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Non-governmental Organisations and African Wildlife Conservation:

A Preliminary Analysis

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Abstract

This paper presents an attempt to provide a first overview of the collective activities of conservation non-government organisations (NGOs) working in Sub-Saharan Africa, presenting findings on the work of over 280 organisations. The number of NGOs in existence grew in the 1980s and blossomed in the 1990s. Their distribution across the continent is patchy. NGOs work in about 14 percent of the continent's protected areas. Estimated average annual expenditure from 2004 to 2006 was just over US$200 million. This is at most about 40 percent of the lowest predicted needs, and these predictions are themselves likely to be substantial underestimates of the sums required for effective conservation by conservation NGOs. Spending by country matches some declared conservation priorities well, without taking into account cost of doing conservation in different countries. In our concluding discussion we examine the diversity of the conservation NGO sector. We argue that the sector will probably need to scale up its activities by one order of magnitude to achieve its stated goals. We offer reasons why this might not be such an impossible task. But we also note that the possibility of more funding raises a number of awkward questions. These include: is money being spent effectively now? Does scaling-up mean more money to existing organisations or a whole set of new ones? More fundamentally, many studies have noted that there are numerous problems associated with existing levels and patterns of expenditure. Scaling up NGO activity will not deal with these problems, they could make many worse. We argue that the problems will be best addressed by recognising them explicitly.

Keywords : Conservation NGOs (non-governmental organisations), Sub-Saharan Africa, Expenditure

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The mistakes above are our own. Please continue to tell us about them and send us other comments and feedback.

In brief

i. There are few analyses of collective spending by biodiversity and wildlife conservation organisations. This paper examines expenditure by the conservation NGO sector in Sub-Saharan Africa.

ii. Existing estimates of funding needs for conservation report substantial shortfalls of between US$450 and US$630 million in annual funding for protected areas in Sub-Saharan Africa. These estimated shortfalls do not include the costs of conservation activities outside protected areas.

iii. Conservation organisations have developed numerous and increasingly sophisticated prioritising mechanisms to identify important places for conservation. But it is difficult to tell the extent to which these prioritising mechanisms are guiding actual expenditure by the conservation NGO sector, also patterns of expenditure do not match priorities well.

iv. We have drawn up a list of over 280 conservation organisations operating in Sub-Saharan Africa, principally using web-based searches and expert review. Our methods miss a great deal of the local colour and vibrancy of national conservation scenes. However, we do appear to have captured most of the major spenders. We report data on the geography of activities of these organisations, and on the finances of 87 of the organisations for which we were able to obtain financial data for the years 2004 to 2006.

v. Our survey suggests a typology of different NGOs at work, according to their size, kind of activities undertaken and the nature of their appeal to different audiences.

vi. We present some basic patterns in the geography of NGO activities. Of the organisations for which we have data, most have their head offices in the global north and in South Africa. Of nearly 900 specific projects we examined, about half involved support for protected areas. Altogether the conservation NGO sector provides some level of support to about 14 percent of the continent's protected areas. There is generally little overlap in terms of the protected areas supported, but there are some areas which are highly popular and attract multiple organisations.

vii. Our analysis of the finances of the sector shows that organisations are spending nearly US$130 million a year, and nearly US$160 million if fundraising and administration costs are included. We predict that total annual expenditure by conservation organisations on the continent will be just over US$200 million (including fundraising and administration), and nearly US$163 million without.

viii. The structure of the sector is highly uneven, being dominated by the World Wide Fund for Nature (WWF) International and four other organisations.

ix. Fundraising and administration costs vary considerably between organisations. This may reflects differences in the way that these organisations' accounts are reported, as well as the variable costs of raising money from different constituencies. Fundraising costs have not been included in previous estimates of conservation needs.

x. We have calculated average expenditure per country and find that spending was well correlated with measures of biodiversity and threat.

xi. Despite the association between biodiversity and conservation activity it was clear that few of the organisations we examined explicitly tied their work to global conservation priorities. Rather we suggest that conservation organisations conserve far more than just wildlife and biodiversity. Some, particularly those based in the North, sustain a way of associating with the continent.

xii. The conservation NGO sector in Sub-Saharan Africa may well need to scale up its activities by one order of magnitude to meet its declared goals. This statement is likely to be the most cited statistic in the report and it comes with several important caveats. Specifically:

- This report has not considered the efficiency or effectiveness of expenditure of existing funds. We have not tried to determine what types of projects or policies deliver the best long-term benefits for different conservation objectives. Thus while the sector might be able to spend much more money than it currently receives, this report is unable to predict whether any extra money would be well spent. If the sector wishes to scale up, then it will be best able to make a convincing case to do so if it has sought out and addressed inefficiencies and ineffective work.

- We cannot tell whether a scaled-up sector would best consist of the same number of organisations which have got larger, or a proliferation of new organisations.

- There are substantial critiques about the consequences of conservation NGO activity which are likely to increase if the sector gets bigger. Specifically critics have noted the involvement of NGOs in policies which can impoverish and disempower rural Africans. Conservation organisations, like development organisations, distribute fortune and misfortune. Scaling up the conservation sector is likely to be a happier process if these critiques are specifically addressed.

xiii. We do not think that the prospect of scaling up the conservation sector is remote and impossible. The nature and scale of philanthropy is changing. But accessing extra funds may well depend on some critical self-examination by conservation organisations, great and small alike. The past few years have seen substantial growth in the number and size of organisations in the sector and prompts several questions. Would a further proliferation of small, or large, NGOs be good for conservation? How big do the large organisations want to become? What is the relationship between size and effectiveness in different fields of conservation? Is there room for more collaboration between different conservation groups? What makes for the most productive relationships between NGOs and governments? How can NGOs, their donors, and governments respond to critiques of conservation activity effectively? Our hope is that this report will facilitate such reflection. We conclude with a number of recommendations for follow-up work.

1 Introduction

This paper examines some basic patterns in the work of conservation non-governmental organisations (NGOs) in Sub-Saharan Africa. It is the first attempted comprehensive study of conservation organisations in the continent (or elsewhere) of which we are aware. On the basis of a list of as many conservation organisations as we could find and obtain data for, we examine where, collectively, they are working. For a subset of organisations we examine how much money they are spending in which countries.

This study addresses two general questions. The first is 'How can efforts in biodiversity conservation be better expended to achieve declared goals?'. In the first part of the paper we review the literature which has examined how much money biodiversity conservation needs in order to fulfil its goals, and where its resources should be directed. We argue that current estimates of shortfalls in conservation budgets do not take into account the full range of conservation activities and are likely substantially to underestimate conservation's financial needs. We then assess the state of knowledge about the distribution of conservation funds, concluding that it is difficult to tell how global conservation strategies are directing expenditure.

The main part of the paper then describes some basic findings about the general geography of conservation NGOs in Africa, considering where they are active, and where not. We consider how much money they are spending and predict how much the sector as a whole is likely to be spending. Finally we examine distribution across different countries and compare these patterns to the stated goals of African conservation spending. Our discussion examines the implications of our findings for conservation and philanthropy.

The second question we address asks 'what are the broader impacts of conservation policies and projects?' Protected areas, conservation policies and conservation NGOs are generally known as good causes producing good effects. But it is more realistic to recognise that conservation distributes both fortune and misfortune (West, Igoe and Brockington 2006; Redford and Fearn 2007; Coad et al. 2008). The latter have produced a more critical literature which considers the surprising, adverse, consequences of the work of non-governmental organisations. We address this in the final pages of the report.

We call conservation NGOs working in Africa which we have studied the 'conservation NGO sector', for the purpose of this analysis, but it is a problematic label. We use it because we feel there is sufficient common ground in the beliefs and actions of conservation NGOs. We suspect that many NGO employees could agree on the broad contours of the sort of world with which they would be happy – healthier vibrant ecosystems, more room for wildlife and biodiversity with people using resources more wisely, causing less rarity and pollution and taking up less space – if not the priority of those objectives or the means of achieving them.

Conservation NGOs can work together. There is a rough hierarchy of funders and grantees. They collaborate on the ground over different projects. They can cooperate by not working in other organisations' locales. But they also compete for donor funds and private sponsorship. At times they can dispute the importance of particular conservation objectives, also the best means of realising them. For example, many of the larger NGOs are concerned with biodiversity, endemism and rarity, while some smaller (but still significant) NGOs will focus on individual animals (sometimes unthreatened species) and their personal freedom.

Moreover the 'conservation NGO sector' does not yet recognise itself to exist in Africa, or, we think, in other parts of the world. The cohesion and frequent meetings of the Birdlife Partnership in Africa may well constitute a sub-sector, but is restricted to birds. The World Conservation Union (IUCN) provides a forum for some sharing ideas and strategies of conservation NGOs, but it is characterised by its eclecticism. The CEOs of the biggest organisations do meet regularly, but in general conservation NGOs do not, despite calls to the contrary (e.g., Mace et al. 2000; Redford et al. 2003), work as closely together as they could.

We must, therefore, warn against attributing too much unanimity or collective identity to this grouping. The tasks of conservation NGOs are highly diverse. They can, *inter alia*, campaign to alter government policy or public perceptions, undertake ecological research on species or ecosystems, police conservation policies, raise funds and awareness for conservation causes, strengthen and diversify the capacity and attitudes of the conservation community and support particular conservation projects. Northern based NGOs also undertake considerable fundraising and act as conduits of resources from wealthy countries. Part of the purpose of this work is to consider what a more cohesive sector, which thought of itself as a sector, might be able to achieve.

1.2 Estimating conservation's financial needs

Conservation strategies increasingly examine how to get most return from money spent (Balmford and Cowling 2006; Cleary 2006; Ferraro and Pattanayak 2006; Wilson et al. 2006; Murdoch et al. 2007; Naidoo and Wamura 2007; Wilson et al. 2007). As part of that effort, it may be useful to consider how much money different conservation plans might need, and how much is already being spent towards them. With respect to the first there have been several attempts to estimate the costs of paying for protected areas. The most prominent predictions are:

- Annual global shortfalls of US$1.8 billion, shortfalls in Sub-Saharan Africa of US$458 million (Table 1). These figures are based on the World Conservation Monitoring Centre's examination of expenditure on protected areas by governments, donors and NGOs on terrestrial protected areas (James, Gaston and Balmford 1999; James, Green and Paine 1999; James, Gaston and Balmford 2001).

- Annual shortfall in global management costs of protected areas of US$1.3 billion. This is offered as the best estimated from a range of US$1.1 and 1.7 billion a year (Bruner, Gullison and Balmford 2004, figures in 2004 US$). These figures are based on an earlier model of protected area costs derived from 194 sites (Balmford et al. 2003).

- Moore and colleagues apply a modified version of the equation used by Balmford and colleagues to calculate figures specifically for Africa (Moore et al. 2004). They estimate that it would cost US$630 million a year to pay for the maintenance of protected areas which covered 10 percent of each ecoregion in the continent.

All these estimates are broadly similar to Albon and Leader-William's study of conservation expenditure and field staff deployment needed to protect rhinos in Luangwa Valley in Zambia which suggests that an appropriate budget would be about US$230/km^2/year (or just under US$500/km^2/year in today's terms, Leader-Williams and Albon 1988).

These figures are influential estimates of the costs of conserving land in protected areas by states (see, for example, Pimm et al. 2001). The focus on protected areas provides clear, predictable expenditure requirements. They provide a good starting point. But we must emphasise that, since conservation needs often extend beyond protected areas, these figures will underestimate conservation needs (Hutton and Leader-Williams 2003). There is a great deal conservationists wish to do, and are attempting to do, beyond the boundaries of protected areas. Projections of need based on protected areas alone will always substantially underestimate conservation needs.

