



APP2 224

DARWIN INITIATIVE



APPLICATION FOR GRANT FOR ROUND 12 COMPETITION: STAGE 2

Please read the Guidance Notes before completing this form. Give a full answer to each section; applications will be considered on the basis of information submitted on this form. Please do not cross-refer to information in separate documents except where invited on the form. The space provided indicates the level of detail required but you may provide additional information on a separate A4 sheet if necessary. Do not reduce the font size below 12pt or alter the paragraph spacing.

Submit by 19 January 2004

Ref (*Defra only*):

1. Name and address of organisation

University of Durham
University Office, Old Shire Hall, Old Elvet, Durham. DH1 3HP

2. Project title (not exceeding 10 words)

Capacity building in mammal management for Western Cape nature reserves

3. Principals in project. Please provide a one page CV for each of these named individuals.

Details	Project leader	Other UK personnel (if working more than 50% of their time on project)	Main project partner or co-ordinator in host country
Surname	Hill	Shultz	Kirkwood
Forename(s)	Russell Anthony	Susanne Marie	Donovan
Post held	Research Fellow	Research Biologist	Regional Ecologist
Institution (if different to above)		Royal Society for the Protection of Birds	Western Cape Nature Conservation Board
Department	Anthropology	Conservation Science	Scientific Services
Telephone			
Fax			
Email			

4. Describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)

Aims

The University of Durham aims to be one of the top five academic institutions in the UK through ensuring both teaching and international research excellence. The Department of Anthropology fully embraces these aims.

Activities

The Department of Anthropology supports excellence in research and academic training, with emphasis on building collaborations at national and international level. As the largest Anthropology department in the UK we offer uniquely diverse, multidisciplinary training at both undergraduate and post-graduate levels. Research is conducted through internationally recognised research groups with projects operating in over 30 countries. Biological Anthropology forms part of the Centre for Tropical Ecology, a multidisciplinary research group specializing in tropical ecosystems and focusing on a wide range of fundamental and applied problems in conservation biology and wildlife management.

Achievements

The Department of Anthropology was rated 5 in the last Research Assessment Exercise. The department has attracted in excess of £1 million in external income since August 2001 from Research Councils, Government agencies, charities and NGO's. Anthropology has on average 300 undergraduate students (with in excess of 200 natural science students also taking Anthropology courses) and 36 postgraduate students are currently registered in the department. Many of these are engaged in collaborative international projects and conducting research abroad. The Centre for Tropical Ecology has successfully coordinated research on a variety of conservation and management projects addressing issues such as climate change, the ecological consequences of alien species, biodiversity and community dynamics in response to habitat change and resolving conflicts of interest between ecotourism, wildlife and agriculture.

5. Has your organisation received funding under the Initiative before? If so, please give details.

2001 - Molecular tools for promoting biodiversity in rainforest fragments of Borneo (Ref 10/025)

1998 - Biodiversity of butterflies in tropical rainforests of Sabah, Borneo (Ref 07/040)

1996 - Prosopis Invasion: Implications for the Biodiversity of Caatinga in NE Brazil (Ref 05/166)

6. Please list the overseas partners that will be involved in the project and explain their role and responsibilities in the project. The extent of their involvement at all stages in the project should be detailed, including in project development. Please provide written evidence of this partnership.

Western Cape Nature Conservation Board (WCNCB): involved in regional coordination of the project and sustainable implementation of the management plan on a wider scale. An existing relationship between the project leader and WCNCB identified the pressing need for the proposed project. Within WCNCB we will work with Dr Donovan Kirkwood (Regional Ecologist), Peter Lloyd (Specialist Scientist - Cape mountain zebra, *Equus zebra zebra*), Dr Helen De Klerk (GIS Scientist) and Andrew Turner (Biodiversity Database Manager).

De Hoop Provincial Nature Reserve (DHPNR): site of former long-term Cape mountain zebra (CMZ) monitoring (discontinued in 1999) and the primary location and base for the field rangers in the proposed project. Kammanassie Provincial Nature Reserve (KPNR) and Gamkaberg Provincial Nature Reserve (GPNR), two of the three original, natural populations, will be the site of secondary training programs and monitoring.

CyberTracker Conservation: South African company developed by Louis Liebenberg to produce biological monitoring software packages. In collaboration with Louis Liebenberg at CyberTracker, the UK partners will develop a novel, habitat-specific, monitoring package under its Greenware Initiative (free conservation software).

