

Darwin Initiative for the Survival of Species

Annual Report

1. Darwin Project Information

Project Ref. Number	<i>162/ex 09/015 (post funding project)</i>
Project Title	<i>The Role of Tourism in Sustainable use of Big Cats</i>
Country(ies)	<i>Zimbabwe & southern Africa</i>
UK Contractor	<i>Prof. D.W. Macdonald, WildCRU, Oxford University</i>
Partner Organisation(s)	<i>Parks and Wildlife Authority, Zimbabwe</i>
Darwin Grant Value	<i>£74 695.80</i>
Start/End dates	<i>October 2003 to October 2005</i>
Reporting period (1 Apr 200x to 31 Mar 200y) and report number (1,2,3..)	<i>October 2004 to April 2005</i>
Project website	<i>http://www.wildcru.org/links/hwangelions/hwange.htm</i>
Author(s), date	<i>Dr A.J.Loveridge, June 2005</i>

2. Project Background

- This Darwin project investigates the sustainability of sport hunting of lions and works towards implementation of sustainable management for this species. The project is hosted by Wildlife Conservation Research Unit at Oxford University and is partnered locally by the Zimbabwe National Parks and Wildlife Authority. The fieldwork component of the project is largely based in western Zimbabwe in Hwange National Park and Matetsi Safari Area. We have strong links with regional and local conservationists involved in similar work.

3. Project Purpose and Outputs

- The project aims, with Darwin Initiative follow-up funding, to build on successes experienced by the original Darwin project in encouraging the sustainable use of wildlife resources- in particular lions. We continue to monitor the Hwange National Park lion population in the light of reductions in hunting quotas achieved by the original project and more recently a complete moratorium on lion hunting implemented at the start of the 2005 hunting season. We aim to assess the value of lions to photographic tourism through a questionnaire survey. We are analysing and creating a database of historical hunting data from Matetsi Safari area. Our conservation education initiative continues to communicate the conservation message to the local community. We aim to disseminate information about the project through implementation of workshops, locally in Hwange attended by local stakeholders and National Parks staff, and continue to forge regional links with other similar projects in the region through a series of conservation workshops.
- The outputs and proposed operational plan have not been significantly modified over the last year.

4. Progress

- This project is a follow-up on the original 'Big cats and sustainable use' project. The original project achieved a 50% reduction in hunting quotas during 2003, based on research results, developed a strong relationship with the National Parks Authority and held 3 regional workshops attended by experts from the region and thereby developed strong links between conservationists in southern Africa. We trained 7 National Parks staff and assisted local stakeholders in assessing and setting wildlife hunting quotas. Our conservation education initiative (Ingonyama theatre group) disseminated conservation values to local school children and villagers through the medium of dance and drama. Since the award of follow-up funding the project has continued to build on this strong foundation. In addition to continuing with the above activities the project has begun analysis of historical hunting data, initiated a survey of the value of lions to tourism and has put in place early planning for the hosting of a major conference in Oxford in early 2006, on Felids.
- Ecological fieldwork has been continuous since the end of the original project and continues to meet the high standards set by the original project, GPS collars have been deployed and monitored by field staff. The wildlife census document was produced and distributed in December 2003, the tourism survey was completed and the compilation of the hunting data base completed. Training and conservation liaison activities are ongoing. Meetings to present results were held in November 2005 at the Parks and Wildlife Authority head office in Harare (attended by the Director-General and all senior officers) and in Hwange (attended by field staff and stakeholders). Initial planning has been undertaken to organise a regional workshop in September 2005 (although this may be superseded by a regional CITES meeting on large carnivores in August 2005) and implement a major international conference on Felids in Oxford.
- Project achievements:-
 - 1) The major achievement of this project has been the influence that we have had on conservation policy. Our early results indicated that lions were being over hunted in the hunting concessions surrounding the National Park. At the end of the original project the Parks Authority reduced hunting quotas by 50%, with a further reduction occurring in 2004. Based on results presented to the Director General (Mr Mutsambiwa) of the Parks Authority in November 2004 a complete ban on lion hunting in western Zimbabwe was implemented at the start of the 2005 hunting season. The aim of suspended hunting is to allow the population to recover sufficiently for a small sustainable quota that will not be ecologically damaging, to be harvested annually in the hunting concessions surrounding the park. This ban is an unprecedented move on the part of the Parks Authority and is likely to last 2-3 years. Surprisingly this move also received considerable support from the local stakeholders and the professional hunting community.
 - 2) Our field work in Hwange National Park continues as planned. One major spin off of having a hunting ban imposed is that we are in a position to monitor the effect of this moratorium in that we have data collected from the population while it was subjected to the impact of hunting. We still have study animals with radio-collars in the field and we continue to monitor these animals and maintain the equipment (e.g. capture animals and replace batteries on GPS collars). These data will allow us to predict the recovery rate of persecuted or exploited lion populations. Early indications, post the hunting moratorium, are that male numbers are increasing- with a number of coalitions of young males moving into the study area and taking up residence.
 - 2) Both the tourism survey and hunting data-base are complete. Analysis is taking place.
 - 3) Dissemination of project goals and conservation objectives has occurred through a regional workshop and local stakeholder workshop and through invitation to

