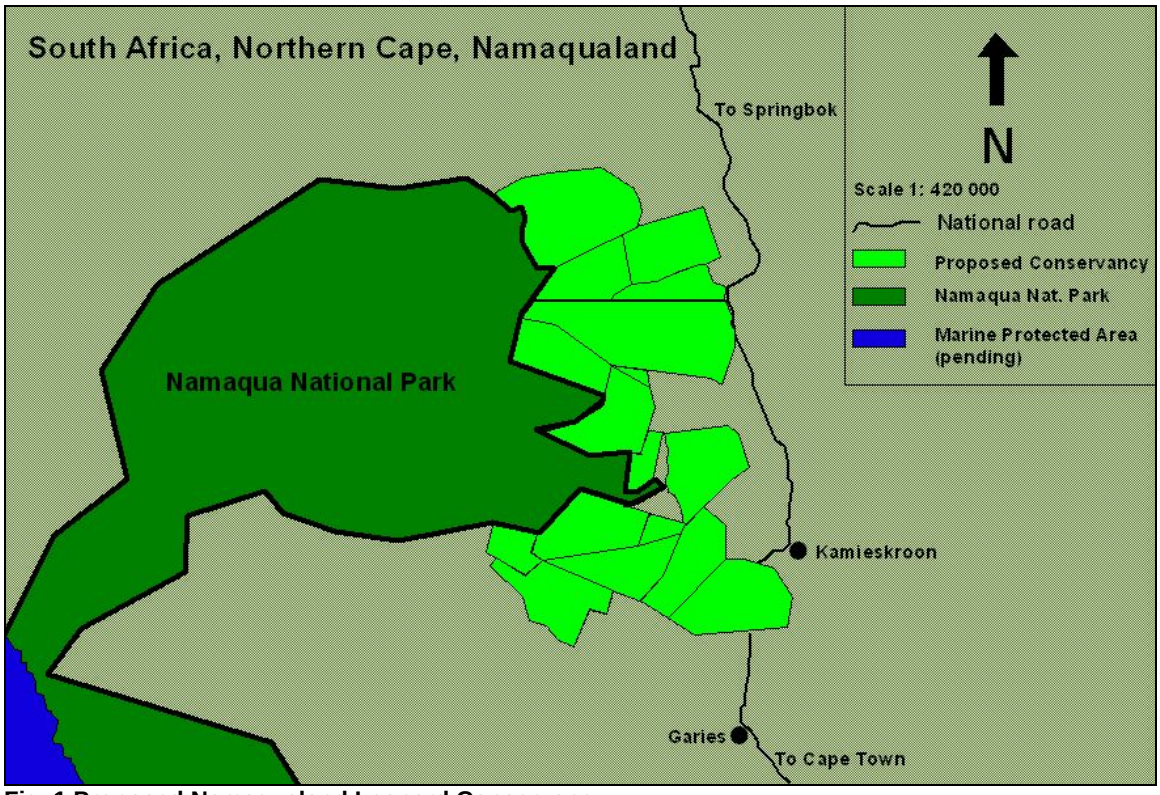

Fig. 1 Proposed Namaqualand Leopard Conservancy.

III. ACHIEVEMENT OF PROJECT PURPOSE

***Project Purpose**: Namaqualand farmers commit to the establishment of predator friendly farming practices and sign agreements to form a Namaqualand Leopard Conservancy as a result of increased awareness regarding predator conservation and support of the work of the Cape Leopard Trust.*

Planned vs. Actual Performance

Indicator	Actual at Completion
Purpose-level:	