Table 1. Projected shortfalls in conservation expenditure from James, Gaston and Balmford (2001)

	Total expenditure				
Region	in millions (2006 US$)	per km^2 (2006 US$)	Shortfall per km^2 (2006 US$)	Total current terrestrial PAs (km^2)	Total shortfall in millions 2006 US$ (if shortfall per km^2 stays constant)
Latin America & Caribbean	269	127	174	3,433,247	597
Sub-Saharan Africa	305	147	152	3,015,502	458
North Africa & Middle East	53	51	234	1,204,928	282
Asia (developing)	131	83	446	983,441	439

Note: Shortfalls per km^2 in the original publications were given in 1996 $US, we have recalculated them here for 2006 $US using the GDP deflator given in http://www.measuringworth.com/uscompare/ (viewed 18/08/07). We only used terrestrial PAs from the WDPA as James and colleagues' original work did not look at the costs of managing marine protected areas. Figures reported here differ slightly from the first presentation of these figures (James, Green and Paine 1999). Following discussion with Kevin Gaston, we have taken the more recently published work as being more accurate. We have updated their report for current protected area figures, assumed expenditure per km^2 in Africa has kept up with current protected area.

1.2 Existing use of conservation funds

Given the scarcity of resources, the precise targeting of expenditure matters, hence the importance of prioritising needs and evaluating performance in meeting these needs. The conservation community uses three different bases for prioritising international spending. Some prioritise high vulnerability (such as Crisis Ecoregions), others low human impact (such as the Last of the Wild), others irreplaceability (such as Endemic Bird Areas). Collectively these models 'target' 79 percent of the land surface of the planet (Brooks et al. 2006).

These models are not fully reconcilable, nor should they be (Redford et al. 2003). Different groups within the conservation movement will value different priorities. A far more substantial problem with these models is that while they do provide some focus and guide for conservation aspirations, they do not appear to have been used by their creators to evaluate conservation expenditure. This is plain for three reasons. First, it is extremely difficult to find out how much money is being spent in each priority area. The data are simply not readily available, indicating no such evaluation is taking place. Second, a notable element of the debate about them concerns their efficacy as fundraising tools, not fund-spending guides. For example, Norman Myers defends hotspots from criticism by appealing to their fundraising power, noting that they had brought in US$750 million (Myers and Mittermeier 2003). Third, the few studies which do examine how well expenditure fits declared priorities have found a poor fit between them.

There is only one peer-reviewed examination of this question produced by Halpern and colleagues (2006). They compare spending against identified conservation priorities at the global scale, examining spending by the World Bank, the Global Environmental Facility, The Wildlife Conservation Society, The Nature Conservancy and the IUCN, with the priority sites identified by three other organisations – Conservation International, Birdlife International and the World Wide Fund for Nature (WWF). They find that the presence of priority areas explained a small proportion of spending, but conclude that 'global priority models are having little effect on how money is distributed among countries containing high-priority areas' (Halpern et al. 2006: 62). Remarkably they were unable to evaluate the geography of the three priority-setting institutions themselves because these organisations 'currently have no way of tracking spending at the regional or country level' (ibid.: 58). Halpern and colleagues are quite critical in the conclusion of their study:

> Conservation priority systems have the potential to be powerful and influential in this regard but it is time to balance enthusiasm for their potential with a thorough analysis of their actual impact on conservation action (Halpern et al. 2006: 63)

Similarly, an assessment of donor support to conservation projects in Latin America and the Caribbean notes that some high-priority regions were relatively neglected and recommends that the distribution of funding across regions be reviewed (Castro and Locker 2000). Mansourian and Dudley (2008) find that of the top 16 countries receiving environmental aid, only 37.5 percent had high biodiversity value.

The paucity of published data from the main organisations themselves on the geography of their expenditure is compounded by a lack of examination of the actual levels of international conservation funding, especially in the tropics where needs are greatest and resources least. James and colleagues observe that globally expenditure on conservation projects by foreign organisations (including foreign aid from governments, multilateral donors as well as NGOs) was 30 percent of total expenditure from 1993 to 1995 for the ten African countries for which foreign assistance figures were given (James, Green and Paine 1999: Table 1). The authors suggest that this is likely to be a substantial underestimation (James, Green and Paine 1999: 4; Balmford and Whitten 2003). There is one detailed regional study of international funding for Latin America and the Caribbean, which was conducted in the late 1990s by Castro and Locker (2000) who not that expenditure between 1990 and 1997 was US$3.26 billion (US$465 million per year). These figures are based on a worldwide survey of 118 major donors to the region (62 percent response rate), they are not inflation adjusted, include loans to governments as well as grants, and are of moneys awarded, not actual expenditure. Cleary is only able to give very general figures, from unpublished sources, for surveys of conservation expenditure in the Amazon, which focussed on the larger NGOs (Cleary 2006: 735).We have not been able to find any more recent data, or any detailed figures of patterns of actual expenditure by the conservation NGO sector in particular regions.

Biodiversity conservation, therefore, appears to need considerable overseas support to sustain conservation in the biodiverse, but economically poor, countries, and we have a reasonable idea of where specifically the money needs to go. But at the same time, there is little published information on the scale, pattern, distribution (not to mention consequences) of existing levels of support. At best these deficiencies add to the difficulty of prioritising current and future expenditure. At worst they weaken the urgency of calls for more conservation funds. If the use – and outcomes – of existing resources by the sector as a whole are unknown, then its ability to lobby for substantially more funds will be weakened in the eyes of serious donors. Given the severity of impending extinctions, and the decline in diverse measures of ecological and planetary health (Pimm and Raven 2000; Pimm et al. 2001; Balmford, Green and Jenkins 2003; Baillie, Hilton-Taylor and Stuart 2004; Butchart et al. 2005), and the importance of generating more funds to combat these declines, it is a potentially serious problem.

1.3 Goals and methods

This paper makes a preliminary attempt to examine patterns in expenditure of the conservation NGO sector within one region: Sub-Saharan Africa, a global analysis was beyond our resources. Our goals are to:

- Present a typology of the range of organisations we encountered;
- Examine the geography of their activities;
- Consider how much money they are spending and explore the structure of the sector, and
- Evaluate these patterns against priorities identified by different organisations and different estimates of financial needs in conservation.

Our first job was to undertake as comprehensive survey as we could of conservation NGOs active on the continent. Defining what we should include as a conservation NGO was not as straightforward as it may seem. At the core is a group of self-defining wildlife and protected area supporting organisations. But on the margins there are animal welfare, environmental management, environmental education and (community) development NGOs whose work can overlap substantially with conservation causes. With respect to the former, we judged them according to the nature of the projects they supported, and included Born Free in our survey, but not the Bridget Bardot Foundation. We excluded environmental organisations where they were concerned with general soil or water conservation issues, but included those supporting forest conservation, or those specifically working on the edge of protected areas to reduce pressure on land. We included environmental education programmes where they were based in Africa, but not Roots and Shoots (of the Jane Goodall Institute), which extends far beyond Sub-Saharan Africa. We excluded development organisations except if they had specific projects working on community-based wildlife management (and then included only those projects). We included an Africare project (Africare is a multi-million dollar US-based development organisation) because it was working on a community conservation programme in Tanzania for which we had precise expenditure data; but excluded CARE International because, although it spent about US$5 million yearly on aspects of biodiversity conservation, we could not pin down precisely what the money was spent on or where.

This is contested ground. There are sharp divisions of opinion as to what should constitute ‘real’ conservation (Hutton, Adams and Murombedzi 2005). But ultimately the financial impact of these marginal organisations and projects is minimal. If some people might find our list of organisations too inclusive, they can rest assured that the financial data are dominated by the traditional core of organisations.

We built up a list of conservation NGOs from a variety of methods. We used Google searches and lists of NGOs available on the 'Save Amboseli' and 'African Conservation Foundation' websites. We identified additional organisations by following links on these organisations' websites, and also came across others through personal contacts and published literature. We examined the lists of NGOs funded by large charities and gleaned more names from these. We disseminated the resulting lists for comment to members of the Environmental Anthropology and Society for Conservation Biology's discussion fora. We also sent it to personal contacts within the field of conservation including people who worked for various NGOs such as WWF, as well as academic contacts. The list currently names 281 organisations.[1]

There are some obvious limitations in these methods. We are limited to NGOs with a web presence, and this excludes the plethora of local and community-based conservation groups who are actively managing particular places, or lobbying for the same, without seeking to advertise their presence or activities through the Internet. We have not searched the Internet in French or Portuguese and representation of Francophone and Lusophone Africa may well be limited. Finally we failed to capture the diversity of South African conservation organisations. There are a plethora of smaller organisations, and many 'friends' of its national parks and game reserves in that country which we have not adequately listed. Note also that the focus on conservation NGOs alone means that we have excluded expenditure by governments, nor have we looked at bilateral and multilateral support to governments (although hopefully we will capture some of that support where it is given to NGOs), finally we have not included expenditure on research or research networks in our list of organisations.[2]

We gained some indication of our list's completeness by comparing it to the list of small NGOs funded by some of the larger organisations. First we listed all the organisations funded by Conservation International in 2004-05 (which are named on its I-990 forms). We compared that to our own list and found that of 161 individuals and organisations receiving support, we had recorded 23; 138 organisations and individuals were not on our list. However the average donation to these unlisted groups was small (US$37,000) compared to an average gift of US$378,000 to the organisations we had listed. This suggests that we have captured most of the more important players. Second we compared our list to the organisations funded by the Critical Ecosystem Partnership Fund (CEPF). Here we found that of 158 organisations and individuals supported since 2001, we again knew of 23 in our NGO database. This may seem a small proportion but note that many other recipients of funds were universities, research institutes, individuals

[1] A complete list can be viewed in the appendices to the original report available at www.sed.manchester.ac.uk/idpm/research/africanwildlife/ .

[2] In this respect our methods differ significantly from Castro and Locker (2000), who look at donors' giving, not recipients' expenditure.

and companies, all of which were excluded from our list. The average donation to the organisations we had listed was US$625,000, the average donation to entities not on our list was US$215,000.

This is, therefore, an incomplete, remote picture, researched from afar with little ground truthing and missing much of the detail and complexity that better local roots would provide. There are signs, however, that it has captured some of the more important financial players. We hope it provides a base on which to improve. Despite its flaws, we know of none like it with a similar scope or scale. The paucity of new organisations named by the consultation exercises, and the differences described in the previous paragraph suggest that the database does provide a reasonable base to merit sharing our findings.

For each organisation we have attempted to establish where their head office is located and when they were created. We examined nearly 900 projects these organisations are running to establish more precisely where they are active and, in particular, with which protected areas they worked. We have sought to find out how much money they spent in the years 2004, 2005 and 2006, and on which countries they spent it. We have listed their patrons and board members and we have listed their sponsors.

Much of the information we sought was available on websites. We have also used the Charities Commission website for UK charities and the I-990 forms for US charities for information on trustees, sponsorship and expenditure.[3] We sent emails and telephoned many organisations in pursuit of more information. Finally we sent a consultation draft of this document to every single NGO we had come across together with a separate Excel file summarising our knowledge of the geography of their activities and, where applicable, their funding. This helped to generate some corrections to our data, and some new data, and a few new organisations. It also led to many thought provoking and challenging responses to our arguments. Our thanks to all who contributed.