present our work at an international lion conservation workshop in Kasane, Botswana march 2005, a presentation given at the Professional Hunters and Guides of Zimbabwe AGM in December 2004, and presentation given at a workshop organised by Conservation Force in Reno, Nevada in February 2005.

4) Training continues. Mr D. Parker gained work experience on the project and has now moved on to start a PhD at Rhodes University, RSA. Mr Z. Davidson has registered as a DPhil. student at Oxford having first gained experience as a field assistant on the project.

5) Wildlife census technique booklet produced and distributed.

6) Continued deployment of the Conservation Education theatre group in the local area to educate and interact with local people on conservation issues. We were able raise £15 000 from Mitsubishi Fund for Europe and Africa to cover the running expenses of this part of the project over a three year period (2005-2008), ensuring the future of this conservation education initiative.

7) Mr N. Hlongwane and Mr P. Dladla (Parks support staff, employed and trained by the project over the last three years) both had the opportunity to apply for permanent positions within the National Parks and Wildlife Authority as research technicians/rangers. The Parks Authority has now employed both men. The training that they received on the project made them eligible for this employment.

- 1) Due to Zimbabwe's political and economic crisis the logistics of undertaking fieldwork are significantly more difficult (e.g. we now have to import all our fuel from South Africa and transport food and consumables from Bulawayo the nearest city, rather than sourcing them locally as before). Notwithstanding these logistical hardships the project has managed to maintain its original impetus and continues to achieve the milestones set out and to build on past successes.
- 2) The project's micro-light aircraft requires overhaul or replacement. We are currently sourcing funding to do this.
- The design of the study has not been altered over the last year.
- Project work-plan for next six months:-
 - 1) Continued ecological fieldwork and monitoring of the lion population. Project will continue to act in an advisory capacity on issues of hunting quotas and liaise with the National Parks authority and local hunters and stakeholders.
 - 2) Continue analysis of hunting data base and tourism survey. Preparation of publications resulting from this work.
 - 3) Z. Davidson has registered as a D.Phil. student with Oxford and will continue fieldwork on project. Ongoing training of National Parks staff continues.
 - 5) Conservation education and liaison continues to be undertaken. Further funds raised for this initiative will be used to enhance the programme.

5. Actions taken in response to previous reviews (if applicable)

- No major changes were required by the review process.

6. Partnerships

- Collaboration between the Oxford based research project and the National Parks and Wildlife Authority, Zimbabwe continues to build on a previously strong relationship, built during the initial part of this project. The Wildlife Authority does not have the resources to monitor the implemented reduction in lion hunting quota and have specifically requested that the project do so. The project continues to partner the Wildlife Authority and provide ecological data to support management decision-

making. The project continues to help train parks staff and improve capacity to undertake ecological research. Project trained personnel applied for and were employed in permanent posts within the Authority and have been able to utilise training and provided by the project over the last three years.

- The Big cat project has collaborated with the Painted Hunting Dog Project (another Darwin Initiative Project in the local area), Ms W. Blakely is attached to the PHDP and assists with training our conservation education theatre group. We collaborate on various logistical issues- such as procurement of fuel and supplies. We assist the PHDP to locate their study animals using our aircraft. We have also collaborated with the local CIRAD project on the production of the Wildlife census booklet and are planning some baseline analysis of lion behaviour using data they have collected on the distribution of prey species in the National Park.
- We are currently discussing collaboration with SIREN Conservation Trust, an Oxford based charity that undertakes conservation education work. We hope to enhance our current efforts by joining forces with SIREN to produce educational material for distribution in local schools (both for the children and teachers).

7. Impact and Sustainability

- The greatest impact of the project to date is the ban on lion hunting by the Wildlife Authority in 2005, based on ecological work that the project has done and presented. This is evidence that the work of this Darwin project is well respected and well promoted within wildlife and conservation circles in Zimbabwe. The legacy of the project, when Darwin funding ends, will be sustainable management of lions in Hwange National Park. In addition, because Mr Davidson is taking up a DPhil studentship, our long-term plans are to continue the ecological fieldwork on lions in Hwange and if possible (should further funding be available) expand the project to encompass other ecosystem processes. Funding applications are currently being prepared to meet the funding needs of the project over the next few years. The conservation education initiative received £15000 of funding in mid 2005, to cover running expenses over the next three years, thus ensuring that the education work remains in place.

