



# Darwin Initiative Annual Report

## Important note:

To be completed with reference to the Reporting Guidance Notes for Project Leaders: it is expected that this report will be about 10 pages in length, excluding annexes



**Submission Deadline: 30 April 2011**

## 1. Darwin Project Information

Project Reference	DAR17-031
Project Title	Ecological sustainability of leopard trophy hunting in Zimbabwe
Host Country/ies	UK, Zimbabwe
UK contract holder institution	WildCRU, Zoology Department, Oxford University
Host country partner institutions	Zambezi Society
Other partner institutions	Parks and Wildlife Management Authority
Darwin Grant Value	£214 886
Start/end dates of project	December 2009 to November 2012
Reporting period (eg Apr 2010 – Mar 2011) and number (eg Annual Report 1, 2, 3)	April 2010 to March 2011, Annual Report 2
Project Leader name	Dr Andrew J Loveridge
Project website	<a href="http://wildcru.org/research">http://wildcru.org/research</a> <a href="http://www.zamsoc.org">http://www.zamsoc.org</a>
Report authors, main contributors and date	A.J. Loveridge (Oxford), L. Evans (Zambezi Society)

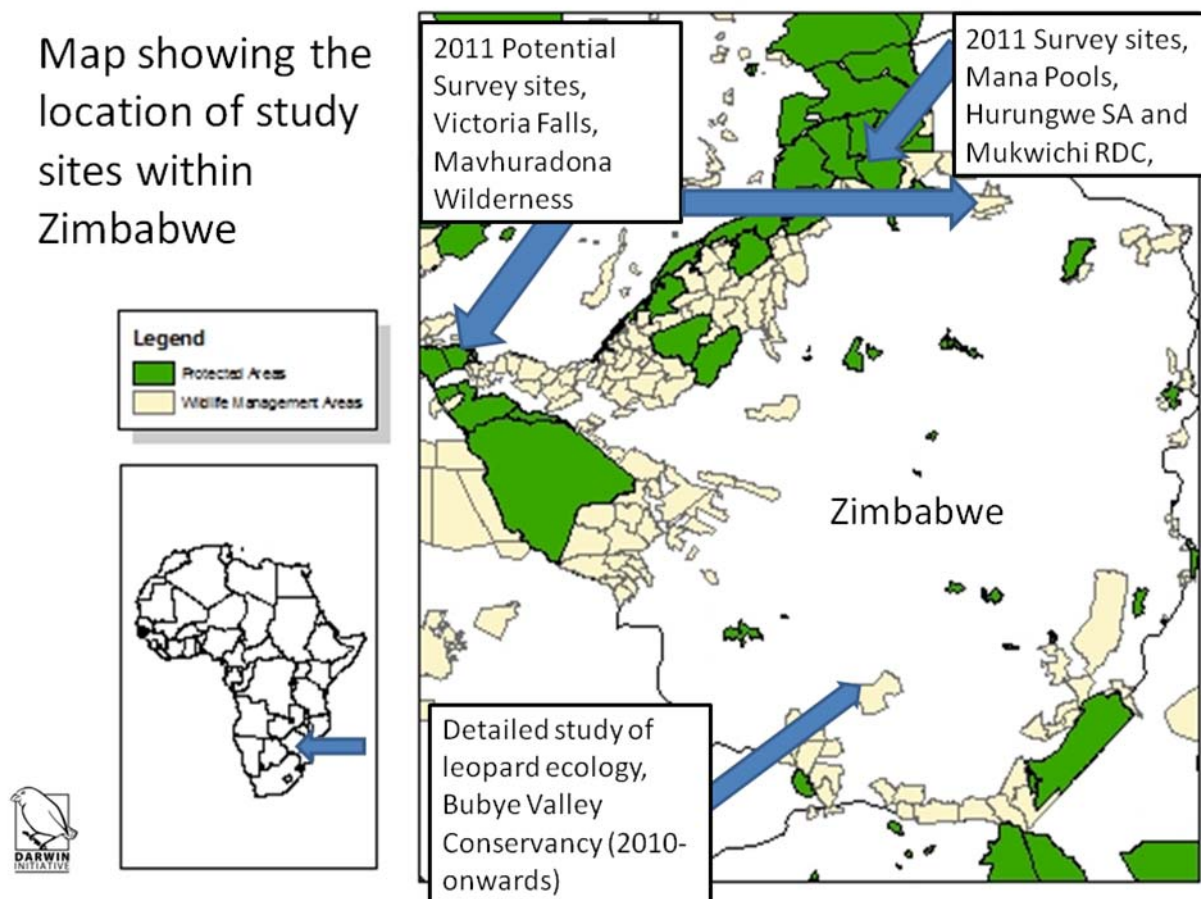
## 2. Project Background

This project aims to address the need for improved management and sustainable conservation of African leopards (*Panthera pardus*) and leopard habitat in Zimbabwe. The project will collect ecological and management data to support a National Leopard Management Strategy in Zimbabwe; the design and implementation of which will be facilitated through this project. The project is a three way partnership between The Wildlife Conservation Research Unit, Oxford University (WildCRU, lead UK institution), The Zambezi Society (Zamsoc, Host country partner) and Parks and Wildlife Management Authority of Zimbabwe (PWMA, project partner).

Leopards are an important component of naturally functioning ecosystems. However, a lack of data on leopard populations impedes effective conservation of the species and its habitats. Furthermore, leopards are hunted for sport in a number of African countries. In Zimbabwe there is an annual CITES quota of 500 individuals each year. Few data are available on the impact hunting has on leopard populations to show that off -take is non-detrimental. Stakeholders (particularly PWMA) are concerned current hunting may be unsustainable because current quota setting models use historical habitat availability as a proxy for leopard population size, despite known habitat degradation, increasing human populations and changing land use (resulting in increasing leopard-livestock conflict). Reassessment of current leopard management policy and practice is urgently required, but is hampered by lack of expertise and capacity within management institutions. This project hopes to address these problems by collecting baseline ecological and distribution data, providing management training and facilitating development of a stakeholder driven National Leopard Management Strategy. The map below shows key sites the project has worked in over the last year.

A detailed study of leopard spatial ecology and social behaviour is underway in the Buby Valley Conservancy to investigate the impacts of trophy hunting. Originally this was supposed to have happened in Hwange National Park and the surrounding hunting areas, but because permissions were delayed we took the decision to do the study in BVC as a delays would have repercussions for DPhil. Student B. Dupreez's funding. Surveys have been undertaken on leopard populations in the Buby Valley North and South areas and are expected to be undertaken at a number of sites in national parks, safari areas, communal lands and private conservancies over the remainder of the project.

