The Rufford Small Grants Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Jean-Marc ANDRE
Project title	Conservation status of the African wild dog (*Lycaon pictus*) in Mozambique
RSG reference	
Reporting period	May 2004 - November 2004
Amount of grant	GBP 4,546
Your email address	awdogmoz@yahoo.fr (formerly jmandre2004@yahoo.fr)
Date of this report	31th December 2008

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Gather baseline ecological data on African wild dogs in and around PA's of Mozambique (distribution, relative abundance, habitats, preys & competitors, people attitudes)			X	- Respectively 4, 11 & 9 previously unreported individual packs of African wild dogs were identified in the Marromeu Complex, in the Cabo Delgado province and in the southern/western sectors of the Niassa National Reserve, together with successive sightings description and home ranges delimitation **(see first attached document)**. - Methods were set-up, and applied in the study case of Cabo Delgado (scientific report), for analysis of habitat (availability, use & preference) and for preliminary demography (incl. age specific survival). - Ranking of threats (12 entries) was established for each population and was mainly deduced from the study of interactions with local people incl. attitudes, activities & land uses **(see second attached document)**. - The study of preys/competitors relative abundance as factors influencing African wild dog density and distribution in the 3 areas is still running.
Use a spatial model to determine African wild dogs' habitats suitability and connectivity		X		- An operational GIS was built-up for each of the 3 areas and informs on distribution of the African wild dogs. - The same tool served to determine vegetation type preference of the respective packs/populations and to project results at larger scales for depicting suitability and connectivity. - Similar methods are set-up to investigate habitat requirements of the identified packs other than vegetation type (human presence, preys/competitors abundance, road network density…) and to combine all obtained expressions (GIS layers superposition) as a reference for assessing effective suitability of any given area (spatial model), and then for looking at interconnections between the most suitable ones.
Provide training in complementary field and analytical skills to Mozambican counterparts			X	- Staff of official conservation areas, scouts in private hunting reserves, and local people where relevant, assisted with fieldwork upon training in the related specific techniques.

including conservation staff, national researchers & local stakeholders				- University students were trained in the same technical skills but also in methods for collected data analysis and interpretation of obtained results. - Findings and analytical steps to them were provided in priority to involved national scientists, what resulted in transmission of new skills both for data analysis and for results interpretation, including the formulation of management recommendations to conserve the African wild dog subpopulations.
Deliver results and recommendations to national responsible authorities & research institutions, to regional biodiversity databases and to the international scientific community			X	- By October 2007, the national Museum of Natural History (MHN) received the final results after having been frequently updated along project course as primary research partner since 2003. - Same results were submitted in November 2007 to the national authorities competent for wildlife conservation (National Directorate of Conservation Areas, DNAC) who subsequently requested project's collaboration on the elaboration of a National Strategy for the species. - Management recommendations were presented 6 months later (June 2008) to the same governmental agency (DNAC) within the proposal of a new project component (ongoing). - The formerly unknown packs resident in the northern Sofala province were revealed to the international scientific community by this project during a workshop at Kruger NP in late October 2004. - In December 2007, details of 227 sightings of African wild dog in Mozambique (>80% of existing data) were provided to the IUCN/SSC Canid Specialist Group (CSG) regional database during another workshop in Botswana and served as a basis to update distribution/status maps for the country.
Better understanding of local people attitudes towards sympatric carnivores incl. African wild dogs and establishment of constructive and long-lasting relationships to recruit participation in conservation efforts			X	- Local people attitudes to, and eventual conflict with, large carnivores were investigated through a specific set a questions during interviews (388 in total). - Non-conflict threats were depicted in the 110 visited communities with a distinctly collected set of socio-economic data to describe local activities and land uses. - In all communities, education efforts were led and negative views of the African wild dog were deterred upon demonstration that actual

				risks of conflict are very low according to the species ecology and that solutions to emerging problems always exist. - Suggestions both of direct actions to protect the species and of simple measures to mitigate unintentional anthropogenic pressures to it were made to and forwarded by the most relevant people in each settlement.
Raise general public awareness and develop links with possible future partners in conservation		X		- The planned national workshop to present project results has not been held yet but the same targeted audience was already invited to numerous (2 in Mozambique and 2 abroad) public presentations on the topic (contacts database is built-up). - A database of potential respondents to an enquiry process at distance (email, fax, phone…) for status survey purpose is created and awareness of any contacted person will implicitly be raised.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

The project actually remained in complete stand-by during the entire year 2006 or so because two unforeseen difficulties arose simultaneously during the few months after fieldwork was completed (December 2005): cancellation of granted funds and loss of scientific supervision.