2 Results

2.1 An initial typology and assessment of NGO activities

Our current list of conservation organisations working in Africa includes 281 organisations. The diversity of organisations we have encountered is amazing. In an effort to move beyond the existing crude dichotomies of big international conservation NGOs (BINGOs), and all the rest, we have come up with a typology below. Not all these categories are mutually exclusive but they provide an indication of the variety out there. A more rigorous analysis based on expenditure and geography of activities follows. We

[3] UK charities' details are at http://www.charity-commission.gov.uk/; I-990s are available from http://foundationcenter.org/findfunders/990finder/.

have eschewed acronyms for each group, as devising them proved too distracting a task.[4]

- The largest NGOs, known elsewhere as BINGOs. Globally they are the WWF, Conservation International and Wildlife Conservation Society. In Africa the WWF stands out above the others, spending more than the next largest two combined.

- NGOs which are slightly smaller than the BINGOs, but still spend millions of dollars a year. We have split these into three categories in the financial analysis. The leading group ('very large') comprises the African Wildlife Foundation, the Peace Parks, Conservation International and the Wildlife Conservation Society, which all spend between US$7 and US$18 million a year.

- Charismatic animal orientated NGOs. They can range in size and origin. Examples include Save the Rhino International, the Mountain Gorilla Conservation Fund and WildiZe Foundation.

- Charismatic conservationist centred NGOs. These are conservation organisations devoted to saving wildlife but whose appeal is focussed on charismatic individuals. Examples include the David Shepherd Wildlife Foundation, the Jane Goodall Institute and the Wildlife Conservation Network.

- Habitat focussed NGOs. These are NGOs that focus on various habitat types across African. Examples include Wetlands International, Rainforest Action Network and African Mangrove Network.

- Taxon focussed NGOs. These organisations focus on groups of animals, for instance, big cats, primates, etc. Examples include Project Primate, CERCOPAN and Born Free USA.

- Bird focussed NGOs. These are similar to taxon focussed NGOs, but they focus their conservation activities on birds. Examples include the International Crane Foundation, the Peregrine Fund and the Birdlife International Partnership.

- Single protected area NGOs. These are usually smaller organisations and focus all their attention on one particular area. Examples include Project African Wilderness, Kasanka Trust and Ol Tukai Conservancy.

- A number of organisations undertake conservation activities but they are secondary to other objectives. Typically these are organisations linked to hunting clubs or

[4] The set of acronyms we devised for different NGOS proved to be the most popular aspect of the consultation report we sent out in 2007. We have culled it from this version but if you want to know what MANGOs, YOUCANGOs, FLAMINGOs and NGONGONGOs stand for, do get in touch.

tourism organisations, where conservation perhaps is the 'secondary' activity of the organisation. Examples include Safari Club International Foundation, African Impact and African Fund for Endangered Wildlife.

- There are several small conservation organisations that were set up by local groups in Africa. Examples include Mazingira Bora Karatu, Vokatry ny Ala and Amboseli Community Wildlife Tourism Project.

- Another set of organisations has been set up by groups of friends, predominantly students who had previously travelled to the area and decided they want to make a difference and set up a conservation organisation. An example would be Tandroy Conservation Trust or Kesho Trust.

- Memorial NGOs are named after (now deceased) conservation figures. Examples include the David Sheldrick Wildlife Trust and the Dian Fossey Gorilla Fund International.

- Research orientated NGOs have often grown out of, or been established alongside research projects. Examples include the Brown Hyena Research Project, the Lion Conservation Fund and Lukuru Wildlife Research Project.

- Volunteer and expedition orientated organisations. These groups provide paying volunteers for projects and journeys. Examples include African Impact and African Conservation Trust.

- Finally there are networks and groups of NGOs. These are organisations that network other conservation organisations working in Africa, though not necessarily implementing their own projects. Examples include Wildlife Conservation Network and Global Communications for Conservation. Birdlife International may also belong to this category in that it is an alliance of different bird focussed organisations.

From the activities these NGOs declared on their websites it was immediately clear that the NGOs were interested, and active, in far more places than protected areas alone. As we shall see shortly, protected areas did feature prominently, but the NGOs' remit extended to all sorts of locations. They also undertook an incredibly wide variety of activities, as this typology indicates. This underlines the fact that estimates of shortfall reported above are likely to be a considerable underestimate of real needs.

2.2 Basic patterns of history and geography

We recorded establishment dates for most organisations (Table 2). A few started early on, generally as domestic conservation organisations in Europe and the USA, with their overseas missions developing later. Growth of NGOs began in the 1960s with decolonisation, but NGOs really began to flourish in the 1980s and grew dramatically in the 1990s, with 34 percent of those for which we have data established in that decade.

Establishment of NGOs has declined since. These growth patterns correspond clearly to the general global preferences for working with NGOs which arose in the 1980s and 1990s.

Table 2. The establishment dates of NGOs

Time period	Count	Time period	Count
Pre-1900	5	1960s	15
1900s	5	1970s	19
1910s	1	1980s	54
1920s	1	1990s	80
1930s	0	2000s	53
1940s	0	unclear	44
1950s	4	**Total**	**281**

Source: Compiled by authors.

Table 3. Location of head offices of conservation NGOs working in Africa

Country	Head offices	Country	Head offices
USA	65	Switzerland	3
UK	34	Uganda	2
South Africa*	33	Belgium	1
Kenya	16	Burkina Faso	1
Namibia	11	Burundi	1
Tanzania	11	Denmark	1
Botswana	10	Djibouti	1
Madagascar	9	Democratic Republic of Congo	1
France	8	Egypt	1
Germany	7	Ethiopia	1
Netherlands	7	Gambia	1
Zimbabwe	7	Ghana	1
Malawi	6	Guinea-Bissau	1
Nigeria	6	Israel	1
Zambia	6	New Zealand	1
Cameroon	4	Portugal	1
Canada	3	Rwanda	1
Sierra Leone	3	Somalia	1
Australia	2	Sudan	1
Liberia	2	Tunisia	1
Norway	2	**Grand total**	**278**

Note: *This figure is not representative of conservation organisations in South Africa due to the many potential organisations not included in this analysis.

Source: Compiled by authors.

We identified where head offices were for 278 conservation organizations. Table 3 shows that 65 (23 percent) of these organisations have a head office in the USA; altogether 48 percent of organisations were based in the north. South Africa dominates among the African-based NGOs, with probably a much larger total than we have shown here. Conservation NGOs working in Africa and which are based in Sub-Saharan Africa exclusive of South Africa are a minority. They are concentrated in Kenya and Tanzania and southern Africa. Note, however, that due to the limitations of our survey methods, we may likely miss many small NGOs based in Africa.

We collected information on over 220 organisations regarding the geography of their activities in terms of which country they worked in. From over 900 projects we examined, we were able to list the specific protected areas affected by over 450 projects. This probably underestimates the real extent of protected areas covered as many organisations may specify they work in a particular geographical area but not whether they focus on the protected areas included in that area. We have been unable to capture in the data the difference between organisations that cover the entire site of a protected area and those that work only in a small part of it.

Table 4 gives the distribution of activity across Sub-Saharan Africa, showing the number of NGOs working in each country. Note that activity is generally low in west Africa, and

Table 4. Distribution of conservation NGO activity within Africa

Western Africa		Central Africa		Eastern Africa		Southern Africa	
Country	NGOs	Country	NGOs	Country	NGOs	Country	NGOs
Nigeria	13	DRC	29	Kenya	64	South Africa	55
Ghana	7	Cameroon	12	Tanzania	39	Namibia	27
Liberia	6	Congo	9	Uganda	17	Zambia	25
Burkina Faso	6	Rwanda	8	Ethiopia	12	Botswana	23
Ivory Coast	5	Angola	6	Somalia	3	Madagascar	22
Mali	5	CAR	6	Sudan	3	Zimbabwe	18
Gambia	4	Gabon	4	Djibouti	2	Malawi	15
Guinea-Bissau	4	Burundi	2	Eritrea	1	Mozambique	10
Sierra Leone	4	Chad	1			Swaziland	5
Guinea	3	Eq Guinea	1			Lesotho	1
Niger	3	Sao Tome &	1				
Senegal	3	Principe					
Benin	2						
Togo	2						
Cape Verde	1						
Total	68	Total	79	Total	139	Total	201

Source: Compiled by authors.

that in all the other regions it is highly uneven, with one country with many NGOs and others with less activity. Kenya and South Africa are the continent's dominant hubs. Eastern and southern Africa combined have far more conservation NGOs operating within them than central and western Africa.

The organisation with the greatest geographical reach is the WWF, which is substantially larger than the other large organisations (Table 5). Note there is not a strong relationship between number of countries covered and the size of NGOs. Some wealthy organisations concentrate their resources on a few countries, others spend much less in many more.

The distribution of NGOs supporting different protected areas shows some tendency to focus on well-known protected areas, but is otherwise generally even (Table 6). Indeed, it is more than even this table suggests, because where some protected areas are listed as having more than one NGO, this conceals the fact that these organisations may be closely related. There are exceptions to the general rule of dispersion, the table provides details of the more iconic protected sites on the continent around which conservation organisations cluster.

Table 5. The international presence of organisations working in more than five countries

Name of organisation	Number of countries
World Wide Fund for Nature	44
Wildlife Conservation Society	19
African Wildlife Foundation	11
SADC Regional Programme for Rhino Conservation	10
International Foundation for the Conservation of Wildlife	10
Conservation Force	10
Wetlands International	9
Peace Parks Foundation	9
Conservation International	9
Royal Society for the Protection of Birds	9
Fauna and Flora International	8
Frankfurt Zoological Society	7
International Crane Foundation	7
Save the Rhino International	6
International Rhino Foundation	6
David Shepherd Wildlife Foundation	6
Bushmeat Crisis Taskforce	6
Africa Parks Foundation	6

Source: Compiled by authors.

Table 6.The distribution of NGO support for different protected areas

No. of NGOs working at the PA	No. of PAs	Specific PAs, with the number of NGOs working there
≥10	3	Kruger (12), Tsavo East (11) and West (10)
8	1	Amboseli
6	3	
5	6	
4	9	
3	18	
2	31	
1	202	

Source: Compiled by authors.