Map showing the location of study sites within Zimbabwe



### 3. Project Partnerships

This project is a partnership of three institutions.

**The WildCRU**, Department of Zoology, Oxford University is a UK University based research group is the UK partner in the project. Dr Andrew Loveridge is the project leader for this Darwin project. Mr Byron du Preez is a D.Phil. student registered at Oxford who will be involved in the field research component of this project and this research will form the basis for his D.Phil thesis. The inclusion of Mr du Preez in this project has been made possible by a Beit Trust Scholarship to support his fees and living expenses while he is a student at Oxford.

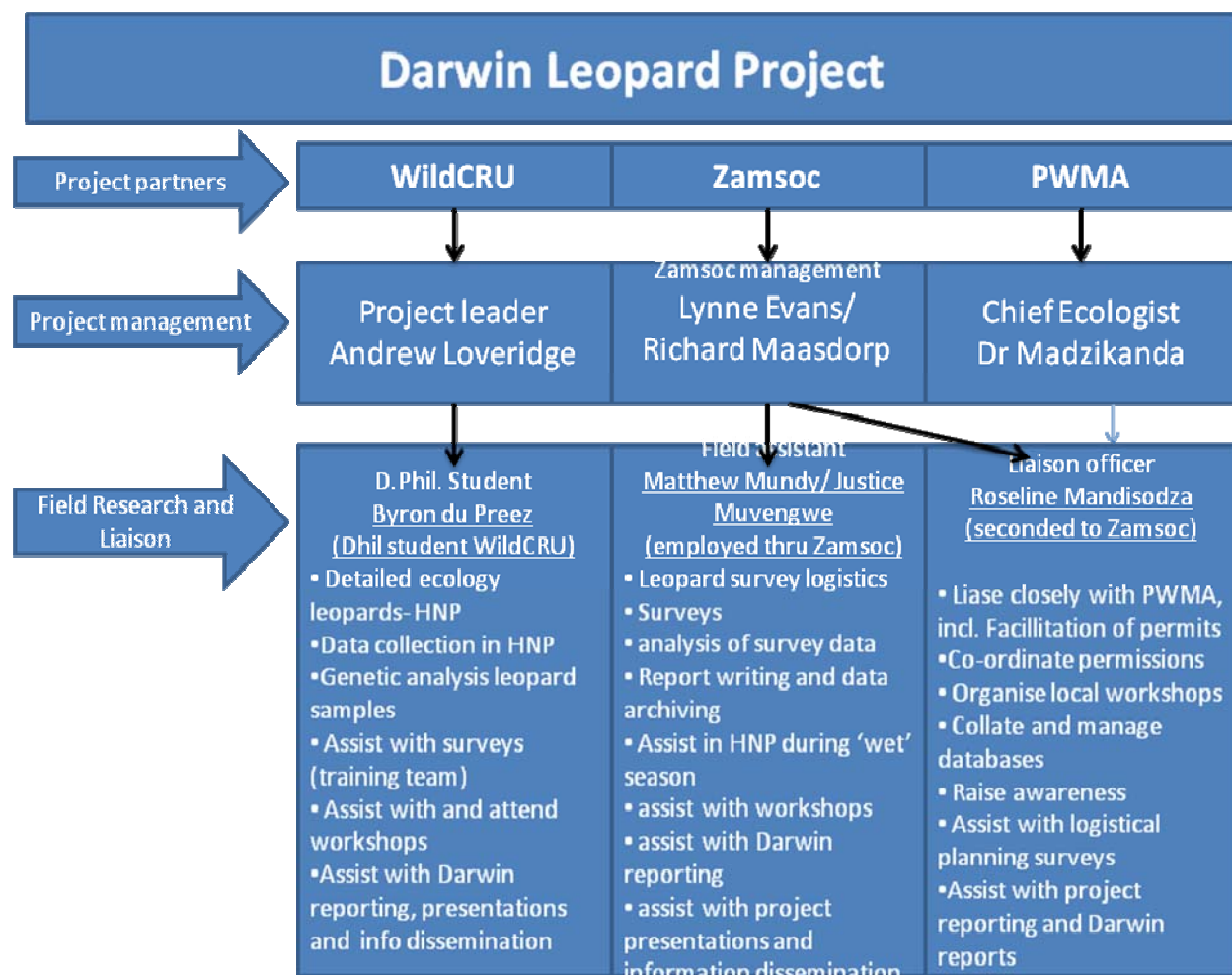
**The Zambezi Society (Zamsoc)**, an established conservation NGO that has previously undertaken assessments of the sustainability of leopard trophy hunting, has initiated the National Strategy for leopard conservation and brought together the partners for this project. Zamsoc liaises closely with Parks and Wildlife Management Authority, Zimbabwe, research staff and local stake-holders, will organise and run technical and management workshops, coordinate permissions and logistics for surveys, maintain the project website and disseminate results and information. Zamsoc is represented on the Zimbabwe CITES technical committee and is therefore in a key position to ensure implementation of the recommendations of this project. Zamsoc is the recipient of all host country DI funding. Because of staff turnover

Zamsoc has recently undergone a restructuring exercise (mentioned in the previous report) Lynne Evans (Zamsoc Task Force member) and Richard Maasdorp (Zamsoc Strategic Director). Roseline Mandisodza, an ecologist in PWMA scientific services has been seconded to Zamsoc and is fulfilling a liaison role. Zamsoc employed Matthew Mundy (a recent graduate of Rhodes University) as a field officer to undertake the surveys for this project and to assist with other work in the field. Mr Mundy has recently left Zamsoc for another job and his position is being replaced by Mr Justice Muvengwe (who is currently being trained in spoor surveys and working with experienced researchers to gain experience and minimise impact on project activities). The details of responsibilities and management structure are detailed in the diagram at the end of this section.

**Parks and Wildlife Management Authority, Zimbabwe (PWMA)** is an independent parastatal authority responsible for management of protected areas and biodiversity, sustainable use of wildlife, population monitoring, and evaluation of CITES and other quotas. PWMA has officially commissioned this research and assigned a staff member to the project to facilitate and co-ordinate research and compilation of data. PWMA are the management authority responsible for formulation of policy and implementation of management recommendations, as well as being the body responsible for implementation of CITES legislation. Hence recommendations of this project can be translated into changes to policy and management. PWMA will provide access to official government records and databases. Staff time and resources will be made available in the CITES office, hunting and administration offices, permits office, scientific services and in regional national parks. PWMA will receive no direct funding through this application. Ms R Mandisodza (PWMA Research Services Office) has been collaborating closely in the design, management and implementation of this project. The following organisational structure has been decided upon by the project partners to identify responsibilities and aid management of the project by UK and host country partners. We anticipate that this structure will evolve as the project progresses.