1. *Leopard Conservancy established*	The establishment of the Namaqualand Leopard Conservancy (NLC) in a livestock farming area, such as Namaqualand, will create awareness and a greater understanding of leopard ecology and ensure the conservation of these threatened cats. One of the aims of the conservancy, was to promote a more holistic or predator-friendly approach to livestock farming. At the outset, this goal seemed to be a distant and almost unattainable one. We developed good relationships with land-owners area ensuring that the establishment of the NLC is now attainable. Possible key areas have been identified to negotiate signing of conservation stewardship agreements with the landowners. These properties will form the core area of the NLC. (Fig 1). Conservation International (CI) and the CLT are working together to establish the NLC.
2. *New data on Leopard biology and ecology*	Data were collected for one year on leopard presence within the Namaqualand study area (500 000 ha). Historically, resident leopards were last recorded in the Kamiesberg region of Namaqualand in 1922. To-date, 8 leopards (2 adult males, 3 adult females and 3 sub adults were identified using remote infrared camera traps. Other preliminary observations include: fewer small predators where leopards dominate. Field data were collected using Cybertracker^{TM}, such as predator tracks, sightings of animals and scat samples. These data, together with camera data, were key to understanding leopard behaviour and movement. It was also possible to calculate a minimum home range size, albeit a crude estimate, of one adult leopard using camera data (Fig 2). This male leopard (NM1) was photographed at 5 different camera stations resulting in an estimated minimum home range size of 24 000 ha. These data are valuable in raising awareness about leopards in the region.
3. *Established Farmer Outreach Programme*	Knowledge of the leopard project has been achieved through the distribution of posters and bi-lingual brochures throughout the study area. We also held numerous meetings with individual farmers and attended various farmers' union meetings informing them of the project's progress. There is evidence that farmers in the region have come to terms with the CLT's message of holistic predator management. The local farmers' union have established a Leopard Committee, where together with the CLT, feedback on any new project developments are shared. General sentiment amongst farmers is that change will be a slow process.

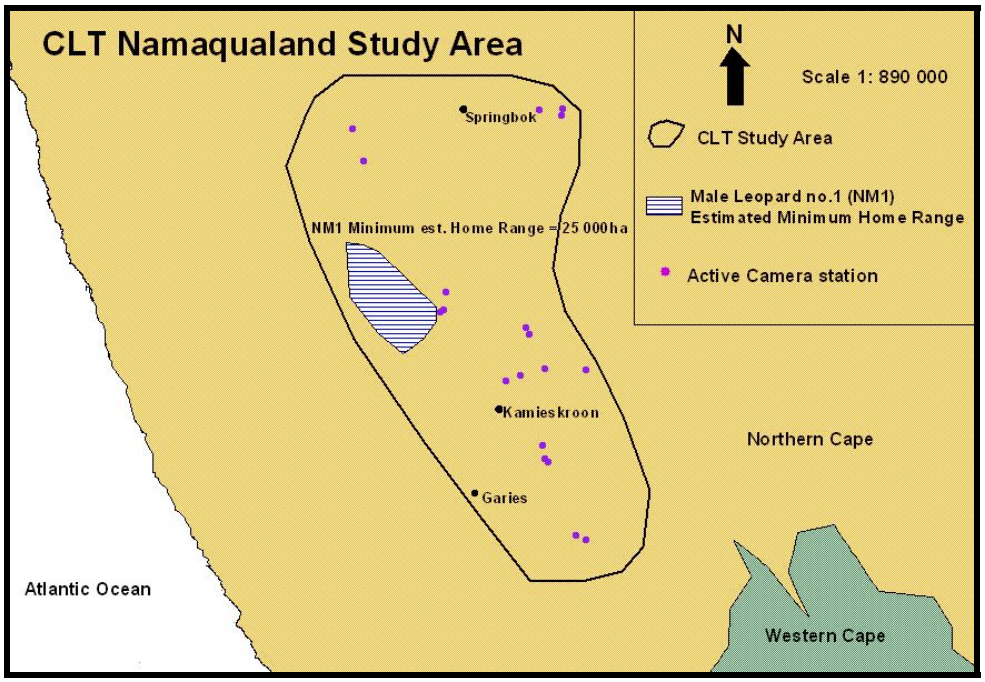

Figure 2 Map of CLT Namaqualand study area, indicating estimated minimum home ranges of an adult leopards in the region.

Describe the success of the project in terms of achieving its intended impact objective and performance indicators.

