ANNEXES TO PROJECT BRIEF

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Annex 1: EPA letter of Endorsement (see separate attachment)

Annex 2: Threats to Biodiversity and Root Cause Analysis

Relevant to	Threat	Biodiversity Impact	Root cause	Barrier	Alternative strategy
All categories of protected areas and their surrounds	Conversion of habitat to agriculture and settlement	Near total loss of wild habitats, flora, fauna and biodiversity on converted areas. Habitat and so population fragmentation and isolation Greatly diminished watershed function, accelerated erosion, and less carbon storage	Population growth, poverty, food insecurity resulting in people moving into marginal areas and protected areas Unsustainable and unproductive agriculture necessitates clearing of new fields Government resettlement schemes to wilderness areas including protected areas Refugee settlements/camps Large benefits and low risk of prosecution for protected area squatters	Land tenure insecurity for agricultural lands. Limited political commitment to deal with agricultural encroachment – squatters in protected area are rarely prosecuted Little or no incentive to respect protected area boundaries coupled with no monitoring of protected area encroachment Little coordination between government agencies (agricultural planning, land allocation, resettlement, refugee, protected area) Low priority of protected areas in development context. Little awareness of economic values of protected areas	Develop innovative protected area management partnerships Adequate capacity (training, tools and funds) Protected areas mainstreamed in land-use framework and recognized by resettlement agencies Role of protected areas in watershed management recognized and acted upon Develop and apply capacities for economic valuation of protected area/natural areas Awareness raising targeting policy makers and decision makers Mainstreaming of protected area into development planning
All areas	The protected area system is not fully representative of ecosystems there are gaps. Remaining habitat under pressure.	Core biodiversity has no legal protection, e.g. arid communities of Ogaden	The wildlife sector has not been able to develop new areas in past thirty years.	Weak wildlife sector, little linkage to States, no political will to increase protected area system. Disconnect between approved guidance (e.g. NCS) and reality.	A full program of gap analysis and conservation planning under revised enabling environment.
All categories of protected areas and their surrounds	Unsustainable often illegal harvesting of natural resources (wildlife, fish, timber and non-timber products and	Deforestation Loss of habitat Loss of biodiversity Population declines and/or local extirpation	Demographic growth and increasing demand for natural resources. Rapidly growing cash markets for urban firewood and charcoal supply and for other products; Over-dependence of people on natural resources (particularly	Little or no incentive for local populations to respect protected area boundaries and regulations Little institutional capacity for protected area management and enforcement. Inappropriate policies and laws on	Develop protected area management partnerships with local communities, tourism operators, civil society institutions and/or local authorities (including law enforcement and judiciary) Institutional capacity building for government, community and civil society institutions for protected area management and for sustainable use

Relevant to	Threat	Biodiversity Impact	Root cause	Barrier	Alternative strategy
	grassland) for subsistence or commercial use	Loss of ecosystem integrity	for construction and fuel) Cultural adherence of indigenous people to wildlife products/ traditional natural resources (medicinal plants) Limited regulation of use of natural resources, and *de facto* open access to land and biological resources Limited risk of prosecution Poaching by military during periods of insecurity	land tenure and resource access rights No linkage between law enforcement, judiciary and protected area authorities Little incentive for sustainable use of resources by local populations. Lack of proven models for sustainable use and management biological resources Career advancement of protected area managers is not linked to effectiveness of protected area management	Improve policy and legal frameworks for land tenure, community-based NRM, co-management of Pa, zoning of protected areas and for incentive systems; Community-based natural resource management areas recognized as legitimate protected area category Develop pilot demonstration models of community-based management of natural resources in community-based NRM areas Participatory zoning of protected area into core conservation areas, sustainable use areas, etc.
Hunting areas	Trophy hunting at unsustainable rates	Reduction of populations; local extirpation	Corruption at local levels and pressures to maintain high quotas, but little statistically valid data for quota setting Limited stakeholder involvement No risk of prosecution or penalties for hunters/safari companies who don't respect quotas and other regulations	Poor governance of management authority and political entities, leading to inadequate monitoring and evaluation, and supervision of hunting areas Little biological expertise for wildlife management and quota setting following from low institutional capacities Limited stakeholder involvement	Develop governance systems and incentives for transparency and accountability. Involve local communities in monitoring wildlife populations, in quota setting and in monitoring of respect of quotas by safari operators Develop incentives for local communities to benefit from sport hunting, test community-based management/co-management of hunting areas Build government management capacity to regulate and supervise the private sector and to develop management partnerships
Forest Priority Areas	Timber use and/or extraction at unsustainable rates	Loss of habitat and biodiversity Loss of forest integrity and watershed value Deforestation	Pressures to increase logging combined with local corruption, poor governance and lack of civil society oversight Little or no forest inventory data on which to base sustainable harvest levels. Low level of motivation of forestry officers No monitoring or supervision of	Inadequate systems of monitoring for forest cover and condition and evaluation and supervision of Training of staff to monitor and set quotas Career advancement in Forestry Department is not tied to quality of forest management or to enforcement of forestry legislation No monitoring of forests cover and	Development of community-based natural forest management systems Development of public/private/ community/ civil society partnerships for forest conservation and management Develop economic valuation tools and awareness raising to increase political commitment and budgetary allocations Increasing the government's capacity to regulate and supervise the private sector

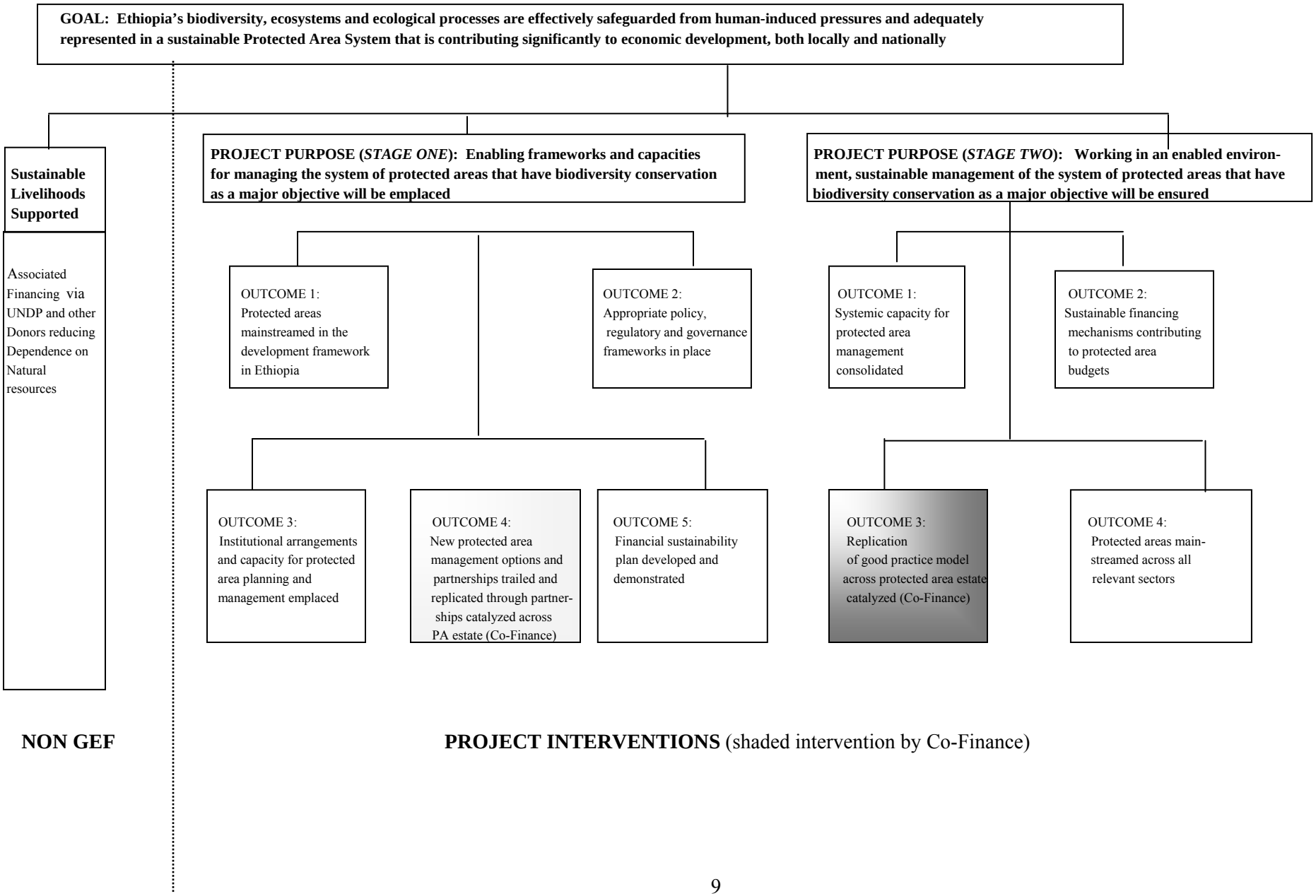
Relevant to	Threat	Biodiversity Impact	Root cause	Barrier	Alternative strategy
			timber extraction; *de facto* open access to areas and resources Limited stakeholder involvement No risk of prosecution or penalties to license holders who illegally exceed their quotas	condition No effective for a for civil society involvement and oversight Lack of political will for forest conservation reflected in low budget allocations Almost no development of partnerships with communities, private sector or NGOs for natural forest management	Involvement of local communities in monitoring timber extraction Mechanisms for local communities to benefit from timber extraction Development of a forest sector observatory to synthesize and publish data on license holders, payments of license fees and enforcement measures taken
All categories of protected areas and their surrounds	Overgrazing & over-browsing by domestic livestock, and localized trampling & erosion	Vegetation change and loss, bare soil & erosion & loss of watershed functions No regeneration of woodlands/forests and preferred forage spp. Loss of habitat and wildlife population declines & biodiversity loss Hybridization with domestic animals & diseases from domestic animals	Demographic growth combined with diminished areas of range/pastures, *de facto* open access grazing in most areas in and around protected area. Little or no risk of prosecution and/or penalties: people graze cattle if benefits of grazing cattle outweigh probability/risk of penalties; Dependence on agro-pastoral or pastoral livelihoods, which have little support, sustained pressures: supplemental feeding during drought maintain high populations combined with humanitarian assistance to rebuild herds.	Little political will to enforce grazing restrictions in PA. No legitimate natural resource regulation and management systems for local communities Poor institutional capacity in protected areas to enforce regulations and to manage areas No linkage between law enforcement, judiciary and protected area authorities	Joint management of protected area with local authorities, local communities, and other stakeholders and partners Develop local participatory use and management systems of range/natural resources in community-based NRM areas Agreements with local community on boundaries of core conservation areas Increasing awareness measures to increase political commitment of policy/decision makers.
Wildlife protected areas: NP, WR & WS	Exclusion of wildlife from critical resources, e.g. water	Loss of range and habitat Population reduction	Tenure systems and/or lack of enforcement allow people/groups to take over water points & other resources critical to wildlife	Lack of political will for enforcement/protection of critical water points and other resources No legitimate natural resource management systems for local communities	Awareness raising, development of political will Agreed local community use and management of natural resources in community-based NRM areas: agreed water sources left open to wildlife