Dr A. Loveridge and Mrs L. Evans are in regular contact via email and phone. B du Preez met with Zamsoc in April 2010. Dr Loveridge met with Zamsoc staff in July/ August 2010 and for a planning meeting in November 2010. A planning meeting was held by Zamsoc staff in March 2011 and minutes distributed. Dr Loveridge visited Buby Valley Conservancy and spent a week with DPhil student B. duPreez and field officer M. Mundy planning the detailed leopard ecology study. B duPreez spent 3 months in Oxford (November 2010- January 2011) during which time he undertook analyses of field data and planned fieldwork in conjunction with Dr Loveridge.

The organogram below sets out the operational structure of the project.

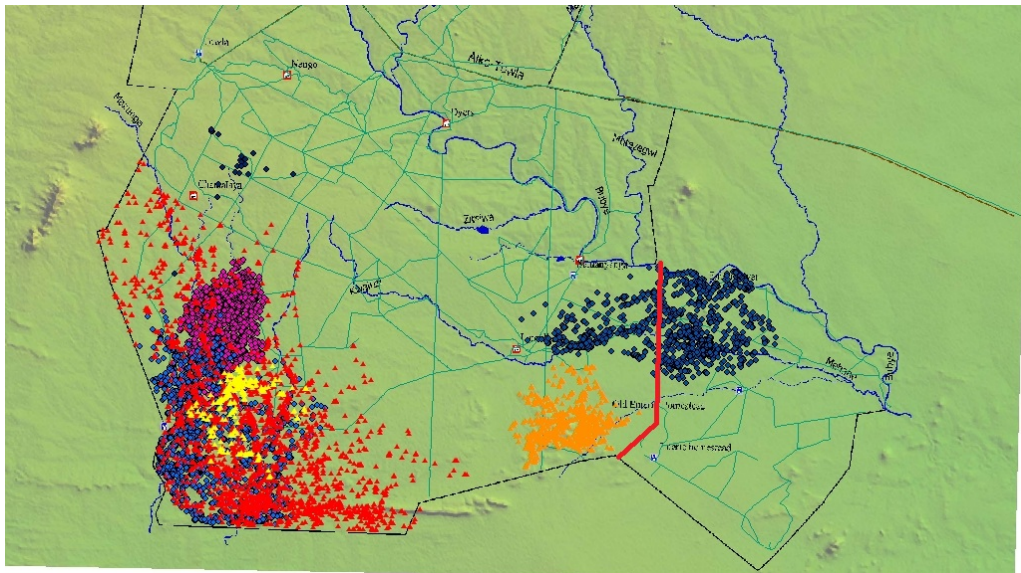


## 4. Project Progress

### 4.1 Progress in carrying out project activities

- 1) National leopard surveys provide knowledge of distribution, population viability and wider ecosystem that will inform national management. During the reporting period two surveys were undertaken and the Buby Valley Conservancy. These surveys (using a spoor survey method) covered an area of 1120km<sup>2</sup> and 1200km<sup>2</sup> respectively. Both areas are hunted on limited and high conservative quotas and both contain healthy leopard populations of 6.4 and 4.2 leopards/ 100km<sup>2</sup> respectively (see accompanying survey report as measurable indicator/ means of verification). In addition to this survey we had hoped to be able to access areas from within the National Parks network, however the permit to allow us access was not issued until after the annual rains had set in- which precluded continuing with surveys. The next surveys can only be undertaken from May/ June 2011 when weather conditions once again allow. Because of bureanocratic delays we could not survey the Mana Pools National Park, Urungwe Safari Area, Mukwichi District as we had planned. We plan to undertake more surveys in partnership with other conservation NGOs, particularly Wild Horizons Trust in the North West Matebeleland area. We are in contact with conservationists in the Mavuradona Wilderness area with a view to carrying out surveys there. M. Mundy (a Zimbabwean graduate) received training in survey methods during the year.
- 2) Impacts of trophy hunting on behavioural ecology of leopards quantified. This output and associated activities take the form of a detailed ecological study of leopards in a population exposed to trophy hunting. After a delay due to problems with permissions we took the decision to undertake this work on privately managed land. This study was

started in June 2010. To date 10 leopards have been captured and tagged with GPS collars (these collars download on demand via a UHF link). Examples of data collected are shown in the figure below. We are also radio-tagging lions in the area as this species may outcompete leopards in many areas and this ecological relationship may need to be incorporated into any wider management strategy for leopards. Good relationships with the conservancy management have resulted in high levels of co-operation and support and also logistical assistance (e.g. provision of accommodation). In addition to tagging of animals an intensive camera trap survey has been planned and piloted (see camera trap photos below). This capture- recapture survey is in the process of being implemented in the area and will utilise 25 camera trap stations and cover two areas of approximately 1000km<sup>2</sup>. An overall annual report for this work will be written after the first year of data collection (June 2011) and analyses of camera trapping data will be written up by the end of 2011. This work is being carried out by Oxford DPhil. Student B. duPreez, under the supervision of Dr. A. Loveridge and Prof. D. W. Macdonald and will contribute to his DPhil. thesis as well as peer reviewed papers. In the process B. duPreez (a Zimbabwean National) is receiving valuable training and experience through WildCRU at Oxford. In addition, P. Trethowan and Zimbabwean graduate student is receiving on the job training on this project and will start his own DPhil. study with WildCRU at the end of 2011.



Map of Buby Valley Conservancy showing GPS data points for some of the collared leopards in 2010/11



Camera trap photograph taken during pilot tests of camera traps. Note the GPS collar fitted to this individual (August 2010).



Camera trap photograph of a GPS tagged male leopard (April 2011).