The project had a substantial impact on resident farmers, landowners and local community members. Many challenges were faced to begin with, often revolving around farmer-predator conflict. It became apparent that before farmers could be approached regarding stewardship or conservancy's, there was a need for general awareness-raising concerning predators, their behaviour and predator-friendly farming methods. Thus, we focussed on leopard research and data collection using these data to inform and educate the Namaqualand people about the project. As a result, farmers are now more receptive to the idea of leopard conservation. We worked in close collaboration with Conservation International (CI).

Were there any unexpected impacts (positive or negative)?

From the outset, this was a controversial project for the region. Despite the conservative nature of land-users, we successfully gained their support through awareness-raising. The results of the camera trap study were a useful way to convey information. Communication channels were created and information was passed on to us regarding predators and wildlife conflict issues on farms. With this heightened awareness regarding predators, a farmer on one occasion, notified us that a leopard was caught in a gin-trap on his farm. He had set the trap to capture black-backed jackals *Canis mesomelas,* but due to the unselective nature in which the trap was set, a leopard cub was captured instead. We did all we could to rescue the cub, however, the injuries proved too serious and the cub had to be euthanized. This incident caused a public outcry and as a result several articles were published in local and national newspapers, some of which cast the farmers in an unfavourable light. We were able to resolve this issue and regain the farmers' trust by highlighting the goals of our project, showing that we were there to help land-owners as well as conserve their unique environment. This led to further expansion of our involvement in the Northern Cape. We were subsequently invited by the Northern Cape Red Meat Production Organisation (NCRPO) to assist with human-wildlife conflict situations throughout the region. This has developed into a strong relationship with decision makers in the industry. In future farmers will be pressurised to convert to more holistic predator friendly farming practices.

Furthermore, the Kamieskroon Farmers' Union founded a Leopard Committee. This was seen as a positive step towards the establishment of the NLC and resolving future issues of livestock-predator conflict. This forum deals with all pertinent environmental issues falling under the umbrella of leopard conservation.

The results of the camera trap study have also had a positive impact on the local community. Residents were astounded to see what animals occur in their region including tangible photographic evidence of the elusive leopards present in the area. These results have been a valuable awareness-raising tool.

IV. PROJECT OUTPUTS

***Project Outputs**:*

Planned vs. Actual Performance

Indicator	Actual at Completion
Output 1: Leopard conservancy where Stewardship agreements are encouraged with landowners in areas where leopards occur.	It was evident at the inception of the project, before any discussions regarding the NLC could be held, an awareness raising initiative was essential. There was little understanding of leopards and their behaviour in the region. During the course of the project, we discussed the concept of the NLC at local meetings, where several farmers and landowners welcomed the idea. We will continue to work closely with CI to set up this conservancy.
***1.1.** Meetings with farmers to set up a Leopard Conservancy which has a Leopard Steering Committee comprising representative farmers, conservation authorities and CLT members. Introductory meeting completed by March 2008, with subsequent meetings each quarter to maintain and elicit support.*	The concept of establishing the Namaqualand Leopard Conservancy was discussed at various meetings in the area and the idea was supported by key farmers. The Kamieskroon Farmers' Union established a Leopard Committee with the CLT as a member, to report on project progress and facilitate the establishment of the NLC. The group of farmers representing the farming community agreed to assist with the stewardship and/or conservancy negotiation process with other land owners.
***1.2.** Project and research results can be used as a tool by conservation authorities and their representatives to encourage the signing of Stewardship Agreements with the relevant landowners*	Our focus on research, primarily using infrared camera traps, led to some exciting results that were regularly communicated with the resident farming community. As a result, farmers have developed a better understanding of leopard behaviour and ecology as well as how best to manage their livestock in order to minimise losses. The NLC concept is now discussed openly with key farmers who have agreed to assist with stewardship contract negotiations with other land owners.
***1.3.** Research undertaken into the type of agreements that are acceptable in the Northern Cape for a leopard conservancy completed by August 2008.*	Meetings between the CLT, CI, SANParks and DTEC have led to a better understanding of the types of agreements suitable for this area, the ownership of land and types of land-use. We will continue to work closely with CI's Stewardship Working Group to facilitate the signing of these agreements.