Table 7. Showing the completeness of the GIS data used in the maps below

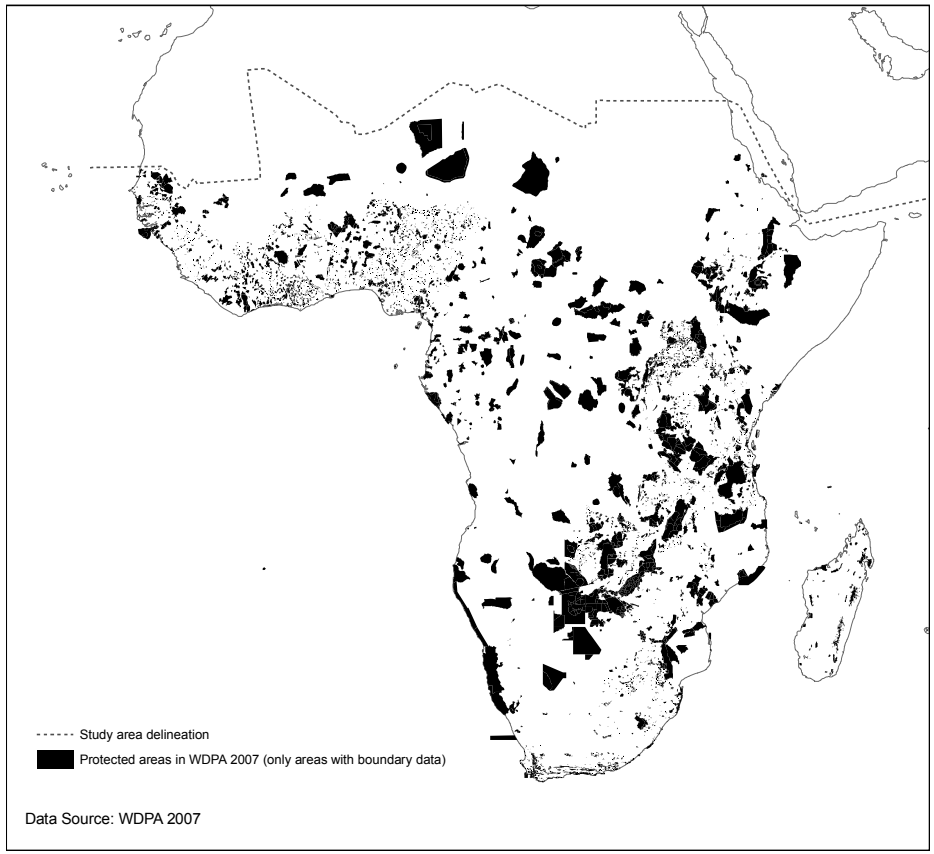
			Protected areas not shown on maps	
	No. of all protected areas	Size of all protected areas, km^2	No. of protected areas	Size of protected areas, km^2
Protected and supported	192	664,191	26	19,531
Protected but unsupported	7,482	4,475,259	2,317	1,468,559
Protected total	7,674	5,139,440	2,343	1,488,089

Source: WDPA 2007 edition.

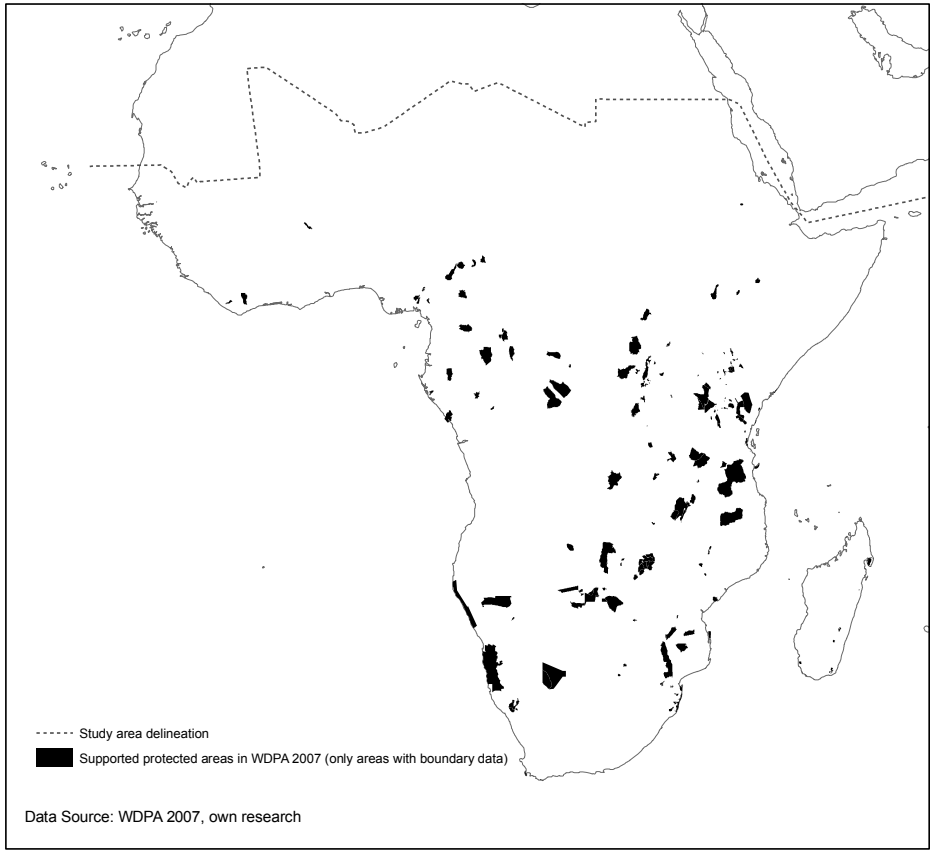
Overall protected area coverage is rather slight. Figure 1 (below) juxtaposes a map of the protected areas in existence with a map of protected areas receiving some level of support (see also Table 7). Overall just under 14 percent of the protected area estate (by area) receives some form of support from conservation organisations. Support favours the more strictly protected IUCN category 1-4 protected areas, 37 percent of which receive some form of support. Few countries have greater than 40 percent coverage of their protected areas, and some of these are notable for their small protected area networks. In many countries, e.g. DRC, Congo, Namibia, smaller NGOs cover a higher percentage of protected areas than larger NGOs. These data must be interpreted with caution as any form of support, no matter how small, puts a protected area on the list. This is not a list of protected areas which are adequately sponsored by conservation NGOs. We do not have data on effective expenditure per square kilometre on protected areas.

Figure 1: The geography of support in Africa

Protected Areas



Supported protected areas



2.3 Financial patterns

Data on expenditure are based on mean annual expenditure between 2004-06. Given the difficulties that Halpern and colleagues (2006) report in exploring expenditure patterns, it is important to put on record the fact that we have found few such difficulties.[5] Indeed we have been continually helped and supported by patient and forthcoming staff in a great diversity of organisations. We were able to obtain financial data for 87 (30 percent) of our list of conservation organisations for some or all of the years 2004-06. We believe these include all the largest NGOs, but there remain a number of significant players for which we have not recorded spending patterns. In particular we have no data on the Global Environment Facility (GEF), United Nations Environment Programme (UNEP) or the (International Union for Conservation of Nature (IUCN).

The financial data come with a number of caveats and warnings.[6] All financial figures are expressed in 2006 US$ using exchange rates and the GDP deflator available at www.measuring worth.com/index.html. Note that we report below patterns in expenditure with and without 'overheads'. Overheads refer to fundraising and administration costs.

We found that the conservation NGOs for which we had data, were spending, on average, just under US$160 million per year, including overheads, and just under US$130 million not including overheads. The structure of the sector is shown in Table 8. We predicted the budgets of the other organisations of whose existence we are aware, but for whom we do not have financial data based on the geography of their activities.[7] This exercise suggests that total annual expenditure of the listed conservation organisations active on the continent would be just under US$202 million (overheads included), and just under US$163 million without overheads. By way of comparison overseas development assistance (ODA) to Africa (including north Africa) in 2004 was just under US$30 billion.[8]

The sector in this region is dominated by a relatively few players. The largest, the WWF, is greater than the next largest two combined. The average annual expenditure of the ten largest organisations (which account for over 83 percent of the organisations for which we have data) is shown in Table 9.

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[5] Notably the WWF, in response to Halpern and colleague's observations, are plotting expenditure geographically and were able to provide good data on regional expenditure for us.

[6] These are detailed in Appendix Two of the original report available at: www.sed.manchester.ac.uk/idpm/research/africanwildlife/

[7] Details of this prediction can be found in the Appendices to the original report, see previous footnote.

[8] OECD: www.oecd.org/dataoecd/40/27/7504863.PDF viewed 1st July 2008

Table 8. The structure of the conservation NGO sector in Sub-Saharan Africa

Size class	Range of expenditure, incl. overheads	Counted NGOs	Average expenditure, incl. overheads	Predicted NGOs	Predicted total expenditure, incl. overheads	Predicted structure
7	Over $40 million	1	42,708,026	1	42,708,026	21%
6	$10 to $21 million	4	15,559,663	4	62,238,654	31%
5	$4.2 to $6.2 million	5	5,467,690	5	27,338,451	14%
4	$0.8 to $1.9 million	10	1,351,520	18	24,026,500	12%
3	$0.3 to $0.72 million	14	479,142	46	21,913,962	11%
2	$0.1 to $0.3 million	26	200,090	90	18,095,153	9%
1	Up to $0.1 million	27	54,927	102	5,605,369	3%
Total		87		263	201,926,116	

Source for Table 8, Table 9, and Table 10: Compiled by authors.

Table 9. The largest 10 conservation organisations (US$ 2006)

	Average expenditure	Average expenditure, incl. overheads
World Wide Fund for Nature	35,212,994	42,708,026
Conservation International	17,264,283	20,247,980
Wildlife Conservation Society	15,585,563	17,321,231
African Wildlife Foundation	12,073,116	14,614,140
Peace Parks Foundation	8,392,335	10,055,302
Jane Goodall Institute	4,412,168	6,120,999
Fauna and Flora International	4,895,446	5,947,705
Frankfurt Zoological Society	4,837,535	5,895,838
African Parks Foundation	3,246,610	5,136,265
Dian Fossey Gorilla Fund	3,497,692	4,237,644

Table 10. Comparing overheads and expenditure (US$2006)

	2004	2005	2006
Expenditure	113,723,444	130,524,350	143,396,577
Expenditure + overheads	139,929,996	159,992,336	176,480,749
Overheads	26,206,553	29,467,986	33,084,172
Overheads (%)	23	23	23

For the sector as a whole, we predict that more than 50 percent of this expenditure will be accounted for by the top five organisations, 65 percent by the top 10 (Table 8). The smallest and most numerous organisations will account for just 3 percent of the total conservation NGO budget. These predictions emphasise the dominance and power of the major organisations, but also point to the presence of a significant minority of smaller organisations. Because of the unevenness of the structure, and because we were able to collect data from all the high spenders, and because many of the smaller organisations are

dependent on the larger ones for funds, we believe that these data provide a reliable estimate of the sums that conservation organisations are spending in the region.

In general the fundraising and management costs of spending conservation sums are about 23 percent of expenditure (Table 10). We offer no judgement here if this figure is high or low. Low overheads are not synonymous with high efficiency. An organisation which gives away a lot of money needs to make sure that it the money is well spent, and applications are from worthy causes. This can be expensive. We return to this issue in the conclusion.

For calculations of expenditure per country we have only used the organisations for which we were able to obtain some financial data. The total expenditure, without overheads, per country per year is shown in Table 11. These data show an increase in expenditure of about US$32 million in two years, with at least a US$14 million dollar increase for the years for which we have data, but the time series is not long enough to deduce a general trends. Expenditure is uneven, with most in Southern Africa, with Central and Eastern Africa in joint second place. This table emphasises again the relative poverty of conservation activity in West Africa, which received less money combined than do the two leading countries in each of the other regions. Expenditure is also uneven within each region. South Africa, Madagascar, Kenya, Tanzania, and the DRC stand out as hubs. The average expenditure per country over the three year period is the figure we take forward in further analyses below.