Relevant to	Threat	Biodiversity Impact	Root cause	Barrier	Alternative strategy
All categories of protected areas and their surrounds	Local populations retaliate against wildlife for damages done	Population declines through retaliatory steps taken by local people	Wildlife predation on livestock – herders don't invest in night enclosures. Wildlife damage crops – people don't invest in fencing/ protection of fields	Lack of incentives for local people to protect/conserve wildlife Poor land use planning to keep wildlife areas removed from human settlements, and lack of political will for adequate enforcement measures to control killing of wildlife Limited technology transfer (use of enclosures using local materials)	Develop co-management systems with adequate incentives for local communities Develop effective, targeted problem animal control programs Improve land use planning and zoning Measures to develop political will for enforcement Knowledge management/technology transfer
Highlands	Poisoning of raptors/ wildlife by pesticides	Population (invertebrates, small mammal, bird) declines	Use of cheap or old pesticide stocks, and inadequate environmental impact assessment	Marginalization of environment sector Poor policy/regulatory framework	Improve POP policy and regulations Mainstreaming of environment sector
All protected areas	Encroachment by development projects	Loss of habitat Loss of biodiversity	Poor planning Single sector-based approach to development	Inadequate environmental impact assessments and marginalization of environment (particularly protected areas)	Protected areas mainstreamed in development framework and recognized by development agencies (donor, government and civil society)
All categories of protected areas and their surrounds	Fire bans and changes to "natural" or long-established fire regimes	Major changes to ecosystem structure and species composition Loss of biodiversity Loss of habitat	Breakdown of traditional fire management systems Well-intentioned measures by authorities lacking basic understanding of ecological role of fire in natural ecosystems. *De facto* open access to areas and resources	No legitimate natural resource regulation and management systems for local communities Poor institutional capacity in protected areas to enforce regulations and to manage areas Poor understanding of decision makers of fire ecology	Restoration of traditional fire management systems Joint management of protected area with communities, local authorities (including law enforcement and judiciary) and other stakeholders and partners Agreed local community use and management of natural resources in community-based NRM areas
All areas : wetlands, cultivation, arid areas	Invasive alien species	Loss of habitat and biodiversity	No control on invasive species (both historic and present) Well-intentioned introduction of highly invasive species	Inadequate knowledge of alien species Lack of systems for prevention and control of IAS	Develop national policy on invasive/alien species Develop prevention and control programs for IAS Research on alien species and control measures

SUMMARY TABLE

Summary of Threats	Summary of Root-Causes	Summary of Barriers	Summary of Interventions
Unsustainable use of natural resources Overgrazing/browsing by large livestock population Conversion of Natural Habitat Protected area system is not fully representative of all ecosystems, gaps.	Increasing demand for natural resources Overdependence on natural resources, few alternatives No regulatory ability, open-access Poor agriculture planning, no inter-sectoral coordination, policy not harmonized, little political will No incentives No stakeholder participation Wildlife damage crops, no rewards	Inadequate institutional capacity in terms of manpower, funding or strategies Biodiversity sector is marginalized from development process. No inter-sectoral coordination mechanism Policy disconnect, no planning or strategies for implementation of policy Top-down state-centric input, little partnership, little involvement of communities	Mainstream protected areas in development processes e.g. SDPRP II (*already achieved in PDF-B phase*). Awareness of protected area values. Policy/law/strategy processes are approved, in place and harmonized. Innovation in place Institutional mandates approved and capacity built at all levels of sector, with public-private-community-civil society partnerships Financial sustainability plan adopted, with business planning approaches.

Annex 3a Project Objective Tree



Annex 3b: Project Logical Framework

Hierarchy of Objectives	Key Performance Indicators	Baseline	Target	Means of verification	Critical Assumptions/Risks
GOAL: *Ethiopia's biodiversity, ecosystems and ecological processes are effectively safeguarded from human-induced pressures and adequately represented in a sustainable Protected Area System that is contributing significantly to economic development, both locally and nationally*					▪ Ethiopia wishes to fulfill her international and national commitments to biodiversity conservation ▪ Political stability is maintained ▪ Protected areas are valued and mainstreamed within the development context of Ethiopia ▪ Macro-economic environment is positive
PROJECT PURPOSE (First Stage): *Enabling frameworks and capacities for managing the system of protected areas that have biodiversity, ecosystem and ecological process conservation as a major objective are emplaced*	▪ Approval and adoption of the Protected Area System Plan by the Council of Ministers. The plan is being implemented.	No such plan in place	Plan in place and approved by end Year 2.	Council of Minister approval for the Protected Area System Plan (Yr 2)	▪ External pressures on protected areas do not significantly increase ▪ Private sector, civil society, communities and other stakeholders respond positively to improved policies and incentives ▪ Ethiopian government continues to commit to the re-structuring and institutional arrangements proposed herein

Hierarchy of Objectives	Key Performance Indicators	Baseline	Target	Means of verification	Critical Assumptions/Risks
	▪ Percentage cover of protected areas in the country	▪ 14% of Ethiopia is currently listed as nominal protected areas ▪ Following rationalization of the protected area system, coverage the protected will decrease. This will then be taken as the baseline for growth	▪ Dependent on the rationalized baseline; expected to be between 8-10% of area of country (end of stage II)	▪ Data from protected areas organization	▪ Linkage between protected areas and sustainable development understood and acted upon ▪ Innovative management measures accepted
	▪ Percentage representation of the ten ecosystems in the protected area system	▪ Percentage coverage of ecosystems will be assessed following the rationalization of the protected areas ▪ Currently, it is estimated that three ecosystems are adequately represented, four are partially represented and three are not at all represented	▪ Identification of all sites to ensure adequate representation (end of stage I) ▪ Minimum of 5% representation of each ecosystem (end of stage II)	▪ Data from protected areas organization	
	▪ Net improvement in management effectiveness of protected area estate	▪ All protected areas in Ethiopia have a METT score < 40 ▪ There is no monitoring of effectiveness. ▪ All protected areas, regardless of their classification, remain largely unmanaged.	▪ System METT score (calculated by the average METT score across the system using only the areas included in the baseline score, and readjusted once new areas are assessed or are designated) increased by 6% (end of stage I) and by 12% (end of stage II)	▪ Site-level METT scores ▪ System METT score	

Hierarchy of Objectives	Key Performance Indicators	Baseline	Target	Means of verification	Critical Assumptions/Risks
OUTCOME 1: Protected areas mainstreamed in the development framework in Ethiopia	• The major indicators from this plan have been adopted in the SDPRP II	▪ SDPRP II under discussion (*they have already been accepted*)	▪ SDPRP II enacted	▪ Publication of the SDPRP II (Yr 1) ▪ METT scores	▪ Linkage between protected areas and sustainable development understood and acted upon
	• Increased protected area in major watersheds with secured co-financing • Protected areas as component of watershed management in Ministry of Water Resources (***Trigger for stage 2***)	▪ 0.06% of upper Great Abbai watershed in protected areas	▪ 4 % coverage of Great Abbai watershed incorporated in new protected areas (end of stage II)	▪ Data from protected areas organization ▪ Ministry of Water Resources policy	
	• Protected areas are adopted as a key area of the sustainable land management program	▪ Sustainable land management program under design	▪ Sustainable land management program enacted and implemented including protected areas as component (***Trigger for stage 2***)	▪ Publication of the national sustainable land management program	
	• Linkage with and adoption by tourism sector of protected areas as one of the key marketing strategies	▪ Initial discussions on incorporation of protected areas in tourism strategy	▪ Tourism strategy enacted	▪ Publication of national tourism strategy	▪ Focus and marketing of tourism remains on cultural and historical sites
OUTCOME 2: Appropriate policy, regulatory and governance frameworks in place	• Approval and enactment of amended policy and new legislation	▪ New wildlife policy & strategy has been approved; new proclamation pending approval	▪ Proclamation for 'parastatal' protected areas organization with appropriate powers and with clear definition of mandate ▪ Amendment of policy and legislation i) to broaden governance types and allow management partnerships and ii) to re-define protected area categories ▪ The four demonstration sites are gazetted (end of	▪ The amended policy and legislation are approved and enacted by the Council of Ministers and the House of People's Representatives ▪ METT scores for gazetted sites ▪ System METT score	▪ The process to amend, approve and enact policy and legislation is not delayed