7. **What steps have been taken to (a) engage at all appropriate levels within the host country partner organisations to ensure full support for the project and its outcomes; and (b) ensure the benefits of the project continue despite staff changes in these organisations?**

WCNCB are the primary custodians of conservation land protecting CMZ and are thus the most appropriate organisation to be involved with. In July 2003 the Project Leader visited WCNCB at Scientific Services in Stellenbosch to discuss initiating the project and to ensure that it would address their future management requirements and current conservation objectives. The Project Leader, who has an established relationship with DHPNR, then met with the new management staff at DHPNR to discuss implementation on the ground. Within Scientific Services, any staff changes will result in recruitment to the current specified roles and the same is true of DHPNR management. Capacity building to ensure that the field rangers involved in the project are proficient to train colleagues in CyberTracker is a fundamental target for the project and will ensure that future staff turnover can be easily managed by local training. In the unlikely event of staff turnover being unusually high, WCNCB will facilitate continuity through formal training. Staff changes are thus unlikely to influence the success of the project.

8. **What other consultation or co-operation will take place or has taken place already with other stakeholders such as local communities. Please include any contact with the government of the host country not already provided.**

DHPNR adjoins a neighbouring conservancy maintained by the Denel Corporation Overberg Test Range (DCOTR). DHPNR already operates a collaborative conservation policy under established written agreement with DCOTR. The Project Leader met with the chief conservator of DCOTR in July 2003 and received complete support in implementation of the project.

PROJECT DETAILS

9. **Define the purpose of the project in line with the logical framework.**

The project has four primary objectives:

- i) Re-establish long-term monitoring of endangered CMZ (IUCN Endangered, CITES Appendix I) at DHPNR, and establish monitoring at KPNR and GPNR, in line with IUCN (2002) recommendations for successful management of small populations.
- ii) Develop a rigorous methodology for monitoring of flagship threatened mammal species using icon-driven handheld computer technology suitable for semi-literate to illiterate conservation field staff.
- iii) Develop clear large mammal census techniques for Western Cape provincial nature reserves for new management policy of current reserves and to develop capacity for planned development of mega-reserves and reintroductions.
- iv) Integrate outputs of established monitoring into a comprehensive database to facilitate local and regional assessment of long-term trends and local stability of populations of target species.

10. **Is this a new initiative or a development of existing work (funded through any source)?**

This is a new initiative, but builds upon historical records of CMZ monitoring at DHPNR.

- 11. How will the project assist the host country in its implementation of the Convention on Biological Diversity? Please make reference to the relevant article(s) of the CBD, thematic programmes and/or cross-cutting themes (see Annex C for list and worked example) and rank the relevance of the project to these by indicating percentages. Is any liaison proposed with the CBD national focal point in the host country? Further information about the CBD can be found on the Darwin website or CBD website.**

The project will support WCNCB in addressing a number of Articles within the Biodiversity Convention. In particular, this project will support the implementation of Articles 5 (facilitating cooperation between partners, UK and South Africa: 5%), 6 (general conservation plans: 10%) 7 (monitoring priority components of biodiversity: 25%), 8 (aiding *in situ* conservation: 5%), 12 (research and training programs: 25%), 16 (access and transfer of technology: 10%), 17 (facilitating information exchange through scientific and popular publication and education/training: 10%), 18 (promoting scientific and technical cooperation: 5%) and 20 (providing financial sources from UK with matched funds from South Africa: 5%).

- 12. How does the work meet a clearly identifiable biodiversity need or priority within the host country? Please indicate how this work will fit in with National Biodiversity Strategies or Environmental Action Plans if applicable.**

The South African National Biodiversity Bill requires that management plans be drawn up for threatened taxa and both the International Equid Specialist Group and the Mountain Zebra Working group have also identified the critical need for ongoing monitoring and management plans based on sound data. Censuses and long-term monitoring are not currently a feature of WCNCB policy: large mammals are relatively rare in WCNCB reserves and management has concentrated on the diverse and sensitive flora of the Cape Floral Region (which has large numbers of locally endemic and globally threatened plant species). Planned reintroductions of large native fauna into WCNCB reserves, including flagship species such as black rhino, have highlighted the need to build local capacity and methodology for sustainable mammal censusing as part of a sound management strategy. The proposed project is thus fundamental to the South African National Biodiversity Strategy and Environmental Action Plans.