Table 11. Annual expenditure (without overheads) in different countries (US$ 2006)

Region	Country	2004	2005	2006	Average
General/uncertain	Africa, General	6,639,175	6,285,464	14,148,417	9,024,352
West Africa	Liberia	406,078	461,124	2,388,176	1,085,126
	Sierra Leone	624,941	1,032,712	841,503	833,052
	Nigeria	559,141	780,041	989,858	776,347
	Guinea	655,626	630,228	708,949	664,934
	Ghana	419,905	598,967	573,947	530,940
	Ivory Coast	462,826	389,835	330,725	394,462
	Senegal	373,374	335,585	411,164	373,374
	Guinea-Bissau	298,700	268,468	360,338	309,169
	Burkina Faso	127,962	139,282	287,672	184,972
	Niger	148,070	146,965	149,176	148,070
	Gambia	124,624	136,982	166,867	142,824
	Cape Verde	95,123	67,567	82,233	81,641
	Togo	26,124	-	20,903	15,676
	Mali	-	-	690	230
	Benin	-	-	-	-
	Regional total	4,322,496	4,987,756	7,312,200	5,540,817

Table 11 continues

Table 11 (cont'd)
Annual expenditure (without overheads) in different countries

Region	Country	2004	2005	2006	Average
Central Africa	DRC	9,384,806	9,535,455	12,323,017	10,414,426
	Gabon	6,872,119	7,237,832	7,578,190	7,229,380
	Congo	4,386,044	4,274,580	5,100,447	4,587,024
	Cameroon	3,876,587	3,916,258	4,522,295	4,105,047
	Rwanda	2,564,029	2,347,681	2,647,749	2,519,820
	CAR	1,644,820	1,526,849	1,765,739	1,645,803
	Angola	462,288	627,337	643,235	577,620
	Burundi	316,840	294,215	402,619	337,891
	Eq Guinea	183,862	168,637	212,371	188,290
	Sao Tome & Principe	-	-	8,847	2,949
	Principe	-	-	-	-
	Regional total	29,691,396	29,928,843	35,204,509	31,608,249
East Africa	Tanzania	14,098,275	14,269,435	15,098,477	14,488,729
	Kenya	11,943,499	15,042,043	14,698,448	13,894,663
	Uganda	3,773,223	4,217,608	4,566,565	4,185,799
	Ethiopia	911,807	1,351,362	2,451,045	1,571,405
	Sudan	-	19,640	380,000	133,213
	Eritrea	4,850	3,867	27,539	12,085
	Djibouti	3,955	1,923	3,769	3,216
	Somalia	-	-	-	-
	Regional total	30,735,610	34,905,878	37,225,842	34,289,110
South Africa	South Africa	12,790,986	13,666,533	14,525,828	13,661,116
	Madagascar	8,306,275	13,140,413	10,391,355	10,612,681
	Zambia	5,077,136	5,356,143	6,052,733	5,495,338
	Mozambique	3,663,959	4,367,035	4,565,920	4,198,971
	Namibia	2,972,415	5,168,203	4,152,798	4,097,806
	Zimbabwe	3,499,054	3,332,903	4,091,842	3,641,267
	Malawi	2,157,621	1,949,885	2,491,559	2,199,688
	Botswana	1,227,282	1,199,299	1,548,419	1,325,000
	Lesotho	457,438	627,337	640,935	575,237
	Swaziland	457,438	627,337	640,935	575,237
	Regional total	40,609,606	49,435,091	49,102,323	46,382,340
All Africa	**Grand total**	**111,998,282**	**125,543,032**	**142,993,292**	**126,844,869**

2.4 Distribution of funds compared to indices of conservation need

We also compared the distribution of resources by country with various indices of conservation need. We used a modified version of the Groombridge and Jenkins (2002) Diversity Index, which is based on numbers of species of particular groups and levels of endemism, we also devised an index of threat based on threatened species found in the

IUCN Red List.[9] We calculated a raw index for each country and an index according to country size.

Before we discuss the results, it may be useful to consider what strategies might be employed to cope with the funding shortfall conservation suffers from. It might be best to invest most in a few places, and do them well, while sacrificing other areas. This would mean *not* investing in all countries in accordance with their need, but doing some places well and others not at all. Alternatively scarce resources could be applied equitably in accordance to diverse measures of conservation priority, with no deliberate sacrifices. We offer no judgement here as to which should be more appropriate. The science of how to allocate scarce resources among different conservation priorities is only just developing (Wilson et al. 2006; Murdoch et al. 2007; Wilson et al. 2007). The conservation sector in Africa has not yet agreed that it exists, let alone what its broader strategy should be, if it does exist. We cannot therefore assess it against any particular strategy.

Table 12 presents the Spearman's rank correlations of actual expenditure with levels of biodiversity and threat. The first rows present results irrespective of country size, the second have been standardised for country size. Both show that expenditure is well correlated with both levels of biodiversity, and levels of threat. The correlations are stronger if these measures are not standardised for country size.

These findings are a refreshing change from previous studies which show a poor match between expenditure and need (Castro and Locker 2000; Halpern et al. 2006; Mansourian and Dudley 2008). Note, however, that it is wrong to infer cause from

Table 12. Correlations of expenditure with measures of threat and biodiversity

		Diversity index	Threat index
Expenditure	Correlation coefficient	0.743(**)	0.650(**)
	Sig. (2-tailed)	0.000	0.000
	N	43	43
		Diversity index standardised per km^2	Threat index standardised per km^2
Expenditure per km^2	Correlation coefficient	0.507(**)	0.383(*)
	Sig. (2-tailed)	0.001	0.11
	N	43	43

Notes: ** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

[9] Details are available in Appendix 5 to the original report available at www.sed.manchester.ac.uk/idpm/research/africanwildlife/

correlation. We cannot be certain how far the presence of conservation priorities is driving this pattern. There are many other factors that would need to be taken into account if we are to develop a robust explanation. For example, we could consider language, levels of wealth, indices of good governance, corruption and country size. This is the subject of ongoing work.

This is also a coarse analysis in several ways. Distribution of conservation interests within countries is highly uneven, yet we have to take countries as our basic spatial unit. We have amalgamated funds here from all sorts of conservation activities, from protected area support, to local development needs near protected areas to research. A more useful task would be to break down expenditure into different activities. This might best be undertaken for smaller regions where more reliable data can be collected.

Finally while the positive association of conservation expenditure with conservation need is encouraging, we have not factored the cost of doing conservation into these calculations at all. Most authors now writing on the topic recommend that conservation costs have to be taken into consideration from the outset (Murdoch et al. 2007). This is because costs vary by several orders of magnitude, much more than indices of conservation importance. We are undertaking those calculations at the time of writing and will shortly be in a position to compare the current distribution of expenditure by country with the recommended level if costs of doing conservation were taken into account. Our prediction is that these calculations will demonstrate substantial changes that could be made to improve the cost effectiveness of the geography of conservation expenditure.

3 Discussion

3.1 Preserving which Africa?

The diversity of activities and organisations we encountered during this research demonstrates that this is a vibrant, indeed occasionally whacky, sector. Yet despite the diversity of organisations and activities, three general themes and one important paradox became apparent. The first theme is that it became abundantly clear from the many hours we spent reading reports, perusing websites, talking with conservationists as well as on our own travels and researches, that doing and supporting conservation is fun. This does not make it any less worthy or less important, and certainly no less dangerous, hard or arduous. But we must recognise that conservation activities sustain not just the wildlife and habitat with which conservation is concerned, but people's relationships with them, and with other people, in thoroughly pleasurable ways. The gala dinners and fundraising events, the sponsored bike rides, walks and runs, the expeditions and celebrity endorsements all serve good causes and substantially improve the quality of life of their participants. Similarly the lives of conservationists in the field can be lived in remote places and close proximity to wildlife, surrounded by beauty, with

little humdrum and routine. A substantial element of the fundraising appeal of some organisations derives from the exotic appeal of these lifestyles, and supporters' desires to participate vicariously in them.

The second theme is that many of the smaller NGOs do not explicitly tie their work to meeting the globally prioritised conservation objectives described above. It is curious, given the important role that conservation prioritising plays in fundraising, that so little effort goes into fulfilling these global conservation priorities. This cannot be explained away by pointing to the fact that the priorities have been set only by a handful of large conservation organisations, for the priorities were intended for use by the whole conservation movement (Halpern et al. 2006).

Instead it is clear that the conservation encompassed by these NGOs could only be very generally defined as the preservation of African wildlife and landscapes, with little apparent prioritising for rarity or irreplaceability. For example, some organisations are concerned with the health and welfare of individual animals (examples include the Born Free Foundation and smaller organisations like Living with Elephants). They owe their existence to two (sometimes conflicting) tendencies in western public – the tendency to anthropomorphise animals and project our feelings onto them, and the desire to connect with the wild in a deep personal and intimate way. There is perhaps a third tendency, namely the tendency to project our compassion for wildlife onto particularly attractive or charismatic individuals (animal and human). Some organisations use these sentiments as part of their fundraising – particularly by encouraging viewers to adopt individual (charismatic) animals such as chimps or baby elephants. In some cases (such as with Care for the Wild) the funds raised will then be put both towards that animal's welfare and to more general projects of greater significance to conservation goals.

The paradox concerns the way that westerners and conservation NGOs produce funds for African conservation. In the long term, it is generally recognised that the conservation movement needs people to develop healthy relationships with the wild (Adams 2004), to retain the love of nature they learn from frequent interactions in childhood (Milton 2002), to recognise the importance of every day encounters with mundane nature all around us (Cronon 1995; Dunn et al. 2006). The financial support on which many of the NGOs we have examined here depend is prompted precisely because of people's affection for wild Africa. But we must also recognise that this affection has not, indeed cannot, be founded on every day interaction and intimacy. Western (or northern) knowledge and experience of African wildlife and society is the product of decidedly impersonal, irregular and often vicarious encounters. It will always be thus.

For example, consider wildlife films and safaris. When we view Africa's wildlife in television programmes, we are watching carefully staged and framed constructions (Mitman 1999; Bouse 2000). When western tourists do encounter African wildlife and societies, it is often through heavily filtered experiences of safaris on national parks

where we visit places without apparent history ('timeless Africa'), often ignorant of the people who have been moved in order to create these landscapes (Brockington and Igoe 2006), and sometimes (at the higher end of the market) through safari experiences that deliberately mirror the colonial relations of privilege, where part of the purpose is to relive a version of the past (popularised in films like *Out of Africa*, or *White Mischief*) as much as it is to enjoy the present. Otherwise tourist encounters with African cultures are typically the highly staged 'cultural bomas' or replica villages. Our point is not that tourists' encounters and experiences are not authentic. Quite the opposite, they are all too real. But they are often based on a particular idea of Africa, which has been developed and reinforced in the west for decades. It is important to recognise what these encounters omit, and what sorts of expectations and experience they perpetuate.

What are the implications of these filtered visions for the conservation NGO sector? We suggest that conservation funding, which builds on and depends on these ideas and images, does not just conserve the continent's wildlife, it restores and reproduces an ideal of what it should look like. This is the final theme we saw. Far more is being conserved by these organisations than just wildlife. They preserve lifestyles and conservation livelihoods, they sustain a flow of public pageantry and parties in the name of good causes. And they sustain, and are sustained by, a vision of (sometimes for) African societies which emphasises roles for Europeans. In the public face of African conservation (on websites and in film), as Garland shows (2006), there is a telling absence of African wildlife professionals who are personally at work in saving wildlife, and a prominence of (white) westerners (cf. Theroux 1997/1967). We hope that this merely reflects our methods and there is an abundance of smaller-scale organisations which we have missed.

3.2 Overheads and efficiency

The problem with the conservation funding shortfalls discussed above and portrayed in Table 1 is that they are only estimates of expenditure shortfalls by national protected area staff whose remit of actions are limited. They include costs like patrolling a protected area, maintaining boundaries and visitor facilities and some core costs (Bruner, Gullison and Balmford 2004: 1120 details the costs involved). But the activities of actually-existing conservation, undertaken by all the NGOs listed above, are far more diverse than that. They include research, locating and defining species, determining their relative abundance, populations trends and threats to them, exploring their ecologies and the functioning of the ecosystems of which they are part. They include environmental education and all sorts of outreach work, policing and controlling the trade in rare species and their products; they include raising awareness about conservation issues and political lobbying as well as careful conservation planning and mapping, exchange visits and capacity building.