	Another approach helping the establishment of the NLC is through a farmer accreditation program being developed with the NCRPO and Agri Namakwa. Farmers who comply with predator-friendly farming standards are rewarded, through, for example, receiving a higher inflated price for their meat or alternatively, gaining access to specialist extension services. These incentives will hopefully encourage more farmers to practice a more holistic predator management style. The red meat industry is also willing to pressurise farmers who do not comply, in an effort to have meat from Namaqualand be declared predator-friendly. Farmers who have registered with this programme will have their land serve as the core area for the formation of the NLC.
Output 2: New data on the distribution, density, diet, genetics and conservation of leopards for the Namaqualand Uplands, based on camera-trapping surveys and scat analyses.	A comprehensive camera trapping study was initiated to determine leopard presence/absence, population density and provide an indication of relative prey abundance. Leopard faeces was collected and will be analysed later to determine diet preference of this threatened carnivore.
2.1. *Presence/absence data from the camera-trapping survey demonstrating minimum suitable habitat*	Forty digital infrared camera traps were used in this study. Eight leopards were identified from a number of photographs, as well as a wide range of other mammal species identified. These photographs were used to create awareness promoting the biodiversity of Namaqualand to encourage conservation and tourism within the region.
2.2. *Camera-trapping data shows minimum home range size and minimum number of leopards in an area and provides a density estimate.*	Camera data were key to understanding leopard behaviour and movement. It was also possible to estimate minimum home range sizes of one adult leopard using camera data (Fig 2). This male leopard (NM1) was photographed at 5 different camera stations resulting in an estimated minimum home range size of 24 000 ha.
2.3. *Camera-trapping data gives an indication of prey abundance*	The camera traps have been a valuable tool for collecting information on Namaqualand's faunal diversity. Within the study area, 27 mammal species were recorded, including honey badger *Mellivora capensis*, caracal *Felis caracal*, black-backed jackal, aardvark *Orycteropus afer*, baboon *Papio ursinus*, cape fox *Vulpes chama*, common duiker *Sylvicapra grimmia*, small spotted genet *Genetta genetta*, klipspringer *Oreotragus oreotragus*, yellow mongoose *Cynictis penicillata*, small grey mongoose *Galerella pulverulanta*, Smith's red rock rabbit *Pronolagus rupestris*, springbok Antidorcas marsupialis, aardwolf *Proteles cristatus*, bat-eared fox *Octocyon megalotus*, leopard, mountain zebra *Equus zebra*, striped polecat *Ictonix striatus*, cape hare *Lepus capensis*, scrub hare *Lepus saxatilis*, steenbok *Raphicerus campestrus*, African wild cat *Felis lybica*, hyraxes *Procavia capensis*, Oryx *Oryx gazella*, suricate *Suricata suricatta*, and porcupine *Hystrix africaeaustralis*. These results show that leopards have a wide variety of prey species available to them. Provided they occur in sufficient numbers, livestock depredation incidents will decrease were farmers to take suitable precautions to protect them.