Hierarchy of Objectives	Key Performance Indicators	Baseline	Target	Means of verification	Critical Assumptions/Risks
			stage I)		
OUTCOME 3: Institutional arrangements and capacity for protected area planning and management emplaced	• Institutional re-structuring, mandate definition and staffing complete			▪ Data from protected area organization	▪ GoE responds well to innovative management measures
	• Protected Area System Plan adapted, adopted and implemented	▪ This project document provides baseline for PASP	▪ PASP is being adaptively implemented	▪ Independent assessment of PASP ▪ Council of Ministers approval of PASP	
	• Individual protected areas use business planning as a standard tool for protected area management planning and monitoring	▪ No business planning at the protected area site level	▪ Business plans and monitoring systems adopted in 4 demonstration sites (end of stage I) and in a total of 10 sites (end of stage II)	▪ Existence of business plans ▪ Existence of monitoring plans	▪ Innovative management measures accepted
	• Staff skill level	▪ No staff with business planning skills ▪ Recruitment, training and M&E do not exist	▪ Staff with appropriate business planning skills (Master's level business planners, socio-economists, and environmental economists) employed by protected area organization (end of stage I) ▪ Staff skill levels have risen to 30% (end of stage I) and 60% of potential (end of stage II)	▪ Independent survey of skills using stratified sampling across all ranks ▪ Individual M&E system and incentive mechanisms in place	▪ Qualified and dedicated people are available from within the system and for recruitment
	• Career development planning for staff within protected areas organization	▪ Career planning does not occur	▪ 30% and 70% of staff have career development plans (including training opportunities and incentive mechanisms)(end of stage I and II, respectively)	▪ As above	▪ An adequate number of staff are interested and capable to advance their careers in conservation ▪ Highly experienced staff remain with the organization
	• Adoption of good practice model for each	▪ Good practice model uses	▪ Good practice model developed from	▪ Plans for six sites, stage II	▪ Acceptance of innovative management

Hierarchy of Objectives	Key Performance Indicators	Baseline	Target	Means of verification	Critical Assumptions/Risks
	category of protected area	demonstration site plans as baseline	demonstration sites used for planning six sites (in stage II)		measures
	• In-country training institutional capacity built	▪ Scout training facility does not exist	▪ Scout training facility established	▪ Independent assessment of training institutions ▪ Number of graduates from training institutions	
	• Gap analysis complete	▪ No gap analysis exists	▪ Existing and new sites prioritized for development; projects in six top priority areas catalyzed (***Trigger for stage 2***)	▪ PAS database established ▪ Gap analysis report	
OUTCOME 4: New protected area management options and partnerships piloted, and replicated through partnerships catalyzed across protected area estate	• Management effectiveness of protected areas	▪ METT scores (demonstration sites) ▪ METT scores (six further sites)	▪ METT scores for demonstration sites increased by 16% (end of stage I; ***Trigger for stage 2***) and 20% (end of stage II) ▪ METT scores for six further sites increased by 16% (end of stage II)	▪ METT scores ▪ All demonstration sites gazetted	▪ Local level stability, law and order are maintained
	• Joint management committees	▪ No joint management committee exists	▪ Joint management committees established for all 4 demonstration sites (end of stage I) and for a total of 10 sites (end of stage II)	▪ Minutes of joint management committee meetings	▪ Acceptance of innovative management measures
	• Management effectiveness of limited harvesting areas	▪ No limited harvesting areas using guidelines	▪ Four limited harvesting areas using agreed regulations (***Trigger for stage 2***)	▪ METT scores	▪ Local level stability, law and order are maintained
OUTCOME 5: Financial sustainability plan developed and demonstrated	• Financial sustainability plan is being implemented	▪ No sustainable financing plan exists	▪ Sustainable financing plan is being implemented	▪ Production of sustainable financing plan	

Hierarchy of Objectives	Key Performance Indicators	Baseline	Target	Means of verification	Critical Assumptions/Risks
	• Tourism is providing recurrent costs for demonstration sites	▪ Government subsidizes protected area system; 0% offset by generated revenues ▪ No lodges within demonstration sites	▪ Revenues will offset 20% (end of stage I) and 60% (end of stage II) ▪ Each demonstration site has appropriate visitor accommodation in place	▪ Annual audit reports, protected area organization	▪ Tourism develops as is hoped
	• Co-financing secured for six further sites (beyond the demonstration sites)	▪ No co-financing for these sites	▪ Incremental costs of projects fully funded	▪ Agreements and contracts with donors	▪ Linkage between protected areas and development understood and acted upon
	• Trust Fund established and capitalization commenced	▪ No Trust Fund exists	▪ Trust Fund established (***Trigger for stage 2***) and capitalized (US$ 1 million from GEF) with further co-financed capitalization (to US$ 20million by end of stage 2)	▪ Trust Fund annual reports	▪ Trust Fund is acceptable sustainable financing mechanism
PROJECT PURPOSE (Second Stage): *Working in an enabled environment, sustainable management of the system of protected areas that have biodiversity, ecosystem and ecological process conservation as a major objective is ensured*	▪				
OUTCOME 1: Systemic capacity for protected area management consolidated	• Area coverage of protected areas in country • Representation of ecosystems within protected area system • Management	▪ Staff skill levels at 30% of potential (end of stage I) ▪ 30% of staff have career	▪ Staff skill levels have risen to 60% of potential (end of stage II) ▪ 70% of staff have career development plans (end of stage II)	▪ System METT score ▪ Site level METT scores ▪ Maps and representation reports	

Hierarchy of Objectives	Key Performance Indicators	Baseline	Target	Means of verification	Critical Assumptions/Risks
	effectiveness across protected area estate	development plans (including training opportunities and incentive mechanisms)(end of stage I) ▪ Good practice model being used for planning six sites	▪ Good practice model adapted from data from 10 sites; planning being carried out across a further 8 sites		
OUTCOME 2: Sustainable financing mechanisms contributing to protected area budgets	• Revenue generated by sustainable financing mechanisms	▪ No budget offset	▪ 60% of budget offset by financing mechanisms at EOP	▪ Audited reports from protected area organization	
	• Income generated by Trust Fund	▪ $ 1 million at beginning of stage II (from GEF)	▪ $ 20 million capitalization (by EOP)	▪ Trust Fund Audit reports	
OUTCOME 3: Replication of good practice model across protected area estate catalyzed	• Management effectiveness in protected areas	▪ At end of first stage, 4 areas operational; six others being developed	▪ At EOP, 10 areas operational; a further eight being developed	▪ METT scores	
OUTCOME 4: Protected areas mainstreamed across all relevant sectors	• Collaborated efforts among different sectors to develop protected areas	▪ (From first stage) Protected areas incorporated into sectoral programs	▪ Protected areas in policy and legislation of all relevant government organizations	▪ Production of sustainable financing plan	

Table 1. Baseline, end of stage 1 and end of project METT scores across assessed protected areas in Ethiopia. Note that not all sites are given end of stage 1 or end-of-project scores; this is primarily because while an increase in the METT scores across the protected area system is expected as capacity is developed, the accelerated improvement will occur with the formation of partnerships in areas. Currently, it is difficult to predict which areas will be the focus of the work; this will be developed in the gaps and prioritization analysis.

Area	Baseline	End of Stage 1	End of Project
Babile Elephant Sanctuary	14		
Awash National Park	33		
Senkele Sanctuary	20		
Alatish (proposed)	11	33	40
Simien Mountains National Park	38	42	48
Nech Sar National Park	29	40	46
Bale Mountains National Park	33	39	48
Omo National Park	33	40	46
Maze	11		
Guassa-Menz Community Area	36	42	46
Yangudi-Rassa National Park	16		
Gambella National Park	24		
Chebera	11		
Average across all above sites	**25**	**32**	**40**

Annex 3c: Incremental Costs

1.1 National Development Objectives

1. The fundamental development objectives of the Federal Democratic Republic of Ethiopia is "to build a free-market economic system in the country which will assist: a) the economy to develop rapidly, b) the country extricate itself from dependence on food aid, and c) poor people to be the main beneficiaries from economic growth". The central thesis of the Sustainable Development and Poverty Reduction Program (SDPRP), which is the development strategy for the country[1], is agricultural and rural-focused. There are four "pillars" to the strategy: i) agricultural development led industrialization (ADLI), ii) justice system and civil service reform, iii) decentralization and empowerment, and iv) capacity building in public and private sectors.

2. Implicit in the principle of sustainable development is the dependence of the rural majority of people in Ethiopia on natural resources. Thus, there is a focus in the development strategy on natural resource protection and conservation (largely water, soil and energy), with the recognition that environmental degradation and poverty are interlinked.

3. However, the linkage is not made to the protected areas of the country. National parks are mentioned only in passing as something requiring "further measures" to address their low level of development facilities for tourism. In contrast, during the district (woreda) level consultation that led to the development of the SDPRP, the protection and conservation of national parks was seen as one means of encouraging the private sector to develop tourism and hence employment.

4. This marginalization of PAs has three important impacts for the incremental costs analysis. First, it is evident that the funding from the government to the biodiversity sector and protected areas in particular has been and is expected in the immediate future to be lower than required for the sustainable and effective management and operation of the protected areas of the country. In addition, the government does not have the financial wherewithal to cover the one-time costs of developing the capacity for the effective management of the protected area system. Second, the multi- and bilateral donors in Ethiopia are largely tied to the development strategy of the country: in this case the SDPRP. As a consequence, co-financing at this preliminary stage for the project may not be comparable to, say, that of other recent GEF BD-1 projects. Finally and leading on from this, the incremental costs will therefore be largely borne by GEF, not only to make the contribution to ensuring the global environmental benefits, but also a catalytic contribution to ensuring national benefits, and so reduced marginalisation.

5. Forging and consolidating the link between development and biodiversity conservation and protected areas in particular is the focus of the first outcome of the project. In this way, the project will assist in overcoming the barriers to biodiversity conservation in the country. The development focus to date has been on things other than protected areas. In this way, the project will cover the costs of ensuring national benefits can be achieved (given that the current budget is insufficient to meet this objective), and, concomitantly, ensure global environmental objectives.

1.2 Global Environment Objectives

6. Ethiopia's biodiversity can be broadly placed into two biogeographical areas: i) the arid and semi-arid areas of the east of the country and ii) the highlands that dominate the majority of the centre and west of the country. The universal value of these areas has recently been recognised by their inclusion into

[1] The SDPRP II is currently under preparation. There are a few key and pertinent differences, with the consideration of tourism and the environment as sectors in and of themselves. However, the SDPRP II will be published after the submission of the project document to GEF.

Conservation International's Biodiversity Hotspots (REF). Over 40% of the Horn of Africa and 51% of the Eastern Afromontane Hotspots fall within the political boundaries of Ethiopia. However, these hotspots, particularly the area that falls within the boundaries of Ethiopia, are among the most threatened in the world. Within Ethiopia, 97.3% and 95% of the natural vegetation in the Ethiopian Highlands and Horn of Africa, respectively, is estimated to have been lost or transformed by human activities. In addition the highlands are the water-tower for the surrounding lowlands, not only within Ethiopia, but also in all the surrounding countries.