Bruner and colleagues warn against the conservation sector taking on too broad a set of interests when they note that significant biodiversity spending is diverted to support

'sustainable use and economic development in local communities' (page 1,123) and that existing figures may conceal lower actual expenditure on protected area management proper. For illustration consider the strategic directions of the Critical Ecosystem Partnership Fund which channels funds only to conservation hot spots on the continent. The strategic directions for these hotspots reveal a rich tapestry of tasks.[10] The wealth of work that now falls under conservation's remit suggests that existing estimates may simply be inadequate to undertake good conservation properly.

Estimates of conservation need also exclude NGO's fundraising, administration and staff costs. The amount of money spent on fundraising varies according to the type of organisations and the audiences they seek to reach. Costs are also higher when raising money from poorer sectors of the population. Raising money from the rich costs more absolutely, but brings a greater return for effort. For example the plethora of activities which Save the Rhino undertook, all carefully targeted to particular audiences, cost over US$383,000 in 2006 and raised US$1,037,000. In contrast Conservation International reported that just four annual fund raising dinners in the US cost more than US$780,000 in 2004/5 but returned revenues of over US$3,840,000. Clearly there are difficulties in comparing organisations of such different sizes. The point is that both play important roles, but that the costs that they incur in accessing conservation funds will vary considerably.

More importantly, fundraising is not just about the money produced, but about raising profile and consciousness (and in the process reproducing a shared vision of Africa). For example, the sight of runners dressed as rhinoceros completing the London Marathon (Save the Rhino International spent nearly US$46,000 on marathons in 2005-06) raises awareness and the image of conservation much more broadly. Furthermore, conservation fundraising is part of the pageantry of everyday life. It is one of the means by which people express their love for and commitment to nature and its conservation. It is how they 'make a difference'. It cannot be evaluated as merely ledger book entries.

It would be possible for the conservation sector to reduce some costs it incurs by basing more of its offices and headquarters in Africa where salaries and expenses are so much cheaper. But this would leave a sizeable population of volunteers and rather poorly paid westerners, who currently support the sector in their home countries still looking for a role. The need to seek efficiencies in the operation, and cooperation among NGOs also has to cope with the large number of people who seek to serve and work for them. The important task is not so much the diminishment of northern support, but the expansion of African powerbase, offices and staff.

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[10] See: http://www.cepf.net/xp/cepf/about_cepf/index.xml

3.3 Scaling up conservation

We must reiterate how small existing support for conservation is. Current expenditure is at most one-third of the sums estimated as essential to make up the shortfall in funding for Africa's protected areas. Conservation spending is less than 1 percent of ODA to Africa. Given that the conservation organisations listed have a much broader remit than just protected area work, given that many protected areas which do receive support are not adequately funded and given that the previous estimates do not include overhead costs of raising and administering the money, then it is likely that current estimates of shortfall substantially underestimate actual needs.

If conservation NGOs are the best vehicles for delivering conservation gains, then we speculate that existing conservation NGO efforts in Africa would need a further US$1-2 billion dollars per year to approach funding levels adequate for their stated goals. This is as much as previous estimates have suggested would be required to cope with protected area shortfalls globally. Or put another way, expenditure by conservation NGOs is an order of magnitude below the levels it needs to be, and that the members of the conservation NGO sector in Africa need to scale up their activities by one order of magnitude.

Does the conservation NGO sector have the capacity to expand its activities so considerably, and still retain its efficiency – or better still, increase the efficiency with which it delivers gains to conservation? Is it measuring its efficiency or effectiveness? How does it perform relative to the efforts of the government and private sectors? Could conservation NGOs working in Africa re-imagine themselves as a collective force working towards common goals? Is it possible for a sector founded on vibrant but eclectic enthusiasms and fuelled by such singular visions of the continent to do any such re-imagining at all?

Currently we do not think this sort of step change is possible. This is only a speculative impression, and we would like to be proved wrong, but it is our view. We do not see the appropriate levels of organisation and co-operation, or self-imagination, apparent for a step change to work. There is some support from other observers. Mercer states that 'most (environmental) charities are of the view that, in the short term, they would be able to expand by up to 20-30 percent of current capacity' (2007: 114). He observes that some environmental charities have plans that involve doubling income and capacity in ten years. These would be significant changes, and perhaps as fast a rate of change as could be reasonably hoped for, but they are not a step change.

But we think that were the sector to conceive of itself differently, then, in the medium term, this sort of increase in funding might not prove as impossible to achieve as it currently appears. This is for three reasons. First, some tasks are, in theory, already doable with current levels of funding. For example, the equations of predicting the costs of supporting protected areas used by Moore and colleagues (2004) suggest that 97

percent of category 1-4 protected areas could be *fully* supported on about US$120 million per year. This sum is less than the sector already spends, exclusive of overheads, yet it currently only *partially* supports about 40 percent of these protected areas. Protected areas are by no means the limit of conservation activities, there is much to*/ be done outside them, but clearly there are great potential gains to be had through more cooperation.

Second, there are many sources of funds which our survey does not include. For example, the world's wealthy countries make approximately US$1.3 billion available to environmental causes each year as multi-lateral and bilateral aid (Mansourian and Dudley 2008). Spending by the GEF in Africa was US$512.6 million in Africa between 2003 and 2005 (Mercer 2007: 146). Safari hunting in Africa raises approximately US$200 million annually, from just 18,500 clients (Lindsey, Roulet and Romanach 2007). This is spent unevenly and mostly in southern Africa, but is making important contributions to conservation estate and practice in these countries. Funds to combat climate change could inject more cash, with US$100 million recently pledged to Tanzania for reducing emissions from degradation and deforestation (REDD), and US$200 million to the Congo basin for community forestry. More generally the World Tourism Organisation estimates that more than 25 million tourists visited the Sub-Saharan Africa, spending an estimated US$15.8 billion annually (UNWTO 2007). The growth rate in tourists has recently varied between 8-10 percent per year. It is not clear how sustainable such travel will be in the long run, but the point is that there may be better ways that to harness this industry for conservation needs.

Third, there are the long-term changes in the power and nature of corporate and individual philanthropy. Increasing inequality and wealth in the west, persistent poverty in many parts of the tropics, and the substantial growth of some organisations mean that few individuals and organisations are likely to be able to have a substantial impact in the long run. Moreover, the attractiveness of the conservation cause is also growing, as being seen to be green is economically valuable. In the UK and Canada, there is also room to increase income from philanthropic foundations. In the UK, environmental grants accounted for just 1.6 percent of £2 billion given; in Canada just 2 percent of environmental NGOs' income is derived from foundations, whereas in the USA it is between 20 and 40 percent (Cracknell and Godwin 2007).

These large and powerful givers could substantially redress the deficit we have observed. The deficits faced by the conservation NGO sector are already within the largess of the world's wealthier philanthropists to meet.[11] However they are likely to demand a vision, an overview, and an assessment of the alignment between activities

[11] The largest philanthropic donation is US$37 billion given by Warren Buffet to the Gates Foundation.

and declared strategy which would be commensurate with such increased giving. Currently the sector has not monitored or evaluated itself sufficiently to warrant that sort of increased investment.

3.4 Bigger and better?

What if the conservation NGO sector did grow substantially? Would it solve conservation's problems in this region? A Chinese curse states simply 'May your wishes be granted'. There are three significant problems with which a substantially better funded sector would have to wrestle.

First, conservationists critiquing their own movement's effectiveness complain that there is often a poor link between conservation activity and outcome, and that the effectiveness of use of money is not measured. The connections between conservation activities and conservation impact are complex, sometimes tenuous and the subject of considerable investigation. We have not tried to examine efficiency or effectiveness in this paper. They are beyond our remit. But it is a common truth that inefficiencies are not eradicated by throwing more money at the problem. A scaled-up sector which is inefficient will waste more money if given more resources. It ought to be difficult for a sector which has not examined its own effectiveness to lobby successfully for substantially more funds. Might it be possible for less money to be spent sustaining conservation NGOs, and all the other attendant activities of the sector, and direct more money to conservation activities? It is possible that development of tools like Miradi software may alleviate some of the difficulties here.[12]

We can put this problem a different way: for different priorities, at what stage do conservation dollars turn into things which conservationists value, and what are the best, and most lasting ways of reaching these payments? [13] Recent work by the Cambridge Conservation Forum highlights some of the difficulties.[14] These researchers have traced the multitude of connections between different conservation tasks and particular conservation outcomes. We need to know now how much money these different links cost.

Second, if the conservation sector needs to scale up then it is not at all clear if the existing organisations need to get bigger, or whether the sector needs a whole set of new organisations. The existing structure of the sector is highly uneven. Does it need more really large players (several new WWFs?), more of the medium-sized

[12] https://miradi.org/

[13] Suggested by Katja Neves-Graca

[14] http://www.cambridgeconservationforum.org.uk/documents/Conservation_Activity_Conceptual_Models_July07.doc

organisations, or a massive expansion of the grassroots smaller organisations? Or does it take what it has and hope they all grow?

Inequality is inevitable. Larger foundations, or companies seeking to sponsor large environmental offsets, need to give away millions of dollars in large chunks. They cannot afford to handle thousands of applications for small grants, but have to deal with large organisations and intermediaries. There is also always likely to be a significant proportion of new, young and small organisations working on specific places and tasks. But the basic problem here is a fundamental ignorance as to the relative effectiveness of different size organisations. We also have few rigorous comparisons of the relative performance of different types of organisation. Many organisations are seeking to grow, and we suspect that few have consciously considered what size might optimise their performance. Without understanding what tasks different sizes of organisations are best at, or how different sets of organisations interact, it is difficult to advocate what sort of sector might best deliver particular conservation goals.

Third, a more fundamental set of criticisms derives from the critical literature on the performance and practice of NGOs that we referred to at the start of this paper. Conservation policies and conservation organisations do many good things, but they also cause a wide variety of problems to different peoples and societies.[15] The work of conservation NGOs distributes both fortune and misfortune. A scaled-up sector would do the same, but to more people, resulting in bigger fights. Central to the abilities of a scaled-up conservation sector to work effectively would be its capacity to work justly. But there are a number of causes for concern in the current performance of conservation NGOs that would inevitably accompany any enlargement of their scale of operations.[16]

These causes of concern include a number of studies of the negative impacts of conservation policies on rural lives and livelihoods due to eviction and, more commonly, exclusion from conservation areas (Neumann 1998; Brockington 2002; Pearce 2005; Brockington and Igoe 2006). There are also concerns that conservation policies marginalise or disempower local groups (Ghimire and Pimbert 1997; Igoe and Croucher

[15] (Bonner 1993; Fairhead and Leach 2000; Chapin 2004; Goenewald and Macleod 2004; Dowie 2005; Pearce 2005) (Brockington 2002; Brechin et al. 2003; Fortwrangler 2003; Adams 2004; Igoe 2004; Duffy 2005; Shanahan 2005; Duffy 2006b, Duffy 2006c; Garland 2006; Stephenson and Chaves 2006; Winer, Turton and Brockington 2007).

[16] These concerns and problems are not restricted to the work of conservation NGOs. There is a much richer and more extensive literature which has detailed the problems and dissatisfactions with development NGOs. This has reached many of the same conclusions as the work on conservation NGOs, including the growing worries about its compromised position in relation to states and donors (Edwards and Hulme 1995; Fisher 1997; Hulme and Edwards 1997); severe doubts as to the long-term consequences of intervention (De Waal 1997), and studies of the struggles and contests inherent in any alternative sector's attempt to pursue and maintain distinctiveness and be accountable (Bebbington 2004; Townsend and Townsend 2004; Igoe and Kelsall 2005; Bebbington, Hickey and Mitlin 2007).