- 3) Trends in past data and management. Trends in past management and utilisation. These data have been collated for the southern part of the country and this work is ongoing. This work is being undertaken by R. Mandisodza. At completion a database will be available to for use by managers and decision makers.
- 4) National leopard strategy devised and implemented to ensure sustainable management of leopard populations and habitats. This is planned for the final year of the project. However, efforts are being made to prime key people to ensure that this is fully supported and all stakeholders are willing and able to contribute.
- 5) Regional technical workshops. We had originally planned to hold a workshop at the end of 2010. However because the African Wildlife Consultative Forum was being held at a similar time and many of the relevant experts were attending we decided to use this opportunity to network and make the regional contacts. This forum was attended by all the regional Parks/ Wildlife Authorities as well as all the regional hunting associations. Leopard conservation, in the context of trophy hunting was discussed, both informally and during formal form sessions (a copy of material presented at this forum can be supplied if required). We have been in frequent communication with three other researchers in Zimbabwe with interests in/ undertaking research on leopards. We aim to hold an informal workshop with these scientists in 2011.
- 6) Training and capacity building. The major training output in this reporting period has been that Mr Edwin Makuwe (National Parks ecologist) has completed his course and received his diploma in International Wildlife conservation and management from Oxford University. Both Mr Makuwe and Mr Mtare (diploma graduate from 2009) are now based in Hwange National Park. Mr Mtare has been promoted to Senior Ecologist and is responsible for all ecological research in the province. We feel this is a strong indicator of the success and influence of training provided. Unfortunately due to administrative difficulties with the PWMA none of the planned training of parks staff in survey methods has occurred. A workshop was planned for April 2010, but this did not receive support or permission to go ahead. We hope to resolve these problems soon and this workshop has been arranged for May 2011 and is being run and organised by R. Mandisodza and Zamsoc. One post-graduate student (B. duPreez) has received 18 months of training as part of his Oxford D.Phil. Two Zimbabwean graduates (M. Mundy and P. Trethowan) have received on the job training in fieldwork techniques (spoor surveys, field study of leopards, camera trap surveys).

## 4.2 Progress towards project outputs

- 1) Output 1: National leopard survey provides knowledge of distribution, population viability and wider ecosystem that will inform national management. This is one of the key outputs of the work that will form the basis for any national strategy. During this reporting period two surveys were completed. Overall a total of 6 surveys have been done. At the outset we aimed to cover 17 sites, so we are behind on this output. Much of the reason for this is because we have not had access to the areas we need to survey. It would seem unlikely that all 17 sites can now be covered by the end of the project, however we would hope to be able to cover a significant number between now and mid 2012. We also hope to collaborate with other conservation NGOs in the country to attempt to cover a wider area and to accelerate data collection. One such partnership has been forged with Wild Horizons Trust who are assisting with surveys and providing technical and logistical support. We are in discussion with other collaborators in other areas of the country.
- 2) Output 2: Impacts of trophy hunting on behavioural ecology and population viability recognised and incorporated into management during the life of the project and ultimately into policy through a national management strategy. This output will be largely achieved through a detailed behavioural and ecological study of leopards. This study has been running for close to a year and is achieving its aims and objectives. Data on a

hunted population of leopards is being collected. The study will be complete by the middle of 2012 and data should be available to feed into stakeholder meetings.

- 3) Output 3: Trends in past management and utilisation identified and used to inform management during the life of the project and incorporated into the National Management strategy. Data have been collated for the southern part of the country and this is an ongoing activity.
- 4) Output 4: Sustainable management of leopard populations and leopard habitats implemented through National Leopard Management Strategy. This is one of the final outputs of the project to take place in 2012. However outputs 1-3 will contribute directly to this output in the form of knowledge and data to inform the strategy.
- 5) Output 5: Improved regional collaboration and technical exchange between conservation managers and scientists in southern Africa. We used the Africa Wildlife Consultative Forum to facilitate both dissemination of project information to regional scientists and managers and also to meet and network with regional scientists. We felt that it did not make sense to organise a separate workshop on top of the existing forum because many of the same people would have been involved. Therefore, we have not yet held a regional workshop specifically for this project, but will do so during 2011 and again in 2012.
- 6) Output 6: Local conservationists monitor important components of biodiversity, using skills acquired during the project, leading to improved monitoring of leopard trophy hunting off-takes and management of leopard populations and their habitats. So far two Zimbabweans have received postgraduate diplomas from Oxford University. Both men are actively involved in wildlife management and liaise closely with project staff (Loveridge). We aim to recruit another Zimbabwean student to attend the diploma course in 2011. We hope to complete survey training for 18 PWMA staff in May 2011 (organised by PWMA/ Zamsoc). This training has been hampered by not having permissions in place, we hope to accelerate training in the last two years of the project.

### 4.3 Standard Measures

**Table 1 Project Standard Output Measures**

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	Total to date	Number planned for this reporting period	Total planned from application
1A	Number of people to submit thesis for PhD qualification (in host country)				1	0	0	1
3	Number of people to attain other qualifications (i.e., Not outputs 1 or 2 above)	1	1	1		2	1	3
4C	Number of postgraduate students to receive training		2	1	1	2	1	3
4D	Number of training weeks to be provided		20	20	20	0	0	60
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above)	1	1	1	1	1	1	4
6B	Number of training weeks to be provided	0	33	33	33	0	0	100
7	Number of (ie different types - not volume - of material produced) training materials to be produced for use by host country		1	1		1	1	2



Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	Total to date	Number planned for this reporting period	Total planned from application
8	Number of weeks to be spent by UK project staff on project work in the host country	5	25	25	20	15	10	75
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country				1	0	0	1
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording				2	0	0	2
11A	Number of papers to be published in peer reviewed journals				4	0	0	4
11B	Number of papers to be submitted to peer reviewed journals				4	0	0	4
12A	Number of computer based databases to be <b>established</b> and handed over to host country		1		1	0	0	2
14A	Number of conferences/seminars/workshops to be <b>organised</b> to present/disseminate findings		1	1	2	0	0	4
14B	Number of conferences/seminars/workshops <b>attended</b> at which findings from Darwin project work will be presented/disseminated.			1	1	1	1	2
15A	Number of national press releases in host country(ies)			1	1	0	0	2
15B	Number of local press releases in host country(ies)			1	1	0	0	2
16A	Number of newsletters to be produced		4	4	4	0	0	12
16B	Estimated circulation of each newsletter in the host country(ies)		75	75	75	0	0	75
17A	Number of dissemination networks to be <b>established</b>				2	0	0	2
19A	Number of national radio interviews/features in host county(ies)				1	0	0	1
19C	Number of local radio interviews/features in host country(ies)			1	1	0	0	2

**Table 2 Publications**

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
Survey Report (*)	duPreez, B, Groom, R., Mundy, M and Loveridge, A. 2010. Results of the Buby Valley Conservancy Spoor Survey 2010	Unpublished		Nil

#### 4.4 Progress towards the project purpose and outcomes

The project purpose is defined as: To collect ecological and management data to support a National leopard management strategy and to build local and regional consensus to create and implement a conservation strategy to manage leopards and their habitats on a sustainable basis. The collection and collation of ecological and management data is underway. Details ecological information is being collected and this part of the project is in track and will deliver on its aims and objectives. Leopard surveys have been started, but are hampered in their scope by lack of permission to access key areas. This we hope is now resolved and we aim to collect this information in the coming year. Collection of management data is ongoing. We have a wide network of contacts within Zimbabwe, but need to build wider relationships in the region to benefit from management experiences elsewhere. The purpose level assumptions remain valid for the above outcomes (ie that ecological data are collected, and workshops etc are attended). Of concern is the seeming lack of political motivation to facilitate this project from within PWMA and the possibility that this may translate to a lack of motivation to protect leopards as a sustainable resource.