7. The degree to which the natural vegetation has been lost, stresses the scale of human activities that threaten biodiversity values. If these pressures continue, then not only will there be a progressive loss of conservation value, but there will also be profound long-term economic costs that stem from loss of watershed function. The protected area system has an important role to play in counteracting these threats, and providing refugia for fauna and flora and also to protect critical ecological processes.

8. The nominal protected area system (including forest priority areas, national parks, wildlife reserves and sanctuaries, and controlled hunting areas) covers an impressive 14% of the country. However, this is neither representative of the ecosystems within the country, and many areas are not correctly sited or are too small to maintain ecological processes. Further, some of the nominal areas no longer have any functional meaning: the biodiversity they were established to protect is long gone.

9. The entry point for this project, therefore, is to develop a protected area system that is sustainably and effectively managed to ensure that the threats to these global environmental assets are counteracted.

1.3 Baseline Scenario

10. The principal threats to biodiversity of Ethiopia stem from i) *de facto* open access of local communities to resources leading to degradation of habitats, ii) conversion of land to agriculture, iii) insecurity or military presence, and iv) invasive species. Diverse strategies need to be implemented to counter or attenuate these threats, including i) defining and legitimizing usufruct rights, ii) broadening and strengthening governance systems, and iv) strengthening the systemic and institutional capacities.

11. The baseline scenario has a wildlife sector of limited capacity, and weak institutional linkages between Federal and State Wildlife Authorities, and the Protected Areas themselves. There is little community empowerment for conservation, and PAs are marginalized from the main developmental focus at all levels of governance.

12. The financing of the Baseline has two components. In the conservation scenario, Ethiopia would finance the protected area system at the level it did for the last financial year (2004/05), with a budget of US$ 177,350 at a federal level and US$ 403,560 across the regions. Thus, the baseline over the project's life (eight years) is expected to be a total of US$ 4,764,500. For the current year (2005/06), the budget at a federal level (including salaries, administrative costs and the management costs of four protected areas) has increased to US$ 192,000[2] per annum (regions have remained the same). The small increase may in part reflect the approval of the new wildlife policy and strategy approved, and with the proclamation in process. The budget is expected to stay at least at the present level, if not increase. This is in a situation characterized by poor capacity and weak overall management effectiveness. In addition support from the Austrian Aid to Amhara (mainly Simien NP) is costed at US$1,200,000.

13. The Sustainable Development Baseline Funding includes support to rural development at community level in villages and districts around Protected Areas. Such development includes support for resource conservation focusing on soil and water resources, improved rural energy and improved agricultural

[2] This is a rounded conversion of the 2005/06 (1998 in the Ethiopian calendar) budget for the Wildlife Conservation Department for central office costs, salaries and the operational costs of four protected areas (Babile, Yangudi-Rassa, Senkelle and Awash). The budget is ETB 1,652,500, which at a rate of US$ 1 = ETB 8.6 rounds to US$ 192,000.

productivity and enhanced food security. Totals are not easy to calculate, but are suggested to be two orders of magnitude greater than funding in the wildlife sector or 10million USD for the project period. This Sustainable Development component is NOT used in subsequent IC analysis.

Incremental activities to generate global benefits

14. The GEF, various bilateral donors, UNDP and NGOs will provide financing to cover the incremental costs of efforts to catalyze the sustainability of an effectively managed and operated protected area system. The immediate purpose of the first stage of the proposed project is: "enabling frameworks and capacities for effectively managing the system of protected areas that have biodiversity conservation as a major objective are strengthened." This, in turn, contributes to the larger goal of: "Ethiopia's biodiversity, ecosystems and ecological processes are effectively safeguarded from human-induced pressures and adequately represented in a sustainable Protected Area System that is contributing significantly to economic development, both locally and nationally." GEF funds will finance the majority of four complementary outcomes, all of which are designed to overcome the barriers to effective management and operation of the protected area system.

15. In the second stage, further definitive co-financing is expected, particularly as the linkage between protected areas and development is consolidated. Currently, there are three development-linked sources of co-financing under discussion: i) co-financing from the World Bank as a component of the watershed management portion of the Blue Nile hydroelectric dam that is currently undergoing a feasibility study; both the World Bank and the feasibility consultant firm have agreed to this in principle; ii) the Sustainable Land Management Program – which, again, is to be funded by the World Bank and also a coalition of bilateral donors – who have requested to see protected areas on the agenda; and iii) the Nile Basin Initiative. The EU has also indicated that it is interested in principle in financing protected area development in the future. In conclusion, substantial co-financing will become available through the course of the first stage and into the second.

16. *Scope*. The GEF Alternative builds on recent government initiatives (policy and institutional reform) to support the conservation of wildlife biodiversity in Ethiopia. The overall focus is to improve the human and institutional capacity to manage biodiversity values in and around Ethiopia's protected areas. This GEF Proposal will enhance the admittedly weak baseline capacity to manage the PAs more effectively, so as to assure the long-term maintenance of their biodiversity, ecological functions, environmental services, and economic benefits.

The system boundary is the institutional setting for Protected Area conservation and management, from Federal government to Regional and District (Woreda) government, and to individual Protected Areas, covering both government and civil society components. The project recognizes the limitations of funding and does not attempt to cover ALL Protected Areas in detail. Some three Protected Areas are selected as pilot areas where co-financing provides on ground demonstration of modern conservation activity. GEF funding supports the overall institutional framework for Protected Areas – providing capacity for the demonstration process.

Incremental Costs. The total expenditure under the Baseline Scenario is estimated to be US$6,411,119 while the total expenditure under the GEF Alternative is estimated to be US$ 33,753,319. The incremental costs under the GEF Alternative are therefore US$ 27,342,200 of which GEF provides US$ 9, and co-finance provides US$ 17,665,000.

GEF funds requested are US$9.0 million to support the activities described above. Other donors, including GOE and long-term NGO partners, bi-lateral donors, and the private sector, will co-finance the balance of

the incremental costs, or US$17.7. These figures are summarized in the table below. The project anticipates additional resources from private sector investments and the introduction of new fiscal instruments.

1.4 Incremental cost matrix (over both stages)

Component	Cost category	Cost (US$)		Domestic benefit	Global benefit
STAGE ONE and TWO: *Enabling frameworks and capacities for managing the system of protected areas that have biodiversity conservation as a major objective will be strengthened*					
OUTCOME 1: Protected areas mainstreamed in the development framework in Ethiopia	*Baseline*	GOE	45,000	- Protected areas remain marginalized	- Considerable negative benefit as significant diversity is lost
	Increment	GOE	15,000	- Enhanced awareness among decision makers within Ethiopia	- Sustainable financing mechanisms secured through the mainstreaming of protected areas leads to greater coverage and financially sustainable protected areas - Protected areas contributing to international watershed value
		GEF	220,000		
	Alternative		280,000		
OUTCOME 2: Appropriate policy, regulatory and governance frameworks in place	*Baseline*	GOE	420,000	- Private sector management of protected areas continues to grow; communities remain marginalized	-
	Increment	GOE	40,000	- Local communities, civil society and the private sector enabled to participate in the planning and management of protected areas	- Strengthened policy, regulatory and governance framework enables partnerships and re-definition of protected areas; it allows for improved management measures
		GEF	350,000		
	Alternative		1,370,000		
OUTCOME 3: Institutional arrangements and capacity for protected area planning and management developed	*Baseline*	GOE	1,940,000	- Existing institutional arrangements for protected area management	- Global values eroded
		Austrian DC	981,499	- Tourism and park strengthened, Simien Mts NP	- Globally important species protected
	Increment	GOE	367,200	- Improved training and incentives for staff improves motivation - Business planning ensures cost-effective and results-driven financing - HIV/AIDS issues mainstreamed	- Strengthened management results in protection of globally important biodiversity, ecosystems and ecological processes - Improved M&E provides basis for adapting and improving protected area management
		CI	5,000		
		GEF	6,370,000		
	Alternative		12,403,699		
OUTCOME 4: New protected area management options and partnerships trialed and further partnerships across protected area estate catalyzed	*Baseline*	GOE	2,897,120	- Protected areas remain nominal	- Protected areas provide only marginal protection of biodiversity, ecosystem and ecological processes
	Increment	GOE	245,000	-	-
		FZS	2,590,000	- Local community participation in and benefit from protected areas Income generation and legitimizing access and user rights for adjacent and resident communities	Innovative management measures tried and adapted; good practice model developed for replication and adoption
		Bale Group	7,320,000		
		African Parks	7,750,000		

		GEF	420,000		Protected areas become cornerstone of protecting globally important biodiversity, ecosystems and ecological processes; and investment in protected areas increases
	Alternative		46,029,518		
OUTCOME 5: Financial sustainability plan developed and demonstrated (for implementation in stage II)	*Baseline*	GOE	127,500	Government continues to subsidize protected area estate at reduced rates	-
	Increment	GOE	10,000	Innovative financial mechanisms replicated to ensure sustainability across PA estate – thus, having impacts on national and local economies	- Innovative sustainable financing mechanisms demonstrated; results disseminated for replication
		GEF	1,640,000		
	Alternative		93,836,536		
TOTAL STAGE 1	*Baseline*		6,411,119		
	Increment	Non-GEF	18,342,200		
		GEF	9,000,000		
		Total	27,342,200		
	Total Cost		33,753,319		
Associated costs			50,000,000*		
STAGE TWO *Consolidation of the enabling frameworks and capacities for managing the system of protected areas that have biodiversity conservation as a major objective and replication of the good practice models across the protected area estate*	*Baseline*	GOE	2,382,250	While capacity has been developed, institutional and financial sustainability have not been achieved	The situation returns to pre-project levels with no sustainability, further emergency interventions needed in future; important biodiversity not secure
	Increment	GOE	338,600	- Significant national and local economic benefits - Institutional, social, financial and environmental sustainability	- Globally important biodiversity and ecological processes sustainably protected.