After two consecutive seasons (2004 & 2005) of field data collection and environmental education in the most remote areas of Mozambique without encountering any major problem, one of the last donors unilaterally decided to suppress my subsistence indemnities planned for the data treatment period once back in the capital city (first semester 2006). The reason was internal mismatch between authorized procedures within the funding institution itself (no mistake from the field team) but consequences inevitably put me in deep material disarray. This caused great prejudice to the amount of time that should have normally been dedicated to field data treatment, and to the degree of concentration on the topic on the few occasions it was made possible.

Even if financial conditions had been better, the other difficulty that surged at the same time would have dramatically increased the delay for data analysis anyway. Indeed, this process was to be overseen by Dr Claudio SILLERO-ZUBIRI (Wildlife Conservation Research Unit, Oxford University, UK), in the position of project supervisor as stated in the original application (together with assistance for formulation of conservation strategy). But he preferred to desist from our collaboration at that precise moment. The main argument was that I should have had delivered a long time before, what I still do not understand today as Dr SILLERO pertinently knew I had always been in the field since October 2003, or in Maputo but committed to raising new funds during the first months of 2005.

Because these two particular challenges showed up conjointly, the possible solutions to be adopted were not so many. There was no more project supervisor to help with restoration of questionably cancelled funds, and no funds to enable intense work on data treatment in order to convince the project supervisor to invert his decision.

For scientific methods, I have simply done my best on my own and with the existing literature, in the hope to manage a renewed interest from the former supervisor. I first thought I actually succeeded when he invited me to a specialist workshop in late 2007 (see hereafter), but it appeared thereafter that it was only for me to provide basic field data and not because of his satisfaction towards my analytical capabilities. I still guess nowadays he did never really look at these and have not heard back from him since the referred invitation. The point is that the project is today in search for another renowned international expert keen to take supervision in charge.

Regarding to the financial situation, it was first attempted to negotiate a consensual agreement with the implicated donor, but without success. According to my formal education level, any employment eventually available was soon revealed too much time consuming and not subsidiary enough to the data treatment work I wanted to keep as the main activity. Finally the solution came only from the sale of a personal good, the fieldwork 4x4 vehicle, which I first needed to repair and then attempted to put in rental for not loosing it definitively. But this last option did not result either and I had to simply sell it.

3. Briefly describe the three most important outcomes of your project.

At the moment, the main outcome from far of the project is to have made a significant contribution to priorities set by the international conservation community for Mozambique (see "Woodroffe, R.B., Ginsberg, J.R. and D.W. Macdonald, Eds. 1997. The African wild dog: status survey and conservation action plan. IUCN, Gland, Switzerland" and "Woodroffe, R.B., McNutt, J.W. and M.G.L. Mills. 2004. African wild dog. In *Canids: foxes, wolves, jackals and dogs. Status Survey and Conservation Action Plan. 2nd edition.* C. Sillero-Zubiri, M. Hoffman and D.W. Macdonald, editors. pp. 174-183. IUCN, Gland, Switzerland") through identifying the presence, distribution (home range) and abundance (group size & age composition) of respectively 4, 11 and 9 individual packs of African wild dogs in the northern districts of the Sofala province, in the Cabo Delgado province and in the western/southern sectors of the Niassa National Reserve. Many of these 24 packs had not been described by anybody in the past and the 4 in the Marromeu Complex (northern Sofala province) were unknown to science prior to their formal presentation by the project at a workshop on "Research for the conservation of African wild dogs" held in the Kruger National Park by late October 2004 (IUCN/SSC Canid Specialist Group - WCS).

The grounds of such major new findings (exact locations of respectively 96, 49 and 82 African wild dog sightings in the 3 study areas) have recently been delivered to the body entitled by the same scientific community with the record of such information into a specific regional biodiversity database (African Wild Dog Working Group, AWDWG, within the IUCN/Species Survival Commission Canid Specialist Group, CSG). This took place at the Southern Africa Regional Workshop on "Rangewide Conservation Planning for Cheetahs and African wild dogs" (Jwana Game Park - Botswana, 4th-8th December 2007, IUCN/SSC Cat & Canid Specialist Groups - WCS - ZSL).