- 13. If relevant, please explain how the work will contribute to sustainable livelihoods in the host country**

Field rangers currently note biological observations into a field book, a daunting task for semi-literate to illiterate staff that rarely results in successful transfer to computer and management databases. CyberTracker's icon-driven system will allow staff with low literacy and computer skills to easily contribute detailed data to a central computer database. Data can be viewed immediately by those who have collected it, providing instant feedback. This will offer empowerment, and play an important role in increasing job satisfaction, as field rangers are able to see the crucial role that their knowledge plays within the core function of WCNCB. WCNCB is committed to upliftment, employment and economic development of local communities.

- 14. What will be the impact of the work, and how will this be achieved? Please include details of how the project outputs will be disseminated and put into effect to achieve this impact.**

The major impact of the work will be to implement a sustainable strategy for the monitoring of CMZ (and ultimately other large mammals) in three of the most important populations within the Western Cape. This monitoring data will be important to management strategies, particularly in relation to reintroductions or translocations to maintain genetic diversity. In addition to the reports and management plans for DHPNR and WCNCB, the Project Leader and Project Officer will work on producing approximately 4 peer-reviewed publications based on both the underlying methodology and interpretation of the CMZ population data for informing future policy. The findings will also be presented at at least one international conference per year during, and immediately following, the project.

15. How will the work leave a lasting legacy in the host country or region?

By the end of the project, eight field rangers and the chief conservator will be trained in, and successfully implementing, monitoring of the endangered CMZ at DHPNR using Cybertracker software on hand-held computers. Furthermore, these staff will have assisted in the training of field staff from KPNR and GPNR such that monitoring will be ongoing in these populations. The project, will thus not only leave a lasting legacy to CMZ conservation, it will also provide management plans and a robust methodology for Western Cape nature reserves to sustainably monitor large mammal populations. WCNCB will feed the results and management plans to other agencies (e.g. SA National Parks) by means of fora such as the Mountain Zebra Working Group (where other organisations are represented) to ensure a far wider legacy to the project.

16. What steps have been taken to identify and address potential problems in achieving impact or legacy?

The Project Leader has consulted extensively with staff at all levels within the partner organisations to ensure full support and to identify potential problems, and we foresee few areas for major concern. One possible issue could be the continued commitment to the monitoring programme developed during this project. Since the project engages a variety of specialist staff at WCNCB and does not hinge on a single individual, staff changes are unlikely to be an issue. WCNCB is highly committed to long-term implementation of CMZ monitoring and large mammal surveys as part of its future management strategy and thus resources are available to ensure a sustained legacy to the project. A second potential concern would be a lack of cooperation between reserves in sharing and evaluating monitoring results. This is highly unlikely since the project is run through the Regional Ecologist and centralised specialist staff who will oversee the bi-directional flow of information from the monitoring project to the central management database. Furthermore, the relationship with the DCOTR has a long history of successful collaboration. Finally, the long-term dependability of hardware and software is essential for the success of the project. CyberTracker is a South African company with strong commitment to conservation initiatives and a stated investment in the success of CyberTracker projects. Louis Liebenberg, who devised the software, is the collaborative partner who can address any CyberTracker software or interface issues.

17. How will the project be advertised as a Darwin project and in what ways would the Darwin name and logo be used?

The work will be heavily advertised as a Darwin project, with all publications and materials prominently displaying the Darwin Initiative logo. Within the UK, we will develop a project website at the University of Durham which will be linked to the web pages of WCNCB, participating nature reserves and personal web pages. Poster displays and leaflets will be placed in the reception office at DHPNR, and subsequently at KPNR and GPNR, to describe the project and the Darwin Initiative to the public. Press releases through the WCNCB publicity department will advertise the initiation of the project and achievement of key milestones in South Africa. All published articles and unpublished reports will acknowledge the support of the Darwin Initiative.

- 18. Are you aware of any other individuals/organisations carrying out similar work? Are there completed or existing Darwin Initiative projects which are relevant to your work? Please give details, explaining the similarities and differences and how your work will be distinctive and innovative. Show how the outputs and outcomes of this work will be additional to any similar work, and what attempts have been/will be made to co-operate with such work for mutual benefits.**

CyberTracker field computers and software are currently under evaluation by WCNCB as a means of allowing literate or semi-literate field rangers to play a critical role in biodiversity conservation. To date, however, short-term pilot projects have focussed either on ad-hoc field observations or specific elements of the Cape floristic kingdom (e.g. the invasion of fynbos by the Argentine ant). The current project is thus the first large-scale use of the software to address the specific requirement for management of larger mammal species. In producing a rigorous censusing methodology the outcomes will far exceed those of the current pilot projects, whilst nevertheless integrating to advance the development of the CyberTracker software. To our knowledge, there are no Darwin Initiative projects of direct relevance to our work.