2007). Conservation NGOs have been involved and implicated in these problems. This problem is not necessarily resolved by putting in more money. A review of GEF sponsored projects demands caution, particularly where large investments are involved:

> Results of the desk review have shown that, with a few notable exceptions, projects do not seem to systematically consider possible negative social impacts, either at the design phase or during implementation. Given that many of the projects are creating and/or strengthening protected areas, partly through components which enforce restrictions on community access to and use of resources inside those areas, there is a significant possibility that negative impacts may be associated with such project activities (Risby 2003: 86).

There are also concerns about the consequences of conservation NGO involvement in the NGO sector as a whole, and on the relations between NGOs, their constituencies, the state and donors. Some writers observe that international NGOs can displace local NGOs and compete with them for funds. Where they register national chapters, they then become competitors for the same sources of money, and tend to be much better at presenting funding cases (Austral Foundation 2007; Rodriguez et al. 2007).

Moreover other observers note that the presence of powerful international conservation NGOs can detract from the capacity of government departments dealing with conservation, or fail to enhance them, and may not necessarily enhance national conservation strategies, or tackle the root causes threatening biodiversity. There are few studies of the conservation sector nationally that have analysed the collective effect of NGOs, but the one of which we are aware demonstrates precisely these failings (Austral Foundation 2007).

Furthermore, when international NGOs do work with local NGOs this is no simple empowerment process. Rather they can transform the activities and structure of locally-based NGOs. The best evidence for this comes from humanitarian and development organisations. Igoe argues (2003) that international support for pastoralist NGOs in East Africa vitiated their accountability. Local NGOs will not simply roll over and become spineless clients of wealthier partners, they will pursue their own agendas (Duffy 2006a). There is evidence that smaller NGOs have been good at working their own agendas into internationally-driven conservation programmes (Gordon 2006). Nonetheless the presence of relatively plentiful dollars will still have powerful impacts. A scaled-up conservation NGO sector would impart large sums to local counterparts in diverse countries. It is difficult to do this in ways which empower vigorous locally-driven environmentalisms and conservation movements. Given the clear need to see a more African-based conservation NGO movement, the consequences of larger western-based organisations will have to be given a great deal of thought.

4 Conclusion

In this paper we have argued that:

i. The conservation NGO in Africa sector is a vibrant and eclectic.

ii. Existing predictions of conservation need based on funding requirements for protected areas underestimate shortfalls.

iii. There are substantial gaps in the coverage and reach of the conservation NGO sector in Africa.

iv. Existing distribution of expenditure generally does reflect conservation priorities. But we predict that it will not reflect the wisest expenditure of scarce resources if the costs of doing conservation are factored into the calculations.

v. In order to meet its own objectives, the conservation NGO sector needs to scale up its activities by one order of magnitude.

vi. There are grounds for hope that the sector could scale up its financing, *but*:

   - we do not know if it is spending existing sums efficiently;
   - we cannot be sure what combination of new, or bigger organisations might be best when scaling up, and,
   - more money will cause more problems of the sort already observed in previous studies.

4.1 Recommendations for further work

The challenge facing the conservation NGO sector is whether or not its members can up-scale their activities, while taking into account the criticisms discussed in the previous section, such that the sector is bigger, more effective, and fairer. This is not just a challenge for the NGOs alone. Their behaviour is important but, as Sachedina argues (2008), whatever qualities a larger sector possesses will emerge out of the broader set of donor-grantee relationships that characterise the sector: between large and small NGOs, NGOs and governments, NGOs and foundations, and NGOs and their members and individual donors. Examining these questions must be a collective effort for critics, NGOs, funders and donors

As donors and grantees examine these issues, there are a number of specific questions and tasks we can identify which would improve the evidential base for further discussion.

- It would be useful to explore the relationships between NGOs in different parts of the sector and the political economy of their interactions to understand how

particular tasks get prioritised, funded and undertaken. It would also be useful to see how relationships between different NGOs and the state shape conservation policy and outcomes.

- It will be important to explore ways of evaluating the relative effectiveness of different size and types of organisation at undertaking different tasks. This would include examining the thorny problem of overheads in more depth. It would also include examining the distribution of funding within the sector more carefully, tracing the flow of funds through networks of linked NGOs rather than treating them as independent and separate bodies, as in this analysis.

- We need to consider how distribution of resources within the sector affects conservation outcomes, and whether a larger sector could usefully increase, maintain, or reduce current levels of inequality of size and budget.

- Institutional ethnographies of how individual organisations perform would also make an important contribution. These could either be of individual organisations as they have grown, or of particular groups or subsectors. Sachedina's analysis (2008) of the growth of the African Wildlife Foundation provides an excellent template for this sort of work.

- We hope that the research we have undertaken for this report will be repeated in a few years to monitor the changes in levels of funding and to the structure of the sector.

- The continental scale picture we have produced needs to be tested with separate ground-truthing exercises in individual countries. This would provide a more complete list of organisations working in each country. It would also make a more thorough exploration of the interactions between different types of NGOs possible.

- It would be useful to undertake comparative examinations of other regions' conservation NGO sectors. Dr Kartik Shanker (Centre for Ecological Sciences, Indian Institute for Science) has begun this task for South Asia.

To many people on the frontlines of conservation, battling individual causes, struggling to raise funds for important projects, continually scrimping to make ends meet, these will seem esoteric tasks, questions which the sector simply does not have the luxury to ask. Many people simply will not ask them. Where organisations and their funders are driven by their desire to help, to make a difference, to give to a good cause, then there is no shortage of urgent activities into which they can launch their energies. This has been the strength and vitality of the conservation movement for decades.

We are generally in favour of this sort of enthusiasm; indeed without sharing it we would not have been able to initiate and complete this study. Our point is that the sector is

likely to be dominated by its current hardships if it continues to imagine itself as a series of separate struggles, and if current levels of coordination continue – if, in short, it continues to see itself as a scramble. A larger vision for conservation NGOs as a whole may ultimately make life easier. Given that the prioritising models to identify areas of need exist, and that the mechanisms for evaluating cost effectiveness of different strategies are being developed, that trends in philanthropic giving appear be continually increasing, and that levels of funding are already sufficient for some conservation tasks, then we need to ask whether the institutional make-up of the sector as a whole is well suited to the tools and resources now available to it.

But we conclude on poignant note. It is currently difficult to envisage many conservation organisations, and many donors and foundations, consenting to this sort of research being carried out into their efficiency and effectiveness. It would require all sorts of painful investigations into what actually worked, and to what uses their hard raised money were actually put. While many of those whom we have contacted have been keen to provide the basic descriptive data, the analytical questions we suggest above are far more intrusive and will be difficult, in practice, to pose.

It may be possible to ask these questions in less threatening ways. For example researchers might follow money along the sorts of networks the Cambridge Conservation Forum described until it produces effects which conservationists find valuable. Also they could trace funds back from useful and successful projects to see what other activities these successes have relied upon. Both these research tasks focus less on the work of single NGOs, but rather on the networks upon which conservation depends.

However uncomfortable they may appear, these questions are important. While they remain unasked broader conservation goals may suffer. We hope that this report will make it easier to address these questions.

References

Adams, W.M. (2004). *Against Extinction: The Story of Conservation*. London: Earthscan.

Austral Foundation, T. (2007). *Review and Analysis of Fiji's Conservation Sector*. Waitakere City: The Austral Foundation.

Baillie, J.E.M., Hilton-Taylor, C. and Stuart, S.N. (2004). *2004 IUCN Red List of Threatened Species(TM). A Global Species Assessment.* Gland: IUCN.

Balmford, A. and Whitten, T. (2003). 'Who should pay for tropical conservation, and how could these costs be met?'. *Oryx*, 37, 238-250.

Balmford, A., Green, R.E. and Jenkins, M. (2003). 'Measuring the changing state of nature'. *Trends in Ecology & Evolution*, 18, 326-330.

Balmford, A. and Cowling, R.M. (2006). 'Fusion or failure? the future of conservation biology'. *Conservation Biology*, 20, 692-695.

Balmford, A., Gaston, K.J., Blyth, S., James, A. and Kapos, V. (2003a). 'Global variation in terrestrial conservation costs, conservation benefits, and unmet conservation needs'. *Proceedings of the National Academy of Sciences of the United States of America*, 100, 1046-1050.

Bebbington, A.J. (2004). 'NGOs and uneven development: Geographies of development intervention'. *Progress in Human Geography*, 28, 725-745.

Bebbington, A.J., Hickey, S. and Mitlin, D.C. (2007). *Can NGOs Make a Difference? The Challenge of Development Alternatives*. London: ZED.

Bonner, R. (1993). *At the Hand of Man. Peril and Hope for Africa's Wildlife*. London: Simon and Schuster.

Bouse, D. (2000). *Wildlife Films*. Philadelphia: University of Pennsylvania Press.

Brechin, S.R., Wilshusen, P.R., Fortwangler, C.L. and West, P.C. (2003). *Contested Nature. Promoting International Biodiversity with Social Justice in the Twenty-first Century*. Albany, NY: State University of New York Press.

Brockington, D. (2002). *Fortress Conservation. The Preservation of the Mkomazi Game Reserve*, *Tanzania*. Oxford: James Currey.

Brockington, D. and Igoe, J. (2006). 'Eviction for conservation. a global overview'. *Conservation and Society*, 4, 424-470.

Brooks, T.M., Mittermeier, R.A., da Fonseca, G.A.B., Gerlach, J., Hoffmann, M., Lamoreux, J.F., Mittermeier, C.G., Pilgrim, J.D. and Rodrigues, A.S.L. (2006). 'Global biodiversity conservation priorities'. *Science*, 313, 58-61.

Bruner, A.G., Gullison, R.E. and Balmford, A. (2004). 'Financial costs and shortfalls of managing and expanding protected-area systems in developing countries'. *Bioscience*, 54, 1119-1126.

Butchart, S.H.M., Stattersfield, A.J., Baillie, J., Bennun, L.A., Stuart, S.N., Akcakaya, H., Hilton-Taylor, R.C. and Mace, G.M. (2005). 'Using red list indices to measure progress towards the 2010 target and beyond'. *Philosophical Transactions of the Royal Society B-Biological Sciences*, 360, 255-268.

Castro, G. and Locker, I. (2000). *Mapping Conservation Investments: An Assessment of Biodiversity Funding in Latin America and the Caribbean*. Washington, DC: Biodiversity Support Program.

Chapin, M. (2004). 'A challenge to conservationists'. *World Watch Magazine*, Nov/Dec, 17-31.

Cleary, D. (2006). 'The questionable effectiveness of science spending by international conservation organisations in the tropics'. *Conservation Biology*, 20, 733-738.

Coad, L., Campbell, A., Miles, L. and Humpries, K. (2008). 'The costs and benefits of forest protected areas for local livelihoods: A review of the current literature'. WCMC Working Paper. Cambridge: World Conservation Monitoring Centre.

Cracknell, J. and Godwin, H. (2007). *Where the Green Grants Went*. London: Environmental Funders Network.

Cronon, W. (1995). 'The trouble with wilderness; or getting back to the wrong nature'. In W. Cronon (ed.), *Uncommon Ground. Rethinking the Human Place in Nature*. New York: W.W. Norton.

De Waal, A. (1997). *Famine Crimes. Politics and the Disaster Relief Industry in Africa*. Oxford: James Currey.

Dowie, M. (2005). 'Conservation refugees. when protecting nature means kicking people out'. *Orion*, Nov/Dec, 16-27.