As the distribution and status maps for African wild dogs were revised on such occasion, the most visible impact of the project will thus be the new limits of the species range on the updated maps for Mozambique to be published shortly (?). Indeed, the detailed African wild dog sightings available for that country came almost exclusively (>80% of all reported sightings) from fieldwork carried out through the present initiative, which the Rufford Small Grant received in 2004 was crucial to.

Another important outcome is to have delivered at the national level the same results together with management recommendations both to relevant research institutions (Museum of Natural History, MHN, and Department of Biological Sciences of the Eduardo Mondlane University, UEM) and to the

state authorities (National Directorate of Conservation Areas, DNAC, at the Ministry of Tourism) competent for wildlife conservation in the country.

Besides being officially in charge of recording such data for the, the first (MHN, UEM) are responsible for forwarding through own communication channels such results to the second (DNAC) and to other members of the national scientific and conservation communities. To be remembered here is that the Museum of Natural History is in Mozambique the legally entitled scientific advisor, to any governmental executive entity, for all decisions susceptible to affect the natural resources of the country.

The second, who received results directly from the project anyway, is expected to officially transmit the information to its field representatives in PA's for deciding together, once concerted, on the best local conservation measures. DNAC also gives a decision on the major enlightenments from the project to be kept for further policy-making towards the conservation of the African wild dogs and associated wildlife species. Finally, it ensures dissemination among all state bodies susceptible to take part to decisional process, including the National Directorate of Land and Forest (DNTF, Ministry of Agriculture), competent for wildlife management on communal lands.

Such deliverables were presented to DNAC representatives just before their attendance to the same Botswana workshop mentioned above and have thus contributed in a very large proportion to the data on their own country they brought there. As a result, the project has recently been requested by the same governmental services to collaborate on the current elaboration of the official "National Strategy for the conservation of African wild dogs in Mozambique".

In terms of new skills brought locally, up to 3 field staff members in the visited conservation areas, and minimum 1 management scout in each private safari concession entered in (9 in total, 5 in the North of the Sofala province and 4 out of the 6 around the Niassa National Reserve), actively took part to fieldwork. They were preliminary trained in specific field techniques and additional skills to perform the four simultaneously running surveys (Field interviews, Signs of presence, Distance sampling & Call-in stations). Where relevant, local community members (mainly former traditional hunters) were recruited rather than official conservation personnel but received exactly the same training. These people did not only make spectacular progress during the month or so they brought to the team their very precious local knowledge of the area/wildlife species, but also exhibited unconditional commitment and exacerbated abilities (local language, tracker skills, physical conditions…).

Mozambican scientists, and particularly researchers at the MHN in their quality of prime recipient of project results, have always been provided in priority with new findings, conjointly with detailed explanations on the analytical steps that led to these. Complementary skills for data treatment and interpretation of obtained results have thus been hopefully transmitted on such occasions, and certainly were to the undergraduate students (Biological Sciences Department, UEM) delegated by the same MHN to participate to fieldwork. Beside the technical skills for data collection these students were also trained in (such as any other of the abovementioned field team members), they learnt as well how to analyze such data (including the use of GIS software) and interpret the related results.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

Local people were actively involved into fieldwork (interviews) and environmental education (species ecology and values for deterring negative views), but also considered further conservation

implications (direct actions or mitigation of indirect pressures) as data were collected for the socio-economic description of their activities and land uses in order to identify ensuing non-conflict threats.

Basically run to collect details of direct African wild dog sightings experienced by local people and data on the relative abundance of its potential prey and competitor species at same date/location, the Field interviews Survey (388 interviews in total, 222 in 2004) already represented on its own a first level of local communities involvement, especially through the set of questions investigating interactions with and on attitudes towards wildlife species, the large carnivores in particular. This was to identify the local residents perception of the origins of eventual conflicts with (attacks to people, livestock depredation, interferences with traditional/safari hunting, interactions with domestic dogs, unfounded general fears…), and possible consequent threats to (measures, tending to direct persecution the most often, taken by the people to resolve the conflict to their advantage), the surrounding sympatric carnivores, including the African wild dog.