#### 4.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

The final aim of this work is to facilitate the implementation of a well designed management plan, with particular reference to sustainable trophy hunting, for leopards in Zimbabwe. If implemented this is likely to contribute to the conservation of a very important component of biodiversity and ecosystem function in the country, as well as protecting valuable habitat. Many of the outputs will contribute to this aim and in particular we aim to address the lack of any robust information on leopard populations with which to manage trophy hunting quotas. Provision of this information will provide baseline information for future surveys and also underpin any management strategy.

### 5. Monitoring, evaluation and lessons

We do not currently anticipate that we will need to change the means of monitoring and evaluating the progress of the project originally outlined in the project proposal (technical reports on surveys and demographic study, databases on historical management, workshops organised and reports published, training monitored through number of trainees attending training and courses).

In terms of lessons learned, we acknowledge the need to better engage PWMA in order to both facilitate the ongoing work of the project and ensure buy-in and sustainability of the project and in particular any management plan and recommendations the project is able to produce. Given the initially strong support for the need for research on leopards to be undertaken the recent difficulty in gaining necessary permissions have been surprising. As a project we need to put more effort into building this relationship to ensure that we are able move forward with key project activities. In addition we need to ensure that management structures and project planning are instituted to ensure smooth running of the work and successful achievement of project outcomes.

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

- 1) While there is already significant conservation expertise within the country we feel that any stakeholder analysis of leopard status and management should be driven by robust data on population sizes and analysis of potential threats. Data exist for some key populations (some of which have been collected by this project), however a number of key areas have not yet been covered so any stakeholder analysis will be incomplete and we prefer not to use resources in this way until a sensible output can be achieved. This aspect of the project is set for the final year, however efforts are being made to prime key people to ensure that this is fully supported and all stakeholders are willing and able to contribute.
- 2) It seems likely that we will not get ministerial endorsement of the management strategy by the end of the project and this is likely to occur at a later stage once the strategy has been approved and adopted by PWMA. At this stage the project is already a long way behind on collecting the population status data for key leopard populations in the country. Because these data are key to underpinning a viable management strategy we do not feel that it would be feasible to move the timing of the strategy meeting to an earlier point in the project. The management strategy will be organised and driven by the in country project partners with the UK institution providing expertise where and when required.
- 3) The lack of Darwin reference on the project websites has been highlighted to project partners on a number of occasions and they have promised to correct this. This has been corrected on the UK partner website :-([http://www.wildcru.org/research/research-detail/?theme=wildlife\\_as\\_a\\_resource&project\\_id=48](http://www.wildcru.org/research/research-detail/?theme=wildlife_as_a_resource&project_id=48))

## 7. Other comments on progress not covered elsewhere

The major and critical difficulty faced by the project this year was that the project's PWMA fieldwork permit was only approved in November 2010, despite strenuous efforts on the part of the Zambezi Society to facilitate this (during which time it was unclear as to whether it would ever be issued). Because field surveys are only feasible in the dry season (May to October) the result was that no surveys could be undertaken on PWMA estate during the 2010 field season as has been planned. It would appear that this problem was not restricted to this project alone and that other research projects in the country faced very similar difficulties. We understand that this was due to a reassessment of research priorities within PWMA following the appointment of a new Director General, a change-over of management and altered priorities within the institution. We have endeavoured to overcome this by undertaking research on privately owned or managed areas and concessions and have been able to undertake some valuable work there. However because most leopard populations and most hunting occurs in PWMA managed areas (Safari Areas) this project needs to access them in order to contribute meaningfully to any management plan designed for this species. The major risk is that if we are unable to motivate PWMA to re-engage with this project there are unlikely to be any significant advances in the management of leopards in the country. This can possibly be countered by engaging with active and motivated institutions (NGOs, conservation organisations and safari companies) to both facilitate the project's work and to build a broader basis for consensus on leopard management. Such a partnership is being forged with the Wild Horizons Trust- a conservation trust actively involved in practical conservation action and activities. We aim to actively involve others during the next year.

## **8. Sustainability**

Significant interest exists on the issues of leopard management and trophy hunting in conservation entities in the country and this has resulted in significant support and interest from hunters and the hunting community (Bubye Valley Conservancy and Mazunga Safaris), and other conservation organisations. This has resulted in assistance with surveys outside PWMA areas. It is likely that this interest and buy-in will continue and can be exploited with dissemination and feedback of project information. It would seem likely that any well designed management strategy for leopards that incorporated both sustainable utilisation with long term protection of leopards and leopard habitats would gain considerable support from within the hunting and conservation industry in the country.

Lack of support from PWMA over the last year may put the sustainability of this project in question. However the project's fieldwork permit was recently issued so it possible that support for the project is improving. It is problematic that key staff with key research expertise have been excluded from the permit, we have been assured that this will not however effect the ability of staff to work in PWMA areas. It remains to be seen whether any fieldwork will take place in PWMA estate or whether further obstruction of the project's aims will occur during this year.

## **9. Dissemination**

The aims and objectives of the project were presented by Dr Loveridge and Ms R. Mandisodza at a high profile workshop (the 9<sup>th</sup> African Wildlife Consultative Forum) held at Victoria Falls in November 2010. This forum was attended by all National Parks departments and many key Conservation organisations from the sub region.

Educational posters are being printed in English and the two local languages, along with fliers requesting public feedback on leopard and carnivore sights. These are to be widely distributed to advertise the project and elicit public assistance.

A 'leopard day' is being organised at the Mukuvisi Woodlands sanctuary in Harare in July 2011 by R. Mandisodza to disseminate project information to the interested public. R. Mandisodza is also approaching local radio stations about doing an educational leopard talk to be aired locally.