		GEF	4,000,000		
		World Bank	§		
		EU	§		
		FZS	984,000		
		WCS	600,000		
	Alternative		8,304,850		

*The World Bank is preparing a tourism development project for Ethiopia of at least US$ 50 million; not all of this is for conservation and protected areas. Part of this will be considered as it is described as associated funding. Further co-financing requires confirmation.

Annex 4: Detailed Description of the Ecological Processes, Ecosystems and Biodiversity of Ethiopia

1. The geography of Ethiopia is dominated by highland mesic plateaus surrounded, particularly to the east, by arid and semi-arid lowlands. These geographical features have profound influences on the ecological processes, ecosystems and biodiversity of the region and country.

Ecological Processes

Watersheds

2. The highlands of Ethiopia attract large amounts of orographic rainfall (Gamachu, 1977). As a consequence, the highlands are not only prime areas for rainfed agriculture, but they are also the watershed for the surrounding lowlands. There are seven major river basins: Webe Shebelle, Awash, Omo, Juba (Genale, Web, Welmel) and Blue Nile (Takeze, Baro-Akobo and Abbai) (see Annex 5 for map) in the highlands of Ethiopia that provide water for the people, livestock, wildlife and riparian vegetation in the lowlands. This is the highland-lowland system where resources are not equally distributed but are dynamically interlinked. Thus, the people, livestock, wildlife and riparian vegetation in the lowlands (not only within Ethiopia but extending to all the surrounding arid lowland countries) are dependent on the good management and protection of the watersheds in the highlands.

Other processes of importance for humans

3. Pollination. Certain crops in Ethiopia are, as elsewhere in the world, dependent on pollinators.

4. Sanitation. Interestingly, various components of biodiversity play an important role in human sanitation in Ethiopia. Most noticeable is the role that spotted hyenas play. Indeed, hyenas are largely tolerated throughout Ethiopia – and even in urban areas. Only 15% of households have latrines or refuse disposal pits in urban areas with a much lower proportion in rural areas. Hyenas (and domestic dogs) keep human environments clean by consuming much of the human feces, livestock carcasses and food preparation waste (Atickem, 2003).

5. Carbon sequestration. Forests act as carbon dioxide sinks thereby assisting to reduce atmospheric and global warming CO_2.

6. Bee products. Ethiopia is the third largest exporters of beeswax in the world (only after Mexico and China); it is also the tenth largest producer of honey – not only for export (10% of an estimated 24,000 tonnes of annual honey production) but also as an important supplement in diets and is used for the production of *tej* (the Ethiopian equivalent of mead); and apitherapy is used in a number of tradition medical practices (for surgical dressings, high fever, burning skin, intestinal and gastric ulcers, colds and coughs, bronchial disease and diseases of the mouth and mucus membrane).

Ecosystems

7. The country contains five recognized biomes: Sudanian, Congo-Guinean, Sahel arid zone, Somali-Maasai, and the Afrotropical and montane. These can be further sub-divided depending on the classification. Thus, there are into ten ecosystems: i) Afroalpine and sub-alpine, ii) dry evergreen montane forest and grassland, iii) moist evergreen montane forest, iv) moist evergreen lowland forest, v) Congo-Guinean forest, vi) Acacia woodland and thickets, vii) Acacia-Commiphora woodland, viii) Combretum-Terminalia woodland/savannah, ix) lakes, wetlands & river systems, and x) arid ecosystems (

8. Table **2**). WWF recognizes 12 eco-regions (11 plus the Rift Valley Lakes, which WWF additionally classifies within its Global 200 categories), whereas an updated Pichi-Sermolli analysis indicates that

there are 20 vegetation types (but this does not distinguish their distribution in the country – thus, nor their uniqueness or conservation value).

Table 2. Types of vegetation, ecosystems, WWF ecoregions and CI Hotspots within Ethiopia.

Hotspot	**Biomes**	**Ecosystems**[§]	**WWF ecoregions**	**Pichi-Sermolli**[ϱ]
Horn of Africa	Somali-Maasai	Acacia-Commiphora woodland Arid ecosystems Acacia woodland and thickets Lakes, wetlands & river systems	Somali Acacia-Commiphora bushland and thickets* Ethiopian xeric grassland and shrubland* Rift Valley Lakes*	Subdesert scrub Open xerophilous woodland Xerophilous woodland Grass steppe Various types of savannah Desert Subdesert scrub with succulents Shrub steppe
Ethiopian Highlands (part of Eastern Afromontane Hotspot)	Afrotropical and montane	Afroalpine and sub-alpine dry evergreen montane forest and grassland moist evergreen montane forest lakes, wetlands & river systems	Ethiopian montane forests Ethiopian montane moorlands* Ethiopian montane grasslands*	Afroalpine-subafroalpine Afroalpine Dry evergreen montane forest Montane savannah Forest with Arundinaria bamboo Montane evergreen thicket and scrub Moist evergreen montane forest
	Sudanian Sahel arid zone Congo-Guinean	Moist evergreen lowland forest Congo-Guinean forest* Acacia woodland and thickets Combretum-Terminalia woodland/savannah Lakes, wetlands & river systems	Sudanian savannah* Victoria basin forest-savannah mosaic Northern Acacia-Commiphora bushland and thickets* Sahelian Acacia savannah Saharan flooded grassland* Maasai xeric grasslands and shrubland	Xerophilous woodland Various types of savannah Woodland with Oxytenanthera bamboo Lowland dry evergreen forest Decidous woodland Shrub steppe

[§]Ensermu Kelbessa, pers. comm.; [o]Pichi-Sermolli (1957); * Included in WWF Global 200

9. For the purpose of assessing the degree to which the protected area network is representative of ecosystems, the WWF eco-regions were adapted to accommodate more detailed areas where they had been lumped. The best example of this is the WWF-ecoregion Somali *Acacia-Commiphora* bushland and thickets (see map section). Critically, this 'lumps' the Acacia woodlands and thickets identified by Ensermu Kelbessa (pers. comm.) and the Xerophilous woodland, 'various types of savannah', open xerophilous woodland, grass steppe and subdesert scrub of Pichi-Sermolli (1957). In biodiversity terms, this lumping means that the Ogaden centre of endemism is not separated out. Thus, for the purpose of the project preparation, a further analysis was undertaken to separate out key biodiversity areas such as this.

Table 3. The ecosystems developed by the project preparation team to determine the degree of representation in the protected area network. The table also gives the METT scores for the areas as some measure of the status of the area.

Ecosystem	**If/where represented**	**METT score**
Rift Valley Lakes	Abiatta-Shalla National Park	*
	Nech Sar National Park	29
Somali *Acacia* woodland, bushland and thickets	Nech Sar National Park	29
	Awash National Park	33
	Mago National Park	*
	Yabello Wildlife Sanctuary	*
	Abiatta-Shalla National Park	*
	Yangudi-Rassa National Park	16
Wetlands, lakes and rivers (*partial representation*)	Omo National Park	33
	Awash National Park	33
	Gambella National Park	24
	Bale Mountains National Park	33
Wetlands, lakes and river systems (*not represented*)	Lake Tana, Abbai, Berghe,	-
Somali *Acacia-Commiphora* bushland and thickets (Ogaden centre of endemism)	*Not represented*	-
Ethiopian xeric grassland and shrubland	Yangudi-Rassa National Park	16
Montane dry woodlands and forest	Bale Mountains National Park	33
	Menagesha State Forest	*
Ethiopian montane moist forests	Bale Mountains National Park	33
Ethiopian montane moorlands	Bale Mountains National Park	33
	Simien Mountains National Park	38
Ethiopian montane grasslands	Bale Mountains National Park	33
	Simien Mountains National Park	38
Moist evergreen lowland forest	*Not represented*	-

Congo-Guinean forest	*Not represented*	-
Sudanian savannah (Combretum-Terminalia woodland)	Alatish (proposed)	11
	Gambella National Park	24
Victoria basin forest-savannah mosaic	*Not represented*	-
Northern Acacia-Commiphora bushland and thickets	Omo National Park	33
	Mago National Park	*
	Gambella National Park	24
Sahelian Acacia savannah	*Not represented*	-
Saharan flooded grassland	*Not represented*	-
Maasai xeric grasslands and shrubland	*Not represented*	-

*Currently not assessed

10. In addition to these ecosystems, the country contains unique and outstanding bio-physical features, including the standing lava lake of Erta'Ale, the sulphur formations of Dallol, and the spectacular Rift Valley escarpments of the Simien Mountains and Abune Josef.

Biodiversity

11. This diversity of ecosystems and the geographically isolated highlands and arid lowlands to the east mean that Ethiopia harbors unique and diverse biological diversity. The biogeography of the country is characterized by these two dominant features - first, the ancient, arid areas of the Horn of Africa, with its three centres of endemism one of which, the Ogaden, falls within Ethiopia (Kingdon, 1990). Thus, the arid nature of the Horn means that species abundance is relatively low, but its age (>100 million years) means that endemism is exceptionally high. The highland plateaux are the second biogeographical feature. Although the highlands relatively young in evolutionary terms (they have been habitable only for the past 4.5 million years) and has experienced relative climatic instability over the past 1.5million years (both in contrast to the arid Horn), highland isolation has resulted in significant endemism. Overall, therefore, while the arid Horn and young highlands are relatively impoverished in species number, the levels of endemism are high.

12. Ethiopia has over 6,000 species of vascular plant (with 625 endemic and 669 near-endemic species, and one endemic plant genus), 860 avian species (16 endemic species and two endemic genera), 279 species of mammal (35 endemic species and six endemic genera).

13. There are a number of charismatic flagship species, most notably the gelada (an endemic genus and the world's only grazing primate), the mountain nyala (an Afrotropical tragelaphine antelope endemic to the Afroalpine ecosystem), the Ethiopian wolf (a palaeartic descent from a wolf-like ancestor that crossed into the Ethiopian highlands just over 100,000 years ago), the walia ibex (another palaeartic species confined to areas in the Simien Mountains) and the giant lobelia.

14. The large mammal populations cannot be compared with the wildlife spectacles of Kenya or Tanzania; few countries have mammal population that can. However, there are remnant populations of elephant (an estimated 850, including 150 of *Loxodonta africana orleansi*), lions (an estimated 1,000) and large ungulates. Spotted hyaenas are abundant; indeed, they flourish and are largely tolerated in Ethiopia. There is at least one and a possible further two isolated populations of black rhino.