Other potential human threats, not conflict-related but ensuing from every-day-life activities and land uses (accidental snaring and other non-selective traditional hunting techniques, habitat fragmentation by shifting agriculture and bushfires, low prey densities driven by traditional/professional hunting, infectious diseases transmission from reservoir domestic dogs…), have been deduced from the analysis of distinct data-sets. These were systematically collected in the field towards the socio-economic description of each interviewed rural community (incl. number of inhabitants, 1st & 2nd main activities, area of influence around settlement/activity, Domestic dogs Survey, subsistence hunting techniques and rate of use, wildlife species traditionally hunted and assessment of removal rate…).

The African wild dog is thus now more familiar to the 110 human settlements visited by the project as the process of interview implicitly evolved into environmental education for an improved perception of the species intrinsic values, such as for a better understanding of its ecology and interactions with other wildlife and human beings. Upon demonstration that the risk of potential conflicts in the studied areas was very low, and that solutions to potentially emerging ones do exist anyway, negative views on the species were deterred and it was dissuaded from engaging in direct persecution.
Further, recruitment for active participation in conservation efforts towards this species was effective and articulated on suggestions either of direct actions (continued recording of new sightings details, zero-level persecution, minimum disturbance to occupied dens when located, ongoing campaigning for the conservation of the species…) or of measures to reduce unintentional anthropogenic threats.

More pragmatically, each of these possible indirect human pressures to the nearby African wild dogs was specifically tackled as it follows.

- Allusions were made to arch/arrows and spear as selective techniques to be envisaged for traditional hunting, searching for references in cultural memories. Dangers of poisons were evoked.
- The reasons for the practice of shifting agriculture were investigated, and rural development alternatives were suggested in function (terrain selection, irrigation & drainage, animal traction, culture rotation, cultivation practices including timing in cycle and adapted techniques, seeds quality improvement, organic inputs, agro-forestry…).
- It was also remembered that traditional hunting on communal areas is authorized in Mozambique only according to numerous conditions, and that being strictly for domestic

use (no trade) and practiced during a well-defined time period of the year (April to September) are only two of those.

- The risk of infectious diseases, transmitted from domestic dogs with erratic behaviour in the bush once back to domestic livestock and human beings concentrated in settlements, was also highlighted in the optic of owners preventing their dogs from such free ranging movements.

Many times, the contact was naturally initiated with the traditional chief (generally the first to be interviewed whatever his knowledge of local wildlife) through additional conversations and explanations on the topic. The project tent was pitched in his property and he often convoked a council composed of the people with the most authority/influence/knowledge in the place regarding to the issue (traditional hunters, bush doctors, elders…), what also favoured a wider effect of the action. All these people were then requested to forward to the entire community the message for the conservation of the African wild dogs, after having been enlightened on their benefits, whether direct (predation on crop-raiding species, competition with notoriously dangerous lions and spotted hyenas, contribution to a fit prey-base for local subsistence hunting...) or indirect (e.g. through eco-tourism), of doing so.

This entire education and awareness process took place with the didactic support of books, pictures, posters, brochures, drawings, craftwork items (small wood statues of African wild dog made and sold by local people around Hwange NP in Zimbabwe), vocalizations of the species on tape etc. Such material illustrating the ecology of the African wild dog was exposed to and most often let with the most indicated members of the community (with sufficient knowledge of wildlife & level of recognition by the others) in the perspective of positively influencing environmental attitudes around them.

5. Are there any plans to continue this work?

Yes, indeed. And more than plans, an additional fieldwork campaign is currently ongoing in the northern Sofala province (“Marromeu Complex”).

The African wild dog population resident in that area had never been reported previously to this project in 2004 and results presented above (in the two attached documents) are highlighting its particularly and unexpectedly high level of vulnerability.

This is not caused only by its very small size (<50 individuals) and the multiplicity of anthropogenic threats to it, but also by factors amplifying the impact of these threats such as the limited area which it is restricted to and its isolation from any surrounding African wild dog population (min. 420 km away).

While these elements were already turning a priority the conservation of the referred population, molecular genetics analysis of suitable samples provided by this same project in 2004 furthermore revealed an outstanding additional value in terms of genetic differentiation. A new mtDNA genetic type was found and called M1 (M for Mozambique). This new genotype is both unique so far to this small area in the centre of the country (until other individuals with same genotype are found elsewhere), most probably the least represented in terms of living animals within the entire species (with no certainty that all the <50 animals of the population are M1…), and with a genetic distinction from the surrounding populations astonishingly much higher than what could be expected according to the existing relationships between the 8 previously identified mtDNA genotypes (M1 being the 9th) and their repartition into two distinct ecotype clades (southern & eastern Africa).