## 10. Project Expenditure

**Table 3 project expenditure during the reporting period (1 April 2010 – 31 March 2011)**

Item	Budget*	Expenditure	Variance/ Comments
<b>Staff costs specified by individual</b> <i>Project Leader (UK partner)</i> A. Loveridge <b>Sub-Total UK Salaries</b>			
<i>Host Country Project Co-ordination/ liaison</i> L. Evans (Project co-ordinator) R. Mandisodza (Project Liaison Officer) S. Worsely (Consultant) R. Maasdorp (Consultant) <i>Project Administration and IT</i> E. Makore (Office Staff) E. Hodzi (Office Staff) <i>Survey and Field Staff</i> M. Mundy Field work, survey staff (Wild Horizons) Field Technicians (Trackers) <b>Sub- Total Partner Salaries</b> <b>TOTAL SALARIES</b>			
<b>Overhead costs</b> Rent, rates, heating, overheads etc			
<b>Travel and subsistence</b>			
<b>Operating costs</b>			
<b>Capital items/equipment (specify)</b> GPS radio Tracking collars for leopards Tracking receiver Antenna and Download terminal Laptop computer for data downloads Field equipment (SD cards for camera traps, ICOM receiver, charger and batteries, spanner roll, GPS, tent, torch) Capture equipment and supplies <b>TOTAL EQUIPMENT</b>			
<b>Others (please specify)</b> Indirect costs (FEC) Print Educational material <b>TOTAL OTHER</b>			
<b>TOTAL</b>			

**Notes:**

\* With the approval of Eilidh Young at the Darwin Initiative we have reported on two years of budget, rather than only the 2010/11 budget lines. This is because almost all the partner budget and part of the UK partner budget in 2009/10 was carried forward to this reporting period. For completeness it seemed most sensible to report across the entire period. Therefore both budgets and expenditure refer to costs across this entire period.

\*\* We had an underspend of 48% on printing costs- this is because posters and leaflets are currently being designed and printed and the project is awaiting an invoice for this.

\*\*\* Due to underspend on printing costs we have a variance of -12% from the budgeted amount for 'other' expenditure.

**11. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes**

I agree for LTS and the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2010-2011

Project summary	Measurable Indicators	Progress and Achievements April 2010 - March 2011	Actions required/planned for next period
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</p> <ul style="list-style-type: none"> <li>⇒ The conservation of biological diversity,</li> <li>⇒ The sustainable use of its components, and</li> <li>⇒ The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>		<p><i>This project should ultimately contribute towards improved sustainable management of African leopards in Zimbabwe, we are in the early stages of collecting the relevant ecological data and although progress has been made we need to accelerate this. Some progress has been made in local and regional collaboration and training, but further efforts need to be made to consolidate these areas</i></p>	
<p><b>Purpose</b> To collect ecological and management data to support a National Leopard Management Strategy and to build local and regional consensus to create and implement a conservation strategy to manage leopards and their habitats on a sustainable basis.</p>	<p>Increased understanding of the distribution, viability and previous management of leopard populations and improved motivation, capacity and tools to monitor and manage them.</p>	<p>Progress has been made towards collecting the ecological and population data that will underpin any management strategy. As outlined in the main report many of the project activities have been delayed by lack of permissions. However progress has been made in surveys outside park estate and in the detailed behavioural study</p>	<p>Leopard surveys continue</p> <p>Detailed study of leopard ecology in a hunting area continues</p> <p>Continued collection of historic hunting data</p> <p>Regional workshop organised</p> <p>Training of ecology staff continues, training workshops organised</p>
<p><b>Output 1:</b> National leopard survey provides knowledge of distribution, population viability and wider ecosystem that will inform national management.</p>	<p>Surveys of distribution and abundance of leopards and other mammals undertaken in 12 protected areas, 2 conservancies and 2-3 rural districts councils (years 1 and 2).</p>	<p>Two surveys were completed in 2010 and a technical report prepared. Further planned surveys were not undertaken as PWMA permission to access Park estate were not forthcoming. 2011 surveys are currently being planned. Technical reports for each survey are considered appropriate indicators.</p>	
<p>Activity 1.1 National leopard survey to determine leopard population size and distribution at ~17 sites across the country</p>		<p>Personnel were recruited to carry out surveys in 2010, and sites were identified and permissions were sought to access these areas. While no permission was provided to access parks areas, two surveys were undertaken at alternative sites on private land.</p>	
<p>Activity 1.2. Baseline survey data compiled. Results disseminated, reports to decision makers in management institutions, data inform quota allocation, CITES non-detriment findings</p>		<p>Technical report presenting the results of the 2010 surveys was prepared and has been distributed to interested stakeholders</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2010 - March 2011	Actions required/planned for next period
<b>Output 2.</b> Impacts of trophy hunting on behavioural ecology and population viability recognised and incorporated into management during the life of the project and ultimately into policy through a National Management Strategy	Technical knowledge gained in years 1-3 by project scientists on the impacts of trophy hunting on behavioural ecology and viability of leopard populations, and put forward for inclusion in national planning, changes in management and policy	This component of the project has been underway since June 2010 and has achieved its goals and in producing valuable data (GPS data and camera trap data of leopard population demography) on leopard behavioural ecology in a hunted area. Training has been given to relevant staff (capture, handling, use of equipment, appropriate analytical tools etc). Annual technical reports will provide appropriate indicators of progress towards this output.	
Activity 2.1. Detailed ecological study to measure the demographic impacts of trophy hunting, undertaken at hunted and un-hunted study sites, results inform management strategy		Project staff have been trained, equipment purchased and fieldwork has been ongoing for 11 months and has focused on capture and instrumentation of study animals. The first camera trapping session has been started.	
Activity 2.2 Results disseminated, published in relevant peer reviewed journals, lessons inform management of leopards and setting of hunting quotas		We will produce the first annual report on progress of this component of the project by the end of June 2011 (after the first 12 months of fieldwork).	
<b>Output 3.</b> Trends in past management and utilisation identified and used to inform management during the life of the project and incorporated into the National Management Strategy	Database of historical leopard management and utilisation compiled by project staff by year two	Data on trophy hunting trends has been collected prior to the start of this project by Dr G. Purchase and Ms R. Mandisodza. These data are available for use by the project and data collation is ongoing. A hunt return form was devised and distributed and results from this are currently being evaluated. Forms are being printed and distributed through this project. The resulting database will form a suitable indicator of this output having been achieved.	
Activity 3.1. To inform future management, data on historical leopard hunting and management trends compiled, database analysed for trends in quota allocation, trophy size, off-take 3.2 Identify shortcomings of system and future management requirements. Propose solutions as part of National Strategy based on field/ historical data		Data have been collated and this process is ongoing. A database is being compiled and when complete a broad analysis of trends will be undertaken to inform future management. This activity will continue throughout 2010/11 (Year 2 of the project).	
<b>Output 4.</b> Sustainable management of leopard populations and leopard habitats implemented through National Leopard Management Strategy	National Leopard Management Strategy workshop held to devise strategy, in consultation with and attended by all stakeholders in year three	Workshops to design a management strategy for leopards will be held in Year 4, however we anticipate that this workshop will benefit from regional technical and stakeholder workshops held in Years 2 and 3.	
Activity 4.1. Design a stakeholder driven National Leopard Management Strategy through participatory workshop		This activity will only take place towards the end of the project (in Year 4)	