2.4. *Camera trap photographs will be used as a tool for tourism purposes, providing visual evidence of these elusive cats to tourists.*	Information posters, including leopard and other mammal photographs, as well as brochures were distributed in key locations within the study area raising awareness about leopards and predator friendly farming methods. These photographs generated considerable interest from the public and tourists who were often amazed at the mammal diversity in this apparently barren landscape.
2.5. *Scat analysis data will give an indication of the diet and prey preference of leopards. This data will be used to inform farmers of the incidence of or presence of domestic livestock in Leopard scats. The same will be done with the caracal scats collected.*	Leopard and caracal scat were collected and stored for future analysis. These will provide an indication of prey preference as well as percentage livestock in their diet. Farmers will thus be encouraged to conserve prey species and habitat. This, along with the use of holistic predator management practices will help to minimise the losses the farmers suffer due to predators.
2.6. *All data on leopard localities submitted to the South African Leopard Forum (SALF) for inclusion in the South African Leopard Atlas Project initiated by SALF.*	All leopard data deemed relevant will be offered to the South African Leopard Forum (SALF) contributing the S.A. Leopard Atlas project underway since 2005.
Output 3: Farmer Outreach Programme involving education and awareness raising regarding the minimum area needed for and the benefits of predator-friendly farming	Creating awareness amongst the local farmers concerning leopard conservation and predator friendly farming methods was a priority for the project. This has been very successful with many farmers interested in converting to more holistic predator friendly farming methods.
3.1. *Minutes from meetings held with all interested and affected parties regarding the intentions of the project, project and research results, such as the minimum area needed for predator friendly farming, and the establishment of a Leopard Conservancy.*	Regular meetings were held to update all stakeholders on project progress, and where possible, minutes were recorded. We attended farmers' union meetings presenting on numerous occasions. Landowners were also visited on an individual basis to update them on the project. The Kamieskroon farmers union established a Cape Leopard Trust project committee within the farmers' union structure as a forum to provide updates and feedback on project progress during quarterly farmer union meetings.
3.2. *Copies of Posters and Presentations given regarding the establishment of the Leopard conservancy and preliminary results of the project.*	Information posters, including leopard and other mammal photographs, as well as brochures were distributed in key locations within the study area raising awareness about leopards and predator friendly farming methods. These photographs generated considerable interest from the public and tourists who were often amazed at the mammal diversity in this apparently barren landscape. We gave regular presentations to all relevant stakeholders to update them on progress of the project and to encourage their active involvement.
3.3. *Increase in numbers of farmers who commit to predator friendly farming methods in support of the work conducted by the Cape Leopard Trust*	There is a growing interest in more holistic farming techniques, and farmers have learnt a lot about predator ecology. The transformation process will take some time. Further evidence on alternative farming techniques may be required to convince farmers to change their current methods. A 'best practice' farmer-recognition/accreditation programme aims to increase the number of farmers changing their predator management methods.
Output 4: The Leopard Conservancy will also encourage and increase tourism in the Namaqualand Uplands.	Research results were used as a tool to generate awareness amongst farmers who are now interested in the establishment of the NLC. An Adventure Festival is being planned for winter in 2010, where

	leopard conservation and the work of the CLT will be promoted. The local community stands to gain from the tourism spin-offs of this festival through their involvement in organising the event.
4.1. *Community members associated with the Biota Programme will be trained to conduct field work as well as to work in the tourism industry through informing tourists about the project and conducting guided tours throughout the study area.*	Two community members from the Biota programme worked closely with us gaining valuable knowledge on project management, conservation and research. They were exposed to field work and the basic data collection techniques, such as scat collection and the use of the Cybertracker^{TM} software.
4.2. *Increase in number of permits for access to conservation land issued*	The Namaqua districts' tourist numbers and statistics for 2007 & 2008 were obtained from the Northern Cape Department of Tourism. These statistics will be compared to those obtained from the 2009 tourist season's survey & questionnaires which will be conducted at the end of October 2009.
4.3. *Records of tourist groups who visit the project*	The tourist season in Namaqualand centres on the flower season (September - October). The project began in March 2008 and although some information on tourist groups was collected, more comprehensive data are required from the October 2009 tourist season.
4.4. *Increased awareness regarding leopard and other predator conservation*	Awareness through the distribution of information posters brochures as well as presentations on project research has generated considerable interest in the project. An Adventure Festival is being planned for the winter of 2010 from which the local community will benefit. This festival aims to promote our work while involving the local community in arranging catering and accommodation for the participants.
Output 5: Simultaneous collection of baseline data on other fauna in region.	The intensive camera trap study in the region has provided photographic evidence of the generous faunal diversity in the Namaqualand. This has been an "eye-opening" experience for many of the local residents giving them a unique opportunity to see elusive wildlife, such as leopard and aardvark. Data were regularly communicated with residents.
5.1. *Baseline data on other fauna will assist in a broad overview of the health of the environment as a whole in this area.*	Camera trap photographs and field data provided a comprehensive baseline dataset generating sufficient evidence as to the general health of the environment in different land-use types in Namaqualand.