Duffy, R. (2005). 'The politics of global environmental governance: The powers and limitations of transfrontier conservation areas in Central America'. *Review of International Studies*, 31, 307-323.

Duffy, R. (2006a). 'Global environmental governance and the politics of ecotourism in Madagascar'. *Journal of Ecotourism*, 5, 128-144.

Duffy, R. (2006b). 'Global governance and environmental management: The politics of transfrontier conservation areas in southern Africa'. *Political Geography*, 25, 89-112.

Duffy, R. (2006c). 'NGOs and governance states: The impact of transnational environmental management networks in Madagascar'. *Environmental Politics*, 15, 731-749.

Dunn, R.R., Gavin, M.C., Sanchez, M.C. and Solomon, J.N. (2006). 'The pigeon paradox: Dependence of global conservation on urban nature'. *Conservation Biology*, 20, 1814-1816.

Edwards, M. and Hulme, D. (1995). *Non-Governmental Organisations - Performance and Accountability. Beyond the Magic Bullet*. London: Earthscan.

Fairhead, J. and Leach, M. (2000). 'The nature lords: After desolation, conservation - and eviction. the future of West African forests and their peoples'. *Times Literary Supplement.* May 5th, 3-4.

Ferraro, P.J. and Pattanayak, S.K. (2006). 'Money for nothing? a call for empirical evaluation of biodiversity conservation investments'. *Plos Biology*, 4, 482-488.

Fisher, W.F. (1997). 'Doing good? the politics and anti-politics of NGO practices'. *Annual Review of Anthropology*, 26, 439-464.

Fortwrangler, C. (2003). 'The winding road. incorporating social justice and human rights into protected area policies'. In S. R. Brechin, P. R. Wilchusen, C. L. Fortwrangler, and P. C. West (eds),*Contested Nature. Promoting International Biodiversity Conservation with Social Justice in the Twenty-first Century.* New York: State University of New York Press.

Garland, E. (2006). 'State of nature: Colonial power, neoliberal capital and wildlife management in Tanzania'. Chicago: University of Chicago. Unpublished PhD Thesis.

Ghimire, K.B. and Pimbert, M.P. (1997). *Social Change and Conservation*. London: Earthscan.

Goenewald, Y. and Macleod, F. (2004). 'Park plans bring "grief" '. *Weekly Mail and Guardian*. 25 June.

Gordon, J.E. (2006). 'The role of science in NGO mediated conservation: Insights from a biodiversity hotspot in Mexico'. *Environmental Science and Policy*, 9, 547-554.

Groombridge, B. and Jenkins, M.D. (2002). *World Atlas of Biodiversity: Earth's Living Resources in the 21st Century.* Berkeley, USA: University of California Press.

Halpern, B.S., Pyke, C.R., Fox, H.E., Haney, J.C., Schlaepfer, M.A. and Zaradic, P. (2006). 'Gaps and mismatches between global conservation priorities and spending'. *Conservation Biology*, 20, 56-64.

Hulme, D. and Edwards, M. (1997). *NGOs, States and Donors: Too Close for Comfort?* London: Macmillan.

Hutton, J., Adams, W.M. and Murombedzi, J.C. (2005). 'Back to the barriers? Changing narratives in biodiversity conservation'. NUPI Forum for Development Studies, No. 2-2005, 341-70. Oslo: NUPI.

Hutton, J. and Leader-Williams, N. (2003). 'Sustainable use and incentive-driven conservation: Realigning human and conservation interests'. *Oryx*, 37, 215-226.

Igoe, J. (2003). 'Scaling up civil society: Donor money, NGOs and the pastoralist land rights movement in Tanzania'. *Development and Change*, 34, 863-885.

Igoe, J. (2004). *Conservation and Globalisation: A Study of National Parks and Indigenous Communities from East Africa to South Dakota. Case Studies in Contemporary Social Issues*. Belmont, CA: Wadsworth/Thomson Learning.

Igoe, J. and Kelsall., T. (2005). *African NGOs, Donors, and the State: Between a Rock and a Hard Place*. Durham, NC.: Carolina Academic Press.

Igoe, J. and Croucher, B. (2007) 'Conservation, commerce and communities: The story of community-based wildlife management areas in Tanzania's northern tourist circuit.' *Conservation & Society*, 5(4), 534-561.

James, A.N., Gaston, K.J. and Balmford, A. (1999). 'Balancing the earth's accounts'. *Nature*, 401, 323-324.

James, A.N., Green, M.J.B. and Paine, J. R. (1999). 'A global review of protected area budgets and staff'. WCMC Biodiversity Series No. 10. Cambridge: World Conservation Monitoring Centre.

James, A., Gaston, K.J. and Balmford, A. (2001). 'Can we afford to conserve biodiversity?'. *Bioscience*, 51, 43-52.

Leader-Williams, N. and Albon, S.D. (1988). 'Allocation of resources for conservation'. *Nature*, 336, 533-535.

Lindsey, P.A., Roulet, P.A. and Romanach., S.S. (2007). 'Economic and conservation significance of the trophy hunting industry in Sub-Saharan Africa'. *Biological Conservation*, 134, 455-469.

Mace, G.M., Balmford, A. Boitani, L., Cowlishaw, G., Dobson, A.P., Faith, D.P., Gaston, K.J., Humphries, C.J., Vane-Wright, R.I., Williams, P.H., Lawton, J.H., Margules, C.R., May, R.M., Nicholls, A.O., Possingham, H.P., Rahbek, C. and van Jaarsveld., A.S. (2000). 'It's time to work together and stop duplicating conservation efforts'. *Nature*, 405, 393.

Mansourian, S. and Dudley, N. (2008). *Public Funds to Protected Areas*. WWF International. Gland.

Mercer, B. (2007). *Green Philanthropy. Funding Charity Solutions to Environment Problems. A Guide to Donors and Funders.* London: New Philanthropy Capital.

Milton, K. (2002). *Loving Nature. Towards an Ecology of Emotion.* London: Routledge.

Mitman, G. (1999). *Reel Nature. America's Romance with Wildlife on Film.* Cambridge, MA: Harvard University Press.

Moore, J., Balmford, A., Allnut, T. and Burgess, N. (2004). 'Integrating costs into conservation planning across Africa'. *Biological Conservation*, 117, 343-350.

Murdoch, W., Polasky, S., Wilson, K.A., Possingham, H.P., Kareiva, P. and Sha, R. (2007). 'Maximising return on investment in conservation'. *Biological Conservation*, 139(3-4), 275-288.

Myers, N. and Mittermeier, R.A. (2003). 'Impact and acceptance of the hotspots strategy: Response to Ovadia and to Brummitt and Lughadha'. *Conservation Biology*, 17, 1449-1450.

Naidoo, R. and Wamura, T. (2007). 'Global-scale mapping of economic benefits from agricultural lands: Implications for conservation priorities'. *Biological Conservation*, 140, 40-49.

Neumann, R.P. (1998). *Imposing Wilderness. Struggles over Livelihood and Nature Preservation in Africa*. Berkeley: University of California Press.

Pearce, F. (2005). 'Big game losers'. *New Scientist*, 16th April, 21.

Pimm, S.L. and Raven, P. (2000). 'Extinction by numbers'. *Nature*, 403, 843-845.

Pimm, S.L., Ayres, M., Balmford, A., Branch, G., Brandon, K., Brooks, T., Bustamante, R., Costanza, R., Cowling, R., Curran, L.M., Dobson, A., Farber, S., da Fonseca, G.A.B., Gascon, C., Kitching, R., McNeely, J., Lovejoy, T., Mittermeier, R.A., Myers, N., Patz, J.A., Raffle, B., Rapport, D., Raven, P., Roberts, C., Rodriguez, J.P., Rylands, A.B., Tucker, C., Safina, C., Samper, C., Stiassny, M.L.J., Supriatna, J., Hall, D.H. and Wilcove, D. (2001). 'Environment: Can we defy nature's end?'. *Science*, 293, 2207-2208.

Redford, K.H. and Fearn, E. (2007). 'Protected areas and human livelihoods'. WCS Working Paper. New York: Wildlife Conservation Society.

Redford, K.H., Coppolillo, P., Sanderson, E.W., da Fonseca, G.A.B., Dinerstein, E., Groves, C., Mace, G., Maginnis, S., Mittermeier, R.A., Noss, R., Olson, D., Robinson, J.G., Vedder, A. and Wright, M. (2003). 'Mapping the conservation landscape'. *Conservation Biology*, 17, 116-131.

Risby, L.A. (2003). 'The nature and role of local benefits in GEF program areas. Study component'. Desk Review of GEF projects. Biodiversity Study Document No. 6 Washington, DC: GEF.

Rodriguez, J.P., Taber, A.B., Daszak, P., Sukumar, R., Valladares-Padua, C., Padua, S., Aguirre, L.F., Medellin, R.A., Acosta, M., Aguirre, A.A., Bonacic, C., Bordino, P., Bruschini, J., Buchori, D., Gonzalez, S., Mathew, T., Mendez, M., Mugica, L., Pacheco, L.F., Dobson, A.P. and Pearl, M. (2007). 'Environment – globalisation of conservation: A view from the south'. *Science*, 317, 755-756.

Sachedina, H. (2008).' Wildlife are our oil. Conservation, livelihoods and NGOs in the Tarangire ecosystem, Tanzania'. Oxford: University of Oxford. D.Phil.

Shanahan, C.L. (2005). '(No) mercy' nary patrols: A controversial, last-ditch effort to salvage the Central African Republic's Chinko Basin'. *Thomas Jefferson Law Review*; 27, 223-254.

Stephenson, M. and Chaves, E. (2006). 'The nature conservancy, the press and accountability'. *Nonprofit and Voluntary Sector Quarterly*, 35, 345-366.

Sullivan, S. (2000). ‘Gender, ethnographic myths and community-based conservation in a former Namibian "homeland" ’. In D. Hodgson (ed.), *Rethinking Pastoralism in Africa: Gender, Culture and the Myth of the Patriarchal Pastoralist*. Oxford: James Currey, 142-164.

Theroux, P. (1997/1967). 'Tarzan is an expatriate'. *Transition*, 75/76, 46-58.

Townsend, J.G. and Townsend, A.R. (2004). 'Accountability, motivation and practice: NGOs north and south'. *Social and Cultural Geography*, 5, 271-284.

UNWTO. (2007). *Tourism Highlights*, 2007 edition. Available at: unwto.org/facts/eng/pdf/highlights/highlights_07_eng_hr.pdf

West, P., Igoe, J. and Brockington, D. (2006). 'Parks and people: The social impacts of protected areas'. *Annual Review of Anthropology*, 35, 251-277.

Wilson, K.A., McBride, M.F., Bode, M. and Possingham, H.P. (2006). 'Prioritising global conservation efforts'. *Nature*, 440, 337-340.

Wilson, K.A., Underwood, E.C., Morrison, S.A., Klausmeyer, K. R., Murdoch, W.W., Reyers, B., Wardell-Johnson, G., Marquet, P.A., Rundel, P.W., McBride, M.F., Pressey, R.L., Bode, M., Hoekstra, J.M., Andelman, S., Looker, M., Rondinini, C., Kareiva, P., Shaw, M.R. and Possingham, H.P. (2007). 'Conserving biodiversity efficiently: What to do, where, and when'. *Plos Biology*, 5, 1850-1861.

Winer, N., Turton, D. and Brockington, D. (2007). 'Conservation principles and humanitarian practice'. *Policy Matters*, 15, 232-240.

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