The conjunction of this population's exacerbated vulnerability and recently revealed exceptional biological value in terms of genetic differentiation made it obvious that a serious reinforcement of its conservation was the most urgently required. In consequence, the project has then prepared follow-up work articulated on the two following points. From one part, on recommendations of practical conservation measures towards mitigation of the previously identified main threats to the population here in focus and, from another part, on advanced scientific research dedicated both to refine the already suggested conservation actions (see below, point 9.) and to better tailor complementary and longer-term ones (sustainable management).

Although supported so far by limited personal moneys only, the research component immediately received renewed support **(documentation is attached in 3rd position)** from the responsible Mozambican research institution (MHN) and competent authorities (DNAC) and is currently in course (started September 2008) in the North of the Sofala province, central Mozambique.

Objectives:

1. To maintain continuous visual contact with the packs during sufficiently long and repeated time periods so that it becomes possible to:

* deepen the study of movements & ranging mechanisms and to refine the former (2004 study) assessment of each home range limits
* improve the previous (2004) deduction of vegetation type preference and discriminate according to African wild dogs' activity type, season and other influencing factors
* determine most important preys, alimentary diet composition, hunting success & other foraging parameters discriminated per prey species and to investigate mechanisms driving prey selection.

2. To use the observed fluctuations in pack size and age/sex composition for determining various demographic parameters such as:

* sex ratio
* whelping time & birth rate
* age specific fecundity, litter size (nr. of emerging pups) & pup survival
* yearling & adult survival
* immigration & emigration (dispersal) rates.

3. To bring the rate of direct observation of the packs to such high levels that scenes displayed by the species on an opportunistic basis only, while the most relevant for its conservation, can be visually recorded as well including:

* actual sources of mortality, dispersal events (incl. causes), den site requirements, exact whelping time, litter size (without disturbance to the den) and number of emerging pups (more realistic)
* actual interactions (circumstances, nr. of protagonists, winners/losers, losses, damages, mortality…) of African wild dog packs one with another, with other carnivores (mainly lion and spotted hyena) and with human beings (directly/indirectly)
* hierarchy among males/females and other expressions of sociality in each pack while paying a particular attention to behavioural observations on roads used as resting sites or travel corridors.

Methods:

It appears clearly through the location of direct sightings reported to the original project (2004) that the African wild dogs of the region were the most frequently seen on a specific road section (see Fig. 1 in the 2nd attached document). Visual contacts with the respective packs are thus expected to be established repeatedly through cruising intensively on the same particular section.

These successive lasting observations repeated over a long time period of each African wild dog pack resident in the northern Sofala province will aim at the identification of all individual animals within the entire population (demographic study).

6. How do you plan to share the results of your work with others?

As it appears in the previous pages, this aspect is a bit delicate in the particular case of the present project.

From on part, the basic field data collected along its course were already submitted for record to the most indicated body of the international conservation community habilitated to do so (IUCN/SSC CSG AWDWG), accepted by the referred entity and integrated into the updating of African wild dog distribution/status maps for Mozambique.

But from another part, none of the methods for the analysis performed so far on the same data (individual packs identification, successive sightings description, home ranges delimitation, habitat analysis, preliminary demography, anthropogenic threats ranking/population…) has been validated yet despite submission to the same international group of experts. This is putting into question the pertinence of disseminating results obtained through the application of methods which confirmation of relevance is still pending.

However, such results were already transmitted to national research institutions and competent authorities who considered them at once as scientifically acceptable and useful in their optics of biological records, advocacy, management decisions and policy-making. But it would be much better to first receive authoritative comments on the actual quality of the referred data treatments before sharing further their results.

Once validation of methods will be effective, various channels could be used for the dissemination of the information such as the proper website of the validating scientific body (university, research institution…), the publication of scientific papers in appropriate journals, additional public presentations and even through the communication work of partners/sponsors of the project including, hopefully, the Rufford Small Grants Foundation.