Project summary	Measurable Indicators	Progress and Achievements April 2010 - March 2011	Actions required/planned for next period
Activity 4.2. Approval sought by project partners from Minister for Environment & Tourism for National management strategy. Strategy endorsed		This will only be undertaken once the above strategy is complete at the end of the project	
<b>Output 5.</b> Improved regional collaboration and technical exchange between conservation managers and scientists in southern Africa	Regional technical and management meetings organised by the project (years 1 and 2).  Potential regional collaborations set up to enhance project impact	Workshops have not yet been held. The stakeholder and regional technical workshop planned for late 2010 was superseded by a high profile regional forum. We anticipate that workshop reports will be printed and made available for distribution. This will be an indicator of success in achieving this output.	
Activity 5.1. Two Regional technical workshops, attended by regional and local scientists, conservationists and managers, organised. Knowledge transferred and collaborations established		Project information and networking with regional and local research scientists was achieved at the African Wildlife Consultative Forum held in Victoria Falls in November 2010.	
Activity 5.2. Workshops reports (2) compiled, published and distributed to all stakeholders and workshop participants		Presentations of the projects aims and objectives were given at the forum and these can be made available if required.	
<b>Output 6.</b> Local conservationists monitor important components of biodiversity, using skills acquired during project, leading to improved monitoring of leopard trophy hunting off-takes and management of leopard populations and their habitats	25 PWMA (field and administration staff), 5 RDC, 3 Forestry and hunting staff trained in monitoring of leopard populations, trophy hunting and survey methods  2-4 Zimbabweans gain valuable training and experience on project, 2-3 Zimbabwean graduates receive diplomas	Since the beginning of the project two Zimbabwean PWMA ecologists (Mr Edwin Makuwe and Mr Godfrey Mtare) have been enrolled in the Oxford Diploma in International Wildlife Conservation. Their places on this course were directly facilitated through this project. We will continue to put forward candidates in future years. A week long training course to familiarise PWMA ecology staff with appropriate survey methodology will be held in May 2011 attended by around 15 people. One Zimbabwean (Mr Matthew Mundy) was recruited and trained to undertake the surveys and received on the job experience. One Zimbabwean (Mr Byron duPreez) is reading for a D.Phil. at Oxford University. Zimbabwean graduate Paul Trethowan is receiving training in 2011 and will enrol for a DPhil at WildCRU, Oxford University in Autumn 2011. Progress towards diploma and degree qualifications will indicate achievement of this output. Training manuals and number of attendees at workshops will provide an indication of the success of training exercises.	
Activity 6.1. Develop training manuals where needed (e.g., survey manual; quota allocation; trophy measurement protocols). Manuals used in conjunction with training sessions		A manual for undertaking surveys of carnivores- using spoor transects has been compiled and will be used in training of PWMA and other ecology staff.	
Activity 6.2. Identify host country personnel for Diploma training course		So far two host country personnel have attended and passed a diploma course at Oxford University. Other local conservationists will be identified as potential candidates for the this course as the project progresses.	

## Annex 2 Project's full current logframe

### LOGICAL FRAMEWORK

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b></p> <p>Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p><b>Sub-Goal:</b></p> <p>Promote leopards as ecological flagships to reduce loss of biodiversity in whole ecosystems and as components of biodiversity to be sustainably used to generate revenue to benefit people.</p>	<p>Leopard populations are stabilised and increase, leopard habitats are conserved, providing protection for other components of biodiversity. Use of species is managed within sustainable limits.</p>	<ul style="list-style-type: none"> <li>• Non-detriment findings by National CITES Technical Committee submitted to CITES for the species</li> <li>• Future surveys show leopard habitats are better protected and leopard populations healthy</li> </ul>	
<p><b>Purpose</b></p> <p>To collect ecological and management data to support a National Leopard Management Strategy and to build local and regional consensus to create and implement a conservation strategy to manage leopards and their habitats on a sustainable basis.</p>	<p>Increased understanding of the distribution, viability and previous management of leopard populations and improved motivation, capacity and tools to monitor and manage them.</p>	<ul style="list-style-type: none"> <li>• Survey data and technical information published as reports and peer reviewed papers, workshop reports published and disseminated</li> <li>• Information made publicly available to raise awareness</li> <li>• National Leopard Management Strategy published</li> </ul>	<ul style="list-style-type: none"> <li>• Ecological data collected through continuing collaboration of project partners</li> <li>• Workshops are attended by stakeholders and consensus reached on leopard management</li> <li>• Political motivation to protect and manage leopards as a sustainable resource is in place</li> </ul>
<p><b>Outputs</b></p> <p>1. National leopard survey provides knowledge of distribution, population viability and wider ecosystem that will inform national management.</p>	<ul style="list-style-type: none"> <li>• Surveys of distribution and abundance of leopards and other mammals undertaken in 12 protected areas, 2 conservancies and 2-3 rural districts councils (years 1 and 2)</li> </ul>	<ul style="list-style-type: none"> <li>• Technical survey report published and made available to stakeholders</li> <li>• Information made available via websites and pamphlets</li> <li>• Peer reviewed papers submitted for publication</li> </ul>	<ul style="list-style-type: none"> <li>• Permissions remain in place to undertake surveys, collaboration between partners continues</li> <li>• Methods appropriate to survey leopards and suitable data collected and analysed</li> </ul>