8. Post-Project Follow up Activities (max 300 words)

- This project is currently benefiting from follow-up funding from the Darwin Initiative. We are committed to continuing the fieldwork that we have carried out over the last 5 years on the lion population in Hwange, as we believe that long term data bases are necessary in order to understand population processes occurring in a population of long lived organisms. To this end we are currently sourcing funding to continue the base-line monitoring of the population and funding to allow collaboration between this project and others on the area on wider ecological and conservation issues impacting this protected area. Mr Zeke Davidson has a funded studentship and will be undertaking fieldwork for his DPhil in Hwange- using the existing infrastructure and ecological methodology. This will ensure that we collect data for at least the next three years- although in practice we anticipate funding the study over a longer period. We have recently sourced funding to ensure that some of the running costs of the conservation education group are met over the next three years, ensuring that this successful initiative remains in place.

9. Outputs, Outcomes and Dissemination

- The project has largely produced the outputs agreed in the project implementation schedule. A number of outputs (tourism survey, hunting database) are more advanced than anticipated which may allow some expansion of these components of the project after initial analysis. The investigation of the impact of conservation education has only gone ahead in pilot form, but due to logistical difficulties and

prioritisation of ecological fieldwork, we have not implemented the full survey to date. We anticipate that it will occur later in the project. This slippage will not impact the main objectives of the work.

- We have presented the results of our work to local stakeholders, researchers and Parks staff on two occasions in late 2004 (in Harare and Hwange). We have attended and presented our work at two international workshops (Kasane, Botswana and Reno, USA) and one conference (Kathu, RSA). In addition ad. hoc. presentations are made, by project staff, when opportunity arises (e.g. in safari camps for guests).

Table 1. Project Outputs (According to Standard Output Measures)

Code No.	Quantity	Description
14A	1	Presentation of results to Parks Authority at Harare Head Office, November 2004
14A	1	Local stakeholder workshop (Hwange, Zimbabwe October 2004)
14A	1	Presentation of results to Parks Authority (Hwange, November 2004)
4C	1	Work experience and training, 1 post-graduate student (D. Parker)
4C	1	Work experience leads to registration as DPhil student (Z. Davidson)
3	2	Two parks rangers trained by project and now employed by the Park Authority (N. Hlongwane, P. Dladla)
7	1	Report on findings of study submitted to Parks Authority (ring bound photocopy)
14B	1	Invited to and attended Kasane Lion workshop in Botswana, presented results.
14B	1	Invited to and attended Lion workshop at Safari Club International Convention, Reno, presented results.
14B	1	Attendance and presentation of results at southern African Wildlife management symposium 20-22 September 2004
12A	3	Compilation of databases
9	1	Recommendations for sustainable hunting of lions (report to Parks and Wildlife Authority)

Table 2: Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £
Report	Loveridge, A.J. 2004.	Digital	WildCRU, Oxford	Nil

Recommendations
for levels of
sustainable lion
hunting in the areas
surrounding Hwange
National Park.

copy

10. Project Expenditure

Table 3: Project expenditure during the reporting period (Defra Financial Year 01 April to 31 March)

Item	Budget (please indicate which document you refer to if other than your project schedule)	Expenditure	Balance
Rent, rates, heating, overheads etc			
Office costs (e.g. postage, telephone, stationery)			
Travel and subsistence			
Printing			
Conferences, seminars, etc			
Capital items/equipment (repair/ replacement of)			
Others (running costs(
Salaries (specify)			
(A. Loveridge)			
TOTAL			

- Due to the fact that follow-up funding for this project runs from September 2003 to September 2005 and does not coincide with the Darwin Initiative financial year, discrepancies exist between the annual project budget and project expenditure to date. Full reporting on expenditure will be given in December 2005 with the final project report is due.

11. Monitoring, Evaluation and Lessons

- The purpose of this Darwin project is to encourage sustainable use and conservation of wildlife resources (in particular big cats), in the Hwange and the southern African region. Verification that this goal is being achieved is evidenced by our continued impact on the management of lions in Hwange National Park based on ecological data collected by the study. An extensive database on lion movements and

demographic parameters has been collected and archived and we continue to add to this database. In addition we have data bases set up to investigate the value of lions and other wildlife to photographic tourism and a data base to investigate the long term impacts of sport hunting on big cats in an adjacent safari area. We have continued to co-operate with regional scientists and have held another regional workshop (publication forthcoming). We continue to work in partnership with the National Parks and Wildlife Authority. Our conservation education theatre group continues to deliver the conservation message to local schools, raising not only the profile of conservation issues, but also the profile of the Darwin project locally.