Unfortunately, it seems that the project can not count anymore with the African Wild Dog Working Group (AWDWG) within the IUCN/SSC Canid Specialist Group for such a results sharing purpose. Firstly because the outputs from the analytical work do not seem so much of its interest, compared to basic African wild dog sightings details/locations, according to the complete silence from its Coordinator/individual members who were asked now more than 1 year ago to have a look at. Secondly because, after having significantly contributed to the last workshop organized on its behalf, both in terms of geo-referenced data and of discussions for status evaluation in Mozambique, the project has not received so far any output document from such meeting, not even the updated distribution/status maps. It has been confirmed in the between time that other participants were already provided with written material of such nature. Like so, it is also made impossible to check whether or not any field researcher having contributed with data along the workshop is duly mentioned/acknowledged and if the respective contribution of each can be clearly depicted.
Such a way of acting is not very well understood up to now and appears to be a pity, particularly because this specialist group would have been the most appropriate recipient of the results from the currently running conservation research on African wild dogs in the northern Sofala province.

7. Timescale: Over what period was the RSG used? How does this compare to the anticipated or actual length of the project?

The Rufford Small Grant received by May 2004 was used until late October 2004 and exclusively dedicated to fieldwork.

Field interviews Survey in the northern Sofala province that year actually ran until June, instead of February as initially planned, and the short time left available thereafter for Distance sampling Survey, Call-in stations Survey and Signs of presence Survey in the same region made it impossible to work in the Niassa National Reserve that same year 2004, although stated in the original proposal. But that area was effectively visited and similar fieldwork carried out in as soon as the next year (2005), together with the entire Cabo Delgado province with a focus on the Quirimbas National Park.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

The GBP 4,545.46 Rufford Small Grant to this project was credited in Mozambique to a bank account in Euro on 9th June 2004. Amount received was EUR 6,772.94 (exchange rate = 1.49) as no commission was charged by the Mozambican bank **(see 4th attached document)**.

The change in national currency (Metical, MZM) for EUR 1.00 oscillated between MZM 28,000 in May 2004 and MZM 24,000 in late October that same year. The exchange rate for EUR 1.00 used in this financial breakdown is thus set to MZM 26,000

Item	Budgeted Amount	Actual Amount	Difference	Comments
Travel expenses – International * Freight for equipment acquired in Europe	253.98	0.00	253.98	Most pieces of field equipment (horn-speakers, amplifier, tent…) were finally acquired in South Africa and not in Europe. Transportation to Mozambique was by road
Travel expenses – Local * Fuel, vehicle maintenance (detailed) - Vehicle rental - Fuel - Public transport	1,878.71	1,697.09 ---------- 1,348.79 106.70 241.60	181.62	Budgeted amount was slightly overestimated
SUBTOTAL Travel expenses	2,132.69	1,697.09	435.60	
Logistics – Administrative costs (visas…) * Administrative	0.00	223.74	- 223.74	As no car was imported this item

regularization in Mozambique (incl. car 4x4)				was shifted with the related sponsor, and the presented amount is for the fieldworker's successive visas only
Logistics – Insurance * Medical insurance (2 persons)	394.25	0.00	394.25	Travel insurance incl. medical component finally provided by the University of Oxford
SUBTOTAL: Logistics	394.25	223.74	170.51	
SUBTOTAL	2,526.94	1,920.83	606.11	
Field expenses * Food, accommodation (2 persons during 180 days)(detailed) - Accommodation in Beira (nearest city) - Accommodation during mission to Maputo & abroad (SA) - Food	0.00	1,109.23 ---------- 639.87 288.03 181.33	-1,109.23	Fieldwork was carried out from October 2003 to October 2004 and not during the only 6 months initially programmed. Expenses in the field fortunately not doubled but an increase was inevitable
SUBTOTAL	2,526.94	3,030.06	-503.12	
Material – Scientific equipment (detailed) - Computer equipment - MD player & amplifier	0.00	312.33 ---------- 63.52 248.81	-312.33	It had been omitted to include these specific equipment items in the budget requested from the 2 other financial sponsors
Material – Field equipment * First aid kit and security	328.15	117.58	210.57	First aid kit was offered and other security costs much lower than expected
Material – Consumables * Photo rolls, development, batteries (incl. for GPS)	163.61	57.81	105.80	Budgeted amount was clearly overestimated
Material – Other * Complementary GIS info acquisition	131.26	0.00	131.26	The project team actually managed a free copy of the most updated digital data files existing for Mozambique