15. The global biodiversity significance of the area has been recently recognized through Conservation International's Biodiversity Hotspots. The country spans two Hotspots: the Horn of Africa (Friis, 2005)

and the Ethiopian Highlands (Williams *et al.*, 2005) (which is included in the Eastern Afromontane Hotspot). The areas included in the Hotspots covers the majority of the country, including the entire eastern area of Ethiopia below 1,100m ASL and all highland areas above 1,100m ASL (see maps in Annex 5).

Highland biodiversity

16. The Ethiopian Highlands have an estimated 5,200 vascular plant species in an estimated 1,563 genera and 185 families. Of these, 555 species (10.7% of the total) are endemics, with some groups, the majority of them associated with the open grasslands, dry woodlands and heaths, being very diverse (e.g., the Compositae). The genus Senecio is particularly diverse, with 12 of the 24 species being endemic. There is only one endemic, monotypic genus from the area (*Nephrophyllum abyssinicum* which is found on heavily grazed pastures, open ground and on rocky areas on steep slopes between 1,650 and 2,700m); no plant families are endemic (reflecting that the area has been only habitable for the past 4.5 million years).

17. Endemism among vertebrates, particularly at the generic level, is relatively high in this region, especially when one considers the mammals. Thirty-one of the 193 mammal species in the Highlands are endemic to the area. Remarkably, there are six endemic genera of mammals, and four are monotypic (three rodent genera, *Megadendromus*, *Muriculus*, *Nilopegamys*, and one primate genus, *Theropithecus*). The other endemic genera are *Desmomys* and *Stenocephalymys*, both represented by two species each. As with the plants, these are associated with high-altitude, open grasslands and dry woodlands.

18. An estimated 680 species of bird are found in the Highlands and of these, 29 are endemic. Most of the bird species that are endemic to the highlands are distributed widely, but five are restricted to tiny pocket areas in the southern highlands. The latter region is considered an Endemic Bird Area (EBA) in the analysis of Stattersfield et al. (1998), as is the Central Ethiopian Highlands, with four species confined to it. There are four endemic genera, three of which are widespread (*Cyanochen*, *Rougetius*, *Parophasma*) and one of which has a very localised distribution in the south of the area (*Zavattariornis*). The blue-winged goose (*Cyanochen cyanoptera*) is interesting because it seems to have resulted from a chance landfall that has found an amenable environment in the Ethiopian Highlands; the species is closely related to the sheldgeese of the alpine and temperate grasslands of South America. In contrast, the Ethiopian bush-crow (*Zavattariornis stresemanni*, VU), along with the white-tailed swallow (*Hirundo megaensis*, VU), and Prince Ruspoli's turaco (*Tauraco ruspolii*, VU), are thought to be relics caught at the confluence of four major biogeographic zones at the southern tip of the Highlands.

19. The amphibian fauna includes six endemic genera (*Sylvacaecilia*, *Altiphrynoides*, *Spinophrynoides*, *Balebreviceps*, *Ericabatrachus* and *Paracassina*) and a high level of endemism at the species level (30 species, of a total of 71). The reptilian fauna is less interesting, although of the 58 species, 15 are endemic.

20. Only 64 fish species occur in Lake Tana and the other rivers draining the Ethiopian Highlands. Lake Tana is the source of the Blue Nile and, with a surface area of over 3,000km², is the most prominent freshwater feature of the Ethiopian Highlands. Nearly a quarter of fish are endemic to Lake Tana, including a loach *Nemacheilus abyssinicus* and 14 large cyprinids barbs. *Barbus megastoma* is one of the largest of a number of important food fishes and it can grow to more than 80cm, which is unusually large for this genus (Nagelkerke & Sibbing, 1998).

21. The number of species in all taxa has been steadily rising over the past 20 years, meaning that the totals given here are provisional. The Ethiopian Highlands is an area where little systematic collecting has been done, and many areas, particularly the forests of the southwest (where expeditions to date have been limited in duration and poorly equipped), are largely unexplored. As an example, the mountain nyala (*Tragelaphus buxtoni*, EN) was one of the last large mammals to be described on the African continent, in 1910. Furthermore, at least five new species of small mammal have been described from the Ethiopian Highlands in the last 15 years. The final total of both recorded species and endemics will almost certainly

turn out to be much greater. In addition, the recognition of the endemic fauna and flora of Ethiopia requires adequate knowledge of areas of similar ecology and history (e.g., the Ruwenzori Mountains in the Albertine Rift) to be certain that presumptive Ethiopian endemics are absent elsewhere (Yalden *et al.*, 1996).

Biodiversity of the Horn (including areas outside of Ethiopia)

22. Rough estimates indicate that there are about 5,000 species of vascular plants in the Horn of Africa (including areas outside Ethiopia), and of these about 2,750 are endemic. Many of the species in the arid Horn have very restricted areas of distribution. There are nearly 60 endemic genera of vascular plants in the arid Horn (of a total of about 970). Of the 170 families in the region, two are endemic, Barbeyaceae and Dirachmaceae, both woody, Barbeyaceae with a single species, *Barbeya oleoides*, which is relatively widespread in evergreen bushland and dry evergreen forest.

23. A total of 190 mammals in 121 genera are known from the arid Horn and of these 20 are endemic, the most notable ones being a number of antelopes, such as Beira (*Dorcatragus megalotis*), Dibatag (*Ammodorcas clarkei*), Speke's gazelle (*Gazella spekei*), Silver dikdik (*Madoqua piacentinii*), and Salt's dikdik (*Madoqua saltiana*). In addition, there is an endemic subspecies of the Somali wild ass (*E. a. somalicus*). There are five endemic mammal genera in the Horn, all of them monotypic, including the aforementioned Beira and dibatag, and three small mammal genera (*Microdillus*, *Amodillus* and *Pectinator*). Indeed, the arid Horn has been identified as an important area for rodent conservation (Amori & Gippoliti, 2001).

24. There are 802 species of birds recorded from the arid Horn and 31 of these are endemic. One Endemic Bird Areas (EBAs) falls within the hotspot in Ethiopia: the Juba and Webe Shabelle valleys (with four species).

25. There are some 240 reptile species in 82 genera recorded from the Horn, and at least 54 are endemic. Amphibians are poorly represented in the arid Horn, with only 20 species recorded, at least seven of which are endemic. It is roughly estimated that there are around 100 species of freshwater fish in about 48 genera and 30 families in the arid Horn, and of these 10 are endemic.

Some other biodiversity aspects important for humans

26. Medicinal plants. The formal medical sector plays a relatively limited role among rural communities in Ethiopia. Traditional medical practices are widespread and these draw primarily off plants. It has been estimated globally that 90% of rural communities depend on biodiversity for healthcare; this percentage is likely to be higher in Ethiopia.

27. Wild foods. Research has shown that wild foods play a role in food security: people incorporate wild foods into their diet as a buffer during food insecure periods. While research has formally collected data on wild plants that are used during such periods, a proposal to collect data on similar use of animals (across all taxa) is currently being developed. Fish are obviously an important source of food.

28. Biomass fuel. The majority of Ethiopians use biomass for fuel. This primarily comes in the forms of dung, fuelwood or charcoal.

29. Construction material. This comes in the form of timber and stems of trees or bamboo, and grass for thatching. Dung is also used for construction.

30. Social and ceremonial use. Leather and skins from various species are used for clothing (e.g., lesser kudus are used for clothing by Mursi women) and ceremonial use (e.g., leopard and gelada skins in various ceremonies).

Knowledge Gaps

31. The number of species in all taxa recorded in Ethiopia has been steadily rising over the past 20 years, meaning that gaps in knowledge still remain. Ethiopia is a country where little systematic collecting has taken place, and many areas, particularly the forests of the southwest (where expeditions to date have been limited in duration and poorly equipped), are largely unexplored. As an example, the mountain nyala (*Tragelaphus buxtoni*) was one of the last large mammals to be described on the African continent, in 1910. Furthermore, at least five new species of small mammal have been described from the Ethiopian Highlands in the last 15 years. The final total of both recorded species and endemics will almost certainly turn out to be much greater than the numbers presented above. In addition, the recognition of the endemic fauna and flora of Ethiopia requires adequate knowledge of areas of similar ecology and history (e.g., the Ruwenzori Mountains in the Albertine Rift) to be certain that presumptive Ethiopian endemics are absent elsewhere (Yalden *et al.*, 1996).

32. During the project preparation phase, at a technical workshop, participants were asked to list all the research topics that they thought were important. In effect, they were asked to determine the gaps in knowledge in the country. Thereafter, the participants were asked to prioritize the most important gaps in knowledge (see Table below).

33. One of the common themes throughout this project document is that Ethiopia is a country rich in biodiversity, but poor in funding to protect these resources. The only way these gaps in knowledge will be filled in the near future, is to build partnerships between Ethiopian and foreign institutions.

34. A small and participatory biodiversity research committee will be established to oversee the establishment of these partnerships. Through networking and facilitation (with the assistance of foreign delegations in the country and foreign multi- and bilateral and non-governmental organizations), the partnerships will be actively sought, with invitations to selected institutions to work with Ethiopian institutions to fill these gaps in knowledge. Training Ethiopian nationals can be linked to the achievements while filling knowledge gaps.

Table 4. The gaps in knowledge in biodiversity, ecosystems and ecological processes in Ethiopia. Note that this list is not exhaustive. The prioritized topics are shown in bold although they are not ranked in order of priority.