- Despite the difficult economic and political conditions prevalent in Zimbabwe it is still possible to achieve conservation outcomes as evidenced by continuation of the initial success experienced by this project. Although logistical difficulties (e.g. lack of fuel, access to motor spares etc) make fieldwork more challenging we have largely been able to overcome these problems and continue to collect high quality data. The National Parks and Wildlife Authority, as an organisation, has undergone a period of restructuring. The Authority appears ever more willing to welcome the assistance of outside expertise. This project is in a unique position to capitalise on the confidence the Authority has displayed in the data we have collected and our management recommendations. We look forward to continuation of this partnership and the resulting implementation of important conservation outcomes.

12. Outstanding achievements of your project during the reporting period

In October 2004 the Kenyan delegation to the CITES conference in Bangkok put forward a proposal that lions be upgraded to CITES Appendix 1, thereby restricting trade in this species. While this proposal did not find favour and was withdrawn, it placed the conservation of the species under scrutiny. As we have been working on the sustainable utilisation of lions this issue is extremely topical. Data we have collected and continue to collect is important in informing this debate. We have been invited to present our results at two workshops dealing with the issue of sport-hunting lions, stemming from the CITES conference, and we believe that our findings are influential in informing policy on the conservation of this species.

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2003/2004

Project summary	Measurable Indicators	Progress and Achievements April 2003-Mar 2004	Actions required/planned for next period
<p>Goal: 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 To encourage sustainable use and conservation of wildlife resources (in particular big</p>	<p><i>New knowledge gained of a big cat population recovering from high levels of hunting</i></p>	<p><i>The project continues to successfully monitor the ecology and behaviour of lions in Hwange National Park and impacts of</i></p>	<p><i>Continued population monitoring, analysis of hunting data base and tourism survey and preparation of</i></p>

<i>cats), in the Hwange and the southern African region</i>	<i>Measures of the value of wildlife to tourism and sustainable use. Measures of the impact and penetration of conservation education initiatives Co-operation of conservation scientists in the region. Exchange of ideas.</i>	<i>hunting, including the impacts of a ban on hunting of lions in western Zimbabwe. We have compiled the hunting database and are undertaking analysis. The tourism survey is complete and a data base has been created.</i>	<i>publications resulting from this work. Planning put in place for 5th regional workshop. Study of impact of conservation education to take place in 2005.</i>
Outputs			
<i>Yearly regional workshops held.</i>	<i>Workshops attended by regional scientists.</i>	<i>A regional workshop is planned for Sept 2005 and will be attended by around 20 wildlife biologists from the UK, USA and southern Africa.</i>	<i>5th Regional lion conservation workshop planned for late 2005. Proceedings of previous workshop are about to be published.</i>
<i>Data obtained on lion population recovery after quota reduction.</i>	<i>Prides of lions collared and monitored effectively. Data compared to current data from period of high trophy hunting pressure.</i>	<i>18 prides of lions and 12 coalitions monitored over a 6000km² area. GPS technology used successfully and yielding high quality ecological data.</i>	<i>Continued monitoring, replacement of worn radio-collars. Collaring of additional animals as necessary.</i>
<i>Data on value of wildlife (in particular lions) to tourism revenue collected.</i>	<i>300+ tourists interviewed.</i>	<i>500 interviews completed</i>	<i>Initial analysis underway</i>
<i>Data on effect of conservation education obtained.</i>	<i>Conservation liaison officer (CLO) and project staff survey local community to assess conservation education impact.</i>	<i>Only a pilot study undertaken so far. This component of the project will be completed at a later date- probably in 2005. W. Blakely working with Theatre group.</i>	<i>Difficult logistics has meant prioritisation of fieldwork and other activities crucial to the main outcomes of this work.</i>
<i>Final workshop presents results</i>	<i>Final workshop attended by project staff, DNPWLM staff and stakeholders</i>	<i>Workshops held in October 2004 in Hwange and Harare attended by Parks and stakeholders and results of original Darwin project and latest</i>	<i>Further workshops planned for October 2005 (to be held at parks HQ, Harare, Bulawayo and Hwange).</i>

		<i>results of current project presented.</i>	
<i>Conservation education outreach continues</i>	<i>CLO and theatre group interact with the local community through conservation education initiative.</i>	<i>Continued conservation education activity.</i>	<i>Conservation education activity to continue throughout.</i>
<i>Database on hunting trophy quality compiled, manual on wildlife census and quota setting produced.</i>	<i>Project and DNPWLM staff enter data into designed database</i>	<i>Booklet on wildlife census and quota setting produced and distributed. Hunting data base for big cats compiled and analysis underway</i>	<i>Initial analysis of hunting data underway.</i>

Note: Please do NOT expand rows to include activities since their completion and outcomes should be reported under the column on progress and achievements at output and purpose levels.