- 19. Will the project include training and development? Please indicate who the trainees will be and criteria for selection. How many will be involved, and from which countries? How will you measure the effectiveness of the training and will those trained then be able to train others? Where appropriate give the length and dates (if known) of any training course. How will trainee outcomes be monitored after the end of the training?**

Training is a key element of the proposed project. Initially we will train the 8 existing field rangers and chief conservator at DHPNR. They will receive 2-4 weeks initial training followed by 5 months of in-service training and development. Throughout this period they will be constantly monitored and assisted by the Project Officer, with the success of the training evaluated through the quality of data incorporated into the management database. In the final year these field staff will assist in the training of 8 field rangers from the KPNR and GPNR at a 2-week training workshop held at the Potberg Field Station on DHPNR. The Project Officer will be responsible for ensuring that these staff then successfully implement the methodology at their respective reserves.

- 20. How are the benefits and/or work of the project expected to continue after the end of grant period? Please provide a clear exit strategy.**

The field rangers and chief conservator will continue to work at DHPNR after the end of the project, and by the end of year 2 will be operating independently of the Project Officer in collecting management data. As a consequence, successful long-term monitoring of CMZ at DHPNR is assured. In the final 6 months, the Project Officer will ensure that, following the training workshop, the methodology is successfully transferred to KPNR and GPNR such that the monitoring program is functioning efficiently by the end of the project. This represents an extremely solid exit strategy for the continuation of this Darwin Initiative project, and will ensure large-scale monitoring of CMZ. The project will also leave a solid platform for WCNCB to develop the methodology to address their future requirements in managing large mammal populations.

21. Provide a project implementation timetable that shows the key milestones in project activities.

Project implementation timetable		
Date	Financial year:	Key milestones
	Apr-Mar 2004/5 Apr-Mar 2005/6 Apr-Mar 2006/7	
Apr 2004	Apr-Mar 2004/5	Initiation of the project – SMS appointed to Project Officer.
Jul 2004	Apr-Mar 2004/5	Project Leader and Project Officer to South Africa to meet host country partners and to present initial report on censussing methodology. Project Officer to remain to validate methodology at DHPNR, develop CyberTracker software in line with methodology and incorporate photographic records of CMZ population from 1999.
Oct 2004	Apr-Mar 2004/5	Initial training in CyberTracker and large mammal censussing for game rangers and chief conservator at DHPNR led by Project Officer.
Nov 2004	Apr-Mar 2004/5	In-service training with field ranger feedback to update 1999 records to 2004 population, enhance database design and ensure flow of data from CyberTracker to CMZ database. Process monitored and evaluated by Project Officer.
Apr 2005	Apr-Mar 2005/6	1-year pilot study of CyberTracker to collect required management information by field rangers led by chief conservator. 3-monthly on-site assessments by Project Leader or Project Officer.
Oct 2005	Apr-Mar 2005/6	Initial report on CyberTracker and CMZ monitoring to WCNCB. Begin development of general management plan.
Oct 2005	Apr-Mar 2005/6	Project Leader and Project Officer to KPNR and GPNR to meet host country partners and conduct assessment ahead of expansion of project.
Feb 2006	Apr-Mar 2005/6	Final assessment of pilot study at DHPNR for incorporation into general management plan.
Mar 2006	Apr-Mar 2005/6	Final training guides produced.
Apr 2006	Apr-Mar 2006/7	Training workshop at Potberg Field Station for KPNR and GPNR field staff led by DHPNR rangers and Project Officer.
Apr 2006	Apr-Mar 2006/7	Implementation of CMZ monitoring at Kammanassie and Gamkaberg Nature Reserves with support of Project Officer.
Jul 2006	Apr-Mar 2006/7	Submission of final management strategy for CMZ at DHPNR.
Sep 2006	Apr-Mar 2006/7	Final assessment of CMZ monitoring at KPNR and GPNR to ensure successful implmentation of censussing methodology.
Sep 2006	Apr-Mar 2006/7	Submission of general management strategy for CMZ and management plan for the monitoring and sustainable censussing of large mammals in WCNCB.
Dec 2006		Submission of final report to the Darwin Initiative.