Topic
Determine the effect of (over)grazing on plant and animal communities in arid and semi-arid ecosystems
Inventory of small mammals of Ethiopia
Which development activities are dependent on biodiversity and how can they pay for the services?
Mechanisms for determining sustainable levels of human impact on biological resources in protected areas
Investigation of indigenous knowledge of resoruce use and conservation
Biodiversity surveys in the southwest forests
Vegetation description and maps of Ethiopia (including human transformed areas)
Determine the effect of (over)grazing on plant and animal communities in Afroalpine ecosystem
Surveys of desert and semi-arid ecosystems
Population status (size, distribution, structure) of important species
What are the policy and legal instrucments that are necessary for effective protected areas
How to develop tourism in the development of protected areas
Study to determine the regeneration of key species
Vertebrate surveys in unrepresented areas
Investigate the roles of mammals, birds and other animals in the pollination and dispersal of plants
Inventory of amphibians and reptiles of Ethiopia
Gap analysis in the protected area system
Economic value of envrionmental services and benefits provided by protected area system
The economic value of biodiversity in sustainable livelihoods

Utilization schemes such as sustainble sport hunting, ranching and farming
Impact of sport hunting on nyala populations
Systematic surveys of selected taxonomic groups through key areas
Determine endemism and threats to endemics/evaluating the threat level
Determine the effect of wild animals on plant communities in protected areas
Species composition, population status and seasonal movements of key mammal species in and around protected areas
Cost-benefit analysis for local communities: can they benefit more by allowing protected area to exist?
Cost-benefit analysis of centralization/decentralization of protected area management in Ethiopia
The mechanisms of benefit sharing among local communities
Inventory of vascular plants in each protected area
The importance of biodiversity in rural development
The major threats to wildlife
How can existing social structures among local communities be used for conservation purposes
Determine the effect of elephants on woody vs herbaceous plant distribution and dominance
Diversity and distribution of wild mammals in Ethiopia
Mammal surveys in unrepresented areas
What are the detail opportunity costs for local people in each of the protected areas?
Identification of endemic species
Investigate the effect of invasive species on plant diversity
Investigate the effect of water use on birds in the aquatic ecosystems
Socio-economic dependence of local peoples on natural resources: which resources and when?
Modelling the energy requirements of a developed and populous Ethiopia: where will the fuel come from?
Threats to biodiversity and species
The genetic diversity of key species and isolated populations
Ethnobotanical surveys in all key areas
Study the effect of fire in the quality of vegetation
Where are the areas on which migratory birds are dependent?
Use of indigenous 'drugs' by local peoples: possibility of commercial production of hallucinogenics
The population and distribution of major mammal species
How to resolve conflicts with local communities
The ranging behaviour of large mammals in the lower Omo valley
The current status of threatened wild animals
Investigate the roles of mammals, birds and other animals in the pollination commercial plant species
What are the potential community benefits of protected areas in Ethiopia
How can community-based NRM and protected area management parnerships work?
Identification of rare, endemic and endangered species in selected areas of interest
Protected areas, sustainable livelihoods, land tenure and user-fruct
Attitude of local communities to established PA
What indigenous common property resource management practices used by local communities
Distribution and status of Grevy's zebras in Ethiopia
Determine the threats to regeneration of key species
How to assign sport hunting quotas for different species: a modelling approach.
The role of protected areas in poverty alleviation
Landscape level planning using GIS tools
Geographical relationship between protected areas, poverty, eduction, biodiversity: GIS analysis
Status of amphibians
Skills needed to manage protected areas in Ethiopia
What are the long-term costs of overabstraction of water for irrigation on biodiversity?
Distribution, status and trend in each species
What are the long-term costs of fertilizer pollution on biological diversity?

Economic and social value of resoruces in protected areas to nation at large
Surveys of micro-organisms
The current status of endemic species
Harvest, use and value of wildlife and plants as a coping strategy in stress periods
Long-term effects of using dung as fuel on soil productivity
The impact of refugees on Gambella NP
Which species are used by local communities and are there alternatives to these?
Local people's attitudes towards establishing new protected areas
What are the long-term costs of dam construction on biodiversity?
Evolution and history of protected areas in Ethiopia

Annex 5: Maps (see separate attachment)

Annex 5b: Protected Area Lists for Ethiopia (all categories)

Table 5. National Parks and Wildlife Sanctuaries

Name	Area (Km^2)	Year Established	Ecosystem Category	No. of Species		Major species conserved
				Mammal	Bird	
Abijata-Shalla Lakes N/P	800	1970	*Acacia-Commiphora* woodland,	37	370	Great White Pelicans, Flamingoes, Egyptian geese, Storks, Eagles, herons,
Awash N/P	756	Estabilished in 1966, **gazetted in** 1969	Acacia-Commiphora woodland & Evergreen scrub	76	451	Beisa Oryx, Soemmering's gazelle, Swayne's Hartebeest & Ostrich
Bale Mountains N/P	2400	1980	Afroalpine & sub-afroalpine, Dry evergreen montane forest & Evergreen scrub	67	262	Mountain Nyala, Ethiopian Wolf, Menelik's Bushbuck & Giant Mole Rat.
Gambella N/P	5061	1973	Combretum-Terminalia woodland &savanna, Lowland evergreen and Moist evergreen montane forests,	43	327	White-eared kob, Nile lechwe, Roan antelope, Elephant, Buffalo, Lelwel Hartebeest
Mago N/P	2162	1978	Desert & semi-desert scrubland, Acacia-Commiphora woodland & Combretum-Terminalia woodland and savanna	81	237	Elephant, Buffalo, Grant's gazelle, Greater and Lesser kudus
Omo N/P	4068	1966	Desert & semi-desert scrubland, Acacia-Commiphora woodland & Combretum-Terminalia woodland and savanna	69	300	Eland, Buffalo, Zebra, Waterbuck, Greater and Lesser kudus, Oryx, Grant's gazelle and Topi
Simien Mts. N/P	225	Established in 1966, **gazetted in 1969**	Afroalpine and Sub-afroalpine & Dry evergreen montane forest	33	125	Walia Ibex, Ethiopian wolf & Gelada baboon
Yangudi-Rassa N/P	4731	1976	Desert & semi-desert scrubland, Acacia-Commiphora woodland	36	230	African wild ass & Soemmering gazelle
Babille Elephant Sanctuary	6982	1970	Desert & semi-desert scrubland, Acacia-Commiphora woodland & Evergreen scrub	22	106	African Elephant
Nech Sar National Park	514	1967	Lakes, rift valley escarpment, groundwater forest, hot springs, grasslands	37	188	Swayne's hartebeest, plains zebra, greater kudu, crocodile, hippo, African wild dog.

Senkelle Swayne's Hartebeest Sanctuary	54	1971	Acacia-Commiphora woodland & Evergreen scrub	13	91	Swayne's Hartebeest, Oribi
Yabello Sanctuary	2500	1985	Desert and semi-desert scrubland & Evergreen scrub	43	280	Abyssinian Bush Crow

Table 6. Summary of Information on Wildlife Reserve Areas of Ethiopia

Name	**Area (Km^2)**	**Region**	**Ecosystem**	**Major wild animal species conserved**
Alledeghi	1,832	Oromiya	Desert and semi-desert scrubland & *Acacia-Commiphora* woodland	Oryx, Soemmerring's Gazelle, Greater & Lesser Kudu, Ostrich, etc
Awash west	1781	Oromiya	*Acacia-Commiphora* woodland & Evergreen scrub	Greater and Lesser kudus and Oryx
Bale	1766	Oromiya	Dry evergreen montane forest & Afroalpine and Subafroalpine	Mountain Nyala and Menelik's Bush buck
Chew Bahir	4212	Southern Ethiopia	Desert and semi-desert scrubland	Grevy's Zebra, Grant's gazelle, Gerenuk, Oryx, Lesser kudu
Gewane	2431	Afar	Desert and semi-desert scrubland & *Acacia-Commiphora* woodland	Soemmerring's gazelle, Greater & Lesser kudus, Ostrich
Mille-Serdo	8766	Afar	Desert and semi-desert scrubland & *Acacia-Commiphora* woodland	Soemmerring's gazelle, Greater & Lesser kudus, Ostrich
Shiraro-Kefta	753	Tigray	Combretum-Terminalia woodland & Savanna, Evergreen scrub and *Acacia-Commiphora* woodland	Elephant, Roan antelop, Greater kudu, Oribi
Tama	3269	Southern Ethiopia	*Acacia-Commiphora* woodland & *Combretum-Terminalia* woodland & Savanna	Giraffe, Burchell's Zebra, & Lelwel Hartebeest

Table 7. Summary of Information on Controlled Hunting Areas of Ethiopia

Name	**Area (Km^2)**	**Region**	**Form of hunting**	**Major Trophy Species**
Hanto	480	Oromiya	Concession	Mountain Nyala Menelik's Bush buck
Arbagugu	225	Oromiya	Concession	Mountain Nyala Menelik's Bush buck
Munessa Kuke	111	Oromiya	Concession	Mountain Nyala Menelik's Bush buck

Ababasheba Demero	210	Oromiya	Concession	Mountain Nyala Menelik's Bush buck Giant Forest Hog
Besmena Odobulu	350	Oromiya	Concession	Mountain Nyala Menelik's Bush buck Giant Forest Hog
Kebena	300	Afar	Concession	Beisa Oryx Soemmerring's Gazelle
Blen hertele	1095		Concession	Gerenuk Beisa Oryx Soemmering's Gazelle
Telalk Dewe	150	Afar	Concession	Beisa Oryz Soemmering's Gazelle Lesser Kudu
Murulle	1111	Souther Peoples'	Concession	Topi Buffalo Greater kudu Grants Gazelle
Woleshet Sala	500	Southern people'	Concession	Buffalo Grants Gazelle
Dindin	110	Southern people's	Concession	Mountain Nyal Menelik's Bush Buck
Gara Gumbi	n.a	Afar	Open	Salts Dik dik Lesser Kudu
Gara Miti	n.a	Oromiya	Open	Klipspringer Dik dik
Debrelibanos	n.a	Oromiya	Open	Gelada Baboon
Aluto Kulito	n.a	Oromiya	Open	Greater Kudu
Jibat	n.a	Oromiya	Open	Giant Forest hog Bush pig Menelik's Bush buck Colobus Monkey
Koka	n.a	Oromiya	Open	Bohor Reed buck
Gelial Dura	n.a	Afar		Warthog Waterbuck Kid dik

				Bohor Common Buch buck

Table 8. National Forest Priority Areas of Ethiopia (NFPAs) by type and coverage (Hectares) (Source: State of Environment Report For Ethiopia, 2003 – EPA).