<p>2. Impacts of trophy hunting on behavioural ecology and population viability recognised and incorporated into management during the life of the project and ultimately into policy through a National Management Strategy</p>	<ul style="list-style-type: none"> <li>• Technical knowledge gained in years 1-3 by project scientists on the impacts of trophy hunting on behavioural ecology and viability of leopard populations, and put forward for inclusion in national planning, changes in management and policy</li> </ul>	<ul style="list-style-type: none"> <li>• Technical reports made to PWMA yearly</li> <li>• Results and recommendations disseminated nationally and regionally through websites and printed material</li> <li>• Peer reviewed scientific papers submitted for publication</li> </ul>	<ul style="list-style-type: none"> <li>• Permissions remain in place to undertake research</li> <li>• Suitable and sufficient data collected using appropriate research tools</li> <li>• Data analysed and made available for use by managers</li> </ul>
<p>3. Trends in past management and utilisation identified and used to inform management during the life of the project and incorporated into the National Management Strategy</p>	<ul style="list-style-type: none"> <li>• Database of historical leopard management and utilisation compiled by project staff by year two</li> </ul>	<ul style="list-style-type: none"> <li>• Database available to managers</li> <li>• Reports disseminated to stakeholders and via project website</li> <li>• Peer reviewed papers submitted</li> </ul>	<ul style="list-style-type: none"> <li>• Data made available by stakeholders, RDCs, PWMA</li> <li>• Data effectively collated by project staff</li> </ul>
<p>4. Sustainable management of leopard populations and leopard habitats implemented through National Leopard Management Strategy</p>	<ul style="list-style-type: none"> <li>• National Leopard Management Strategy workshop held to devise strategy, in consultation with and attended by all stakeholders in year three</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop reports prepared and disseminated</li> <li>• National Leopard Management Strategy disseminated to stakeholders, approved by Minister</li> </ul>	<ul style="list-style-type: none"> <li>• Co-operative relations established with all stakeholders</li> <li>• Stakeholders and resource managers willing to contribute to and adopt a management strategy</li> </ul>
<p>5. Improved regional collaboration and technical exchange between conservation managers and scientists in southern Africa</p>	<ul style="list-style-type: none"> <li>• Regional technical and management meetings organised by the project (years 1 and 2).</li> <li>• Potential regional collaborations set up to enhance project impact</li> </ul>	<ul style="list-style-type: none"> <li>• Two regional technical and management workshops facilitated, with scientists and managers invited from region</li> <li>• Workshop reports prepared and disseminated</li> </ul>	<ul style="list-style-type: none"> <li>• Regional scientists willing and motivated to collaborate with the project</li> <li>• Scope exists for regional collaboration</li> </ul>
<p>6. Local conservationists monitor important components of biodiversity, using skills acquired during project, leading to improved monitoring of leopard trophy hunting off-takes and management of leopard populations and their habitats</p>	<ul style="list-style-type: none"> <li>• 25 PWMA (field and administration staff), 5 RDC, 3 Forestry and hunting staff trained in monitoring of leopard populations, trophy hunting and survey methods</li> <li>• 2-4 Zimbabweans gain valuable training and experience on project, 2-3 Zimbabwean graduates receive diplomas</li> </ul>	<ul style="list-style-type: none"> <li>• Annual reports to PWMA</li> <li>• Annual project reports</li> <li>• Pre-survey training sessions at all 17 sites to be included as part of national survey</li> </ul>	<ul style="list-style-type: none"> <li>• Staff motivated to learn and apply new skills</li> <li>• Staff continue to be supported by PWMA and RDCs in conducting monitoring and management activities</li> <li>• Most project trained staff remain in conservation organisations</li> <li>• Entry requirements met by applicants for diploma course</li> </ul>

### **Activities (details in workplan)**

- 1.1 National leopard survey to determine leopard population size and distribution at ~17 sites across the country
- 1.2 Baseline survey data compiled. Results disseminated, reports to decision makers in management institutions, data inform quota allocation, CITES non-detriment findings
- 2.1 Detailed ecological study to measure the demographic impacts of trophy hunting, undertaken at hunted and un-hunted study sites, results inform management strategy
- 2.2 Results disseminated, published in relevant peer reviewed journals, lessons inform management of leopards and setting of hunting quotas
- 3.1 To inform future management, data on historical leopard hunting and management trends compiled, database analysed for trends in quota allocation, trophy size, off-take
- 3.2 Identify shortcomings of system and future management requirements. Propose solutions as part of National Strategy based on field/ historical data
- 4.1 Design a stakeholder driven National Leopard Management Strategy through participatory workshop
- 4.2 Approval sought by project partners from Minister for Environment & Tourism for National management strategy. Strategy endorsed
- 5.1 Two Regional technical workshops, attended by regional and local scientists, conservationists and managers, organised. Knowledge transferred and collaborations established
- 5.2 Workshops reports (2) compiled, published and distributed to all stakeholders and workshop participants
- 6.1 Identify training needs, conduct field training exercises (surveys, radio-tracking, analysis of data), conduct in-house training programmes for administration staff
- 6.2 Develop training manuals where needed (e.g., survey manual; quota allocation; trophy measurement protocols). Manuals used in conjunction with training sessions
- 6.3 Identify host country personnel for Diploma training course

### **Monitoring activities:**

Indicator 1: Robust data available via monitoring data (collected by project-trained staff and with project protocols) to show that leopard off-take is demonstrably sustainable and allowing annual report, based on scientific evidence, to be made to CITES, by the CITES technical committee

Indicator 2: Leopard utilisation sustainable and populations stable (indicated by comparison of future surveys against baseline data collected by project) leading to habitat protection and improved benefits generated for stakeholders and communities

### **Annex 3 Onwards – supplementary material (optional but encouraged as evidence of project achievement)**

This may include outputs of the project, but need not necessarily include all project documentation. For example, the abstract of a conference would be adequate, as would be a summary of a thesis rather than the full document. If we feel that reviewing the full document would be useful, we will contact you again to ask for it to be submitted.

It is important, however, that you include enough evidence of project achievement to allow reassurance that the project is continuing to work towards its objectives. Evidence can be provided in many formats (photos, copies of presentations/press releases/press cuttings, publications, minutes of meetings, reports, questionnaires, reports etc) and you should ensure you include some of these materials to support the annual report text.

## Checklist for submission

	Check
<b>Is the report less than 5MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	y
<b>Is your report more than 5MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	y
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	n
Have you involved your partners in preparation of the report and named the main contributors	y
Have you completed the Project Expenditure table fully?	y
Do not include claim forms or other communications with this report.	