SUBTOTAL: Material	623.02	487.72	135.30	
SUTOTAL	3,149.96	3,517.78	-367.82	
Essential subsistence				
* Local counterpart/ tracker/translator indemnities	886.01	529.26	356.75	Indemnities exigencies from local counterpart were lower than expected
* Fieldworker essential subsistence	0.00	140.06	-140.06	There are more days of subsistence to be counted to the fieldworker (work alone, transfer across the study area…)
SUBTOTAL: Essential subsistence	886.01	669.32	216.69	
SUBTOTAL	4,035.97	4,187.10	-151.13	
Education/training				
* Support material to local training and communities education programmes	196.89	131.62	65.27	Budgeted amount was overestimated
SUBTOTAL	4,232.86	4,318.72	-85.86	
Communication				
* Printer and Internet access	312.60	226.74	85.86	Budgeted amount was overestimated
TOTAL	4,545.46	4,545.46	0.00	

9. Looking ahead, what do you feel are the important next steps?

Apart from the presently ongoing extended research component, the already mentioned conservation reinforcement follow-up work on the northern Sofala province African wild dog population (see above, point 5.) also implies the urgent implementation of practical conservation measures in the field. The order of priority of these is inspired from the ranking of threats to this particular population as deduced from the original work in 2004 (see again the 2nd attached document).

Both the Museum of Natural History (MHN) and the National Directorate of Conservation Areas (DNAC) have judged the proposed measures here referred to of the most appropriate but it has been impossible so far to start with their implementation mainly because resources, both human and financial, needed to do so are quite substantial and unfortunately still missing.

The most important step ahead, at this moment, would thus be to sort such a situation out and to get the suggested conservation actions actually launched in the field.
These are the following:

- to reduce African wild dogs road traffic accident mortality by implementing, with auspices of the relevant state authorities competent both in matter of wildlife (DNAC, DNTF) and transport/

- communication (Roads National Administration, ANE), practical measures that whether slow the traffic down on the sections revealed the most critical through the research components (previous & current) or facilitate the animals to avoid vehicle hazards, but always include strong educational efforts,
- to mitigate threats linked to bush-meat poaching (accidental catch, conflicts on interferences, low prey densities…) in areas identified of high risk through existing and forthcoming data, less on a repressive approach than by rather generating alternative sources of incomes for local communities, and to diminish the same threats where hunting is legal (professionally in safari concessions & traditionally on communal lands) by adding a component of education/awareness on specific adaptations to its practice (locations, time of the year, techniques, target species, intensity…) in order to overlap the least with local requirements of the African wild dogs as informed by research work,
- to liaise with NGO's and other organizations acting locally in rural development for their implemental programmes to integrate considerations on African wild dog conservation towards long-term mitigation of threats to the species such as habitat fragmentation (through adapted land uses), conflicts on livestock depredation (through better husbandry practices), or on unfounded general fears (through comprehensive educational work), at the exception of an emphasis on the domestic dogs problematic (infectious diseases transmission and conflict on interactions with) that should be addressed more directly through additional education efforts, supply of collars/leashes and launching domestic dog training programmes.

10. Did you use the RSGF logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

No, the RSGF logo has never been used in the past, mainly because the project team was not aware of its availability.

But the Rufford Small Grants Foundation was of course duly acknowledged in any report on this project written so far such as during any single public presentation performed up to now. Also, education/awareness material prepared and used by this project near local communities and a more general public was always clearly displaying the name of the Foundation.

11. Any other comments?

Involving, as an additional local stakeholder to the project, the hunting safari companies operating in the study areas has been greatly facilitated by relatively high densities of wild herbivores, making that competing conflicts with the resident African wild dogs on size and availability of the referred herbivore populations had not been experienced yet by professional hunters.

In a longer term perspective for the conservation of the species in the respective hunting concessions, the managers were actualized on its ecological characteristics, especially the wide ranging behaviour, highlighting that spatial avoidance should suffice to surpass such conflicts if they were to occur.
Contact details have been exchanged so that effective communication on a potentially emerging problem with African wild dogs will hopefully generate moderate and scientifically driven concerted solutions in the field instead of heading straight to the more radical direct persecution.

Additionally, it will also be possible to communicate on trends in African wild dog sightings that the safari field responsible persons have many times promised to keep on recording with caution.