Name of area		High Forest (ha)		Man-made forest (ha)	Other forest (ha)	Total area (ha)
		Slightly Disturbed	Heavily Disturbed			
1	Arbagugu	n.a	63000	1600	13500	21400
2	Chilalo Galama	n.a	n.a	1400	20600	22000
3	Munesa Shashemne	7000	10200	6800	74200	98200
4	Neshe-Batu Adaba Dodola	n.a	10000	1700	28300	40000
5	Logo	5000	16400	900	36700	59000
6	Goro Bele	9800	50000	200	40000	10000
7	Harena Kokosa	20000	70000	n.a	92000	182000
8	Kubayo	5000	17900	300	55200	78400
9	Mena-Angetu	20000	50000	200	119800	190000
10	Bulki Malokoza	n.a	n.a	500	10500	11000
11	Gidola Gamba	15000	5000	n.a	10000	30000
12	Gidole Gamba	n.a	n.a	1200	14800	16000
13	Guwanga Kahitas	n.a	32000	2800	21700	56500
14	Sekela Mariam	n.a	n.a	2000	8000	10000
15	Butiji Melkajebdu	n.a	n.a	3800	41400	45200
16	Dindin Arbagugu	n.a	n.a	5900	57600	66800
17	Gara Muleta	n.a	2600	2000	2400	7000
18	Jalo Muktare	n.a	2500	4100	14700	21300
19	Iaro Gursum	n.a	1500	4500	46300	52300
20	Abobo Gog	150000	45000	100	22900	218000
21	Gebre Dima	50000	82000	n.a	33000	165000
22	Godere	40000	100000	500	19500	160000
23	Sele Anderacha	100000	115000	700	9300	225000
24	Sibo Tale Kobo	28000	50000	1900	20100	100000
25	Sigemo Geba	67700	190000	2300	20000	280000
26	Yayu	20000	100000	300	29700	150000
27	Yeki	10000	100000	500	11500	122000

28	Wangus	329900	n.a	n.a	85100	415000
29	Mesenigo	292350	n.a	650	32000	325000
30	Abelti Gibe	n.a	4700	1300	4000	10000
31	Babiya Fola	n.a	45000	900	28400	74300
32	Belate Gera	76500	35200	1100	35700	148500
33	Bonga	7000	10000	2100	142300	161400
34	Gura Farda	80000	35100	800	224100	340000
35	Tiro Boter Becho	16000	23300	2300	44200	85800
36	Butajira	n.a	n.a	1600	13400	15000
37	Chilimo Gaji	n.a	2000	800	23200	26000
38	Gedo	2000	3000	n.a	5000	10000
39	Jibate Muti Jegenfo	n.a	5000	n.a	33500	38500
40	Menagesha Suba	n.a	3600	1300	4900	9800
41	Wof Washa	n.a	2000	4200	2700	8900
42	Yere Diregebrecha Zukala	300	3800	1700	3800	9600
43	AnderaraWadera	n.a	13000	3700	89900	106600
44	Bore Asferara	n.a	33000	1400	182900	217300
45	Megada	5000	10000	1300	4500	20800
46	Negele	n.a	1200	300	16300	17800
47	Yabelo Arero	n.a	8000	150	41750	49900
48	Dasa	n.a	n.a	n.a	20000	20000
49	Chato Sengi Dengeb	n.a	5000	60	39800	44860
50	Gergeda	20000	20000	1000	96400	137400
51	Gidame	n.a	10000	n.a	7000	17000
52	Jurgo Wato	n.a	15000	200	4700	19900
53	Komto Waja Tsega	n.a	1000	1200	6900	9100
54	Konchi	10000	5000	n.a	8000	23000
55	Linche dali Gewe	n.a	15000	n.a	25000	40000
56	Dekoro	n.a	2300	n.a	3000	5300
57	Guwobirda Girakaso	n.a	11500	2200	12300	26000
58	Yegof Erike	n.a	2800	8400	6800	18000
	Total	1,386,550	1,385,200	84860	1,921,250	4,777,860

Annex 6: Detailed Capacity Analysis of the Protected Areas Sector

[Note – this is based on a collaborative report by regional and national consultant expertise in the PDF-B process. This is available as a full report.]

Political and legal framework

1. It is normal procedure to develop national sectoral policies before enacting the required legislation. The legislation is supposed to provide legal basis for implementing sectoral policies. Once institutions are set up, then the organizational policies, regulations are developed to guide implementation. The process has proceeded in reverse order in Ethiopia.

Policy analysis

2. Policy analysis was focused on two aspects – the soundness of the policy framework and how it enables the institutions to implement it for protected area management.

3. There are several policies and strategies for biodiversity conservation. These include the Conservation Strategy of Ethiopia (CSE), 1997 (within which is the Federal Policy on Natural Resources and the Environment); the National Policy on Biodiversity Conservation and Research, 1990, the Ethiopian Forestry Action Program, 1994, and the recent Wildlife Policy.

4. The Federal Policy on Natural Resources and the Environment is Ethiopia's umbrella policy on environment management. Its overall goal is to improve the health and quality of life and promote sustainable socio-economic development through sound management and use of resources and the environment. Some of the policy objectives that relate to biodiversity conservation include:

- Ensuring essential ecological processes and life support systems are sustained, biodiversity preserved and renewable natural resources used in a way that maintains their regenerative capabilities.
- Incorporating full economic, social and environmental costs and benefits of natural resource development into planning, implementation and accounting processes.
- Ensuring people's participation in environment management activities.
- Raising public awareness and understanding of the essential linkages between environment and development.
- Conserving, sustainably managing and supporting Ethiopia's rich and diverse cultural heritage.

5. The umbrella policy on environment does give some level of importance to protected area management as a tool for conservation of genetic, species and ecosystem biodiversity. However, it falls short in identifying which agency is responsible for protected area management.

6. The wildlife policy provides for protected area management and so does the draft wildlife proclamation which recognizes "wildlife conservation areas". Both of these instruments are also rather silent on the institution that will be responsible for protected area management. The section on implementation, within the wildlife policy, only refers to development of regional policies and infrastructure. The draft proclamation does identify the "powers and duties of the ministry" but does not provide for establishment of an autonomous agency for protected area management.

7. The wildlife policy also has some inconsistencies and although it is still very new, it needs to be reviewed not only to remove the inconsistencies but make it stronger on the general principles of conservation and development.

8. The National Policy on Biodiversity Conservation and Research recognizes the economic importance of Ethiopia's genetic resources, whether domestic or wild. Its basic aim is to ensure in-situ and ex-situ conservation of Ethiopia's biodiversity through research, collaborative management, community participation, etc.

9. Although there is no formal policy document on forestry, the Ethiopian Forestry Action Program (EFAP) does have provisions for the establishment of a single conservation agency responsible for coordinating management of protected areas. It proposes the setting aside of part of the remaining natural forest estate for protection and conservation purposes.

Legislative instruments

10. There are a number of policy documents and legal instruments that guide Ethiopia's biodiversity conservation efforts in general and protected area management in particular.

11. At the international level, the Federal Democratic Republic of Ethiopia (FDRE) is signatory to a number of conventions including the Convention on Biological Diversity (CBD), the UN Framework Convention for Climate Change, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the United Nations Convention to Combat Desertification, etc. It is in the process of ratifying the Ramsar Convention and the Kyoto Agreement.

12. The Constitution of the FDRE is the overarching legislation that guides government's policy. It was enacted in 1995 and has several articles relating to management of natural resources and the environment in general but does not specifically refer to biodiversity conservation or protected area management.

13. The Forest and Wildlife Conservation and Development Proclamation No. 192/1980 created the Forest and Wildlife Conservation and Development Authority out of the former Wildlife Conservation Organization and the State Forest Development Agency. It repealed a number of the previous proclamations dealing with wildlife and forest management. It gave the state ownership of "state forests" which could be deemed as protection to these areas.

14. In 1993 proclamation No. 41 created the Ministry of Natural Resources and Environment Protection charged with management of wildlife and protected areas of Ethiopia. This Ministry ceased to exist in 1995 with Proclamation No. 4/1995 which repealed the former and transferred the Ministry's rights and obligations to the Ministry of Agriculture (wildlife and forestry management), the Ministry of Water Resources and the Environmental Protection Authority - EPA (environmental protection). The EPA is an autonomous institution with powers and responsibilities as defined in Proclamation No. 9/1995 and later in No. 295/2002.

15. Biodiversity conservation in general is taken care of by Proclamation No. 120/1998 that established the Institute of Biodiversity and Research as an autonomous body. Wildlife management is to be guided by the Wildlife Proclamation[3] which is still in draft form. However, this proclamation does not give enough guidance for development of the wildlife sector using current principles of collaboration and sustainable development.

16. Clarity in the legal framework although important is rather lacking. It is not just a matter of having sufficient environmental laws but also ensuring that they compliment each other and the protected area legislation fits well within the broader national legal framework. Protected areas function within the

[3] This has been approved by the Council of Ministers but has not yet passed through Parliament.

constraints dictated by the existing policy framework, inhibiting or overlapping policies can present significant barriers to protected area management. In addition many of the legislative instruments are thought to be obsolete as far as protected area management is concerned and the level of awareness and enforcement remains rather low.

Institutional setup and mandates

17. Sustainable protected area management is an area that requires many different disciplines, professionals and practitioners who handle different management aspects at different levels. There is thus need for collaboration and co-operation to ensure that all these efforts contribute effectively to the same management objectives. In establishing protected area management institutions, the biophysical, protected area-level science and the policy-level legislation is usually taken into account. However, the institutional structure and behavior of organizations at all levels tends to be poorly understood and therefore not well developed. This is the situation that pertains for Ethiopia.

18. Constitutionally, the Ethiopia government is organized at two levels. Having adopted the policy of decentralization, there is the Federal Government that oversees the administration of the whole country and there are the regional governments with their own administrative structures. To a certain extent, the administrative structures at the regional level mirror those at the federal level.

19. Management of the protected areas is under the Ministry of Agriculture and Rural Development (MoARD) in general. Specifically, wildlife protected areas are under the WCD while "forest priority areas" are under that of Forest, Soils and Land Use.

20. There have been a lot of changes in the institutional set-up for the environment and natural resources sector. The former organization responsible for wildlife management, Ethiopian Wildlife Conservation Organization (EWCO), went under ***