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

Leopard Conservancy

This project has been successful in creating awareness and interest surrounding leopard conservation in the Namaqualand region. Research results were used as a tool to generate awareness amongst farmers who are now interested in the establishment of the NLC. Fundamental facets of predator ecology were communicated to land-owners experiencing human-wildlife conflict issues. Although resident farmers have not been totally converted yet, the seeds have been sown for a modification, and in some cases, complete change in their livestock management styles. It is apparent through the success of the CLT in other leopard areas that conservation of this apex predator ultimately leads to effective conservation of regional fauna and biodiversity as a whole.

Research

The camera trapping resulted in the identification of 8 individual leopards within the study area. Considering that the last resident leopard in this region was recorded in 1922, we consider our

results a resounding success. The survey also highlighted faunal diversity still present in Namaqualand today. This research will continue to ensure that interest in the project is maintained and involvement encouraged.

As a result of the logistical and practical problems experienced trying to achieve project goals, we have now employed the services of several students to assist in finding suitable solutions. These students will use new and innovative technology to address issues such as trap communication, animal monitoring tools and predator behaviour altering tools.

Community involvement
Two local community members from Biota were exposed and trained in all aspects of project management. They were also trained in scientific data collection, including camera placement and monitoring, data capturing, collection of scat samples and the use of Cybertracker™ to input field data. We anticipate further involvement of local community members to assist with the project in the future.

Tourism
An Adventure Festival is being planned for the winter of 2010 which will have tourism spin-offs for the local community. The festival aims to promote environmental awareness, focussing on the leopard and the work of the CLT, while involving the local community in organising the event. Local tourism stakeholders, Namaqua National Park, The DTEC, CLT and Wild Runner Events will be combining efforts to host the event.

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

It was evident that the goal of establishing the Namaqualand Leopard Conservancy would not be achieved without a solid foundation and understanding of leopard ecology and an insight into possible predator friendly farming techniques that would suit this area. Historically, predator conflict and loss of livestock to depredation has been significant in Namaqualand. Income from livestock farming is low and predators are considered a real threat to farmer livelihoods. As can be expected, it takes time for a relationship of trust to develop, thereafter opening the way for negotiations to commission land under a stewardship programme and the creation of a leopard conservancy to safeguard the regions biodiversity.

V. SAFEGUARD POLICY ASSESSMENTS

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

None

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.

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

Although one of the main aims of the project was the establishment of the Namaqualand Leopard Conservancy, it was evident that research results and predator friendly farming options were required within the region before expecting any "buy-in" from farmers. This has been a successful

approach, as many farmers are now interested in the idea of being part of the Namaqualand Leopard Conservancy.

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

Perhaps the most important lesson learnt is that the relationships developed with the local community and farmers are essential for ensuring the success of such a project. Keeping the local community and farmers informed of any project developments or results is crucial to guarantee that their interest is maintained and involvement encouraged. These relationships also benefit the local communities and farmers, as they now have an organisation aimed to assist them with leopard queries and problems, available to them when needed.

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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		$		
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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.

The CLT will be facilitating the establishment of the Namaqualand Leopard Conservancy in close collaboration with CI-SA's Stewardship working group. For this project to continue, additional funding is essential. The CLT is currently investigating avenues of funding to ensure the continuation of this valuable work in the region. In the interim, the CLT are funding further work in the area. Data are still collected on a regular basis. Stellenbosch University have committed resources and students to assist with aspects of this project aiming to assist in the alleviation of human-wildlife conflict.

VIII. ADDITIONAL COMMENTS AND RECOMMENDATIONS

The CLT would like to thank CEPF for their generous funding, without which the successful project and work towards leopard conservation in Namaqualand would not have been possible. We will endeavour to remain in this area ensuring conservation of the regions biodiversity at every level possible.

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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