22. How will the most significant outputs contribute towards achieving the purpose of the project? (This should be summarised in the Log Frame as Indicators at Purpose level)

This project aims to produce sustainable capacity for large mammal management in Western Cape nature reserves through development of icon-driven computer software. This will be achieved through focussing a pilot project that re-establishes monitoring of CMZ at DHPNR, and subsequently establishes monitoring at KPNR and GPNR (key populations in maintaining genetic diversity). The project will produce operational icon-driven computer software for use by field rangers at each of these reserves following intensive development in relation to the DHPNR population. The results of this study will produce an effective management plan for censussing of large mammal populations in Western Cape nature reserves.

23. Set out the project's measurable outputs using the separate list of output measures

PROJECT OUTPUTS		
Year/Month (starting April)	Standard Output Number (see standard output list)	Description (include numbers of people involved, publications produced, days/weeks etc)
Apr 2004	15B	Local press release through WCNCB publicity department to announce start of project.
Apr 2004		Project website developed and linked to WCNCB and personal websites.
Jul 2004	8	Project Leader (4 weeks) and Project Officer (36 weeks) in South Africa for start of project and training and development phase.
Oct 2004	6A/B	4-week initial training on censussing and CyberTracker software for 8 field rangers and chief conservator at DHPNR.
Nov 2004	6A/B	5-months in-service training with associated product development for 8 field rangers and chief conservator at DHPNR.
Mar 2005	8	Project Leader (2 weeks) to assess end of training and development phase.
Mar 2005	12B	DHPNR CMZ management database updated in enhanced electronic format.
Apr 2005		Posters and leaflets to advertise project and Darwin Initiative on display at DHPNR.
Oct 2005	8	Project Leader (4 weeks) and Project Officer (8 weeks) for meeting with host country partners and visits to KPNR and GPNR.
Oct 2005	9	Management report on CyberTracker and CMZ monitoring to WCNCB.
2005	14B	International conference attended by Project Leader or Project Officer to present findings.
Mar 2006	8	Project Officer (24weeks) for training workshop and implementation of monitoring at KPNR and GPNR.
Mar 2006	11A/B	1-2 papers to be submitted for publication in peer-reviewed journals.
Mar 2006	7	Training guides for use of CyberTracker in large mammal surveys.
Apr 2006	15B	Local press release through WCNCB publicity department to announce successful completion of first phase and initiation of work at KPNR and GPNR.
Apr 2006	8	Project Leader (4 weeks) for training workshop.
Apr 2006	6A/B	2-week training workshop on censussing and CyberTracker software led by DHPNR field staff for 8 field rangers and chief conservators from KPNR and GPNR
Apr 2006		Posters and leaflets to advertise project and Darwin Initiative on display at KPNR and GPNR.
Jul 2006	9	Management strategy for CMZ at DHPNR to WCNCB.
Sep 2006	8	Project Leader (2 weeks) to Scientific Services for end of project and to submit reports and management plans.
Sep 2006	9	Management plans for monitoring of CMZ and sustainable censussing of large mammals in Western Cape nature reserves to WCNCB.
Sep 2006	11A/B	1-2 papers to be submitted for publication in peer-reviewed journals.
2006	14B	International conference attended by Project Leader or Project officer to present findings.
Dec 2006		Submission of final report to the Darwin Initiative.

MONITORING AND EVALUATION

24. Describe how the progress of the project, including towards delivery of outputs, will be monitored and evaluated in terms of achieving its overall purpose. This should be both during the lifetime of the project and at its conclusion. Please make reference to the indicators described in the Logical Framework.

The Project Leader and Project Officer will be primarily responsible for monitoring the work and ensuring it achieves its stated goals. The Project Leader will regularly visit South Africa to meet with the Project Officer and host country partners and assess progress in relation to the key milestones. The Project Officer will be resident in South Africa for substantial portions of the project, particularly during the training and development phase (Jul 2004 – Mar 2005), and in the expansion of the project to KPNR and GPNR following the training workshop (Mar – Aug 2006). The Project Officer will report to the Project Leader and host country partners at quarterly intervals.

25. How will host country partners be involved in monitoring and evaluation of the project?

The host country partners will be constantly involved in monitoring and evaluating the project. At the initial stages, WCNCB will be regularly consulted to ensure that the CyberTracker software and database is being developed in line with their perceived management requirements and current biodiversity database design. The host country partners will also receive reports at quarterly intervals from the Project Officer to which they will be invited to respond. During the pilot study, DHPNR management will become progressively more involved in coordinating the project such that by the end of year 2 monitoring will be entirely under their administration. Monitoring at KPNR and GPNR will be similarly transferred by the end of the project.

26. How will you ensure that the project achieves value for money?

Since the majority of the personnel involved in the project will have their salaries covered from existing sources, salary costs are minimal and only a dedicated Project Officer is required to coordinate the project. This fact also ensures the long-term legacy of the work, since additional funding will not be required for staff to ensure that the project continues. Given that WCNCB will provide additional resources, such as accommodation, vehicles and running costs, and that the CyberTracker software is provided free of charge, this project represents extremely good value for money given the scope of the work involved. Nevertheless, we will continue to seek funding from other sources to further subsidise costs and have minimised the number of flights involved to maximise value for money.

27. Reporting Requirements. All projects must submit six monthly reports (by 31 October each year) and annual reports (by 30 April each year). Please check the box for all reports that you will be submitting, dependent on the term of your project. You must ensure that you cover the full term of your project.

Report type	Period covered	Due date	REQUIRED?
Six month report	1 April 2004 – 30 September 2004	31 October 2004	Yes
Annual report	1 April 2004 – 31 March 2005	30 April 2005	Yes
Six month report	1 April 2005 – 30 September 2005	31 October 2005	Yes
Annual report	1 April 2005 – 31 March 2006	30 April 2006	Yes
Six month report	1 April 2006 – 30 September 2006	31 October 2006	Yes
Annual report	1 April 2006– 31 March 2007	30 April 2007	No
Six month report	1 April 2007 – 30 September 2007	31 October 2007	No
Final report	1 April 2004 – project end date	3 months after project completion	Yes

LOGICAL FRAMEWORK

28. Please enter the details of your project onto the matrix using the note at Annex B of the Guidance Note. This should not have substantially changed from the Logical Framework submitted with your Stage 1 application. Please highlight any changes.

Project summary	Measurable indicators	Means of verification	Important assumptions
<p>Goal:</p> <p>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources 			
<p>Purpose</p> <p>To produce sustainable capacity for large mammal management in Western Cape nature reserves through development of icon driven computer software</p>	<p>i) Re-established monitoring of CMZ at DHPNR, new monitoring implemented at KPNR and GPNR, and a general increase in large mammal censusing</p> <p>ii) Operational icon-driven computer software for use by field rangers</p> <p>iii) Effective management plan for censusing of large mammal populations in Western Cape provincial nature reserves</p>	<p>i) DHPNR management reports, CMZ database</p> <p>ii) Software adopted by WCNCB available from CyberTracker conservation</p> <p>iii) Peer reviewed publications (copies to Darwin initiative); management plan available from WCNCB</p>	<p>CyberTracker continue free software development</p> <p>Continued cooperation from DCOTR</p>
<p>Outputs</p> <p>Increased capacity for mammal surveying and management through staff training</p>	<p>8 field rangers trained in data collection at DHPNR; field rangers act as trainers for staff from other reserves</p>	<p>Field survey reports</p> <p>DHPNR management reports</p> <p>KPNR and GPNR management reports</p>	<p>Current field ranger levels maintained at DHPNR</p>
<p>Enhanced and updated CMZ monitoring and records</p>	<p>Complete population records for DHPNR and DCOTR conservancy</p>	<p>CMZ database available in enhanced electronic format</p> <p>Peer reviewed publications (copies to Darwin initiative)</p>	<p>Continued cooperation from DCOTR</p>
<p>Management plan for mammal surveys and conservation in Western Cape provincial nature reserves</p>	<p>Report on census techniques</p> <p>Recommendations to WCNCB management on future policy</p>	<p>Peer-reviewed publications (copies to Darwin initiative)</p> <p>Management plan available from WCNCB</p>	
<p>Activities</p> <p>Training programs</p>	<p>Activity Milestones (Summary of Project Implementation Timetable)</p> <p>Yr 1: Initial game ranger training (Oct 04) followed by in-service training with field ranger feedback at DHPNR (Nov 04 – Mar 05); Yr 3 field ranger led training seminar at Potberg for rangers from KPNR and GPNR (Apr 06)</p>		
<p>Software development</p>	<p>CyberTracker software developed for CMZ monitoring at DHPNR by Sep 04; field tests and development to produce final version by Apr 05</p>		
<p>Field research</p>	<p>Yr 1: Monitoring re-established for CMZ at DHPNR with long-term records updated in enhanced digital format by Mar 05; Assessment of CyberTracker software and census techniques completed by Apr 05; Yr 2: Pilot study of CyberTracker software on DHPNR CMZ completed by Apr 06; Yr 3: Introduction and assessment of CMZ monitoring and management plan at KPNR and GPNR from May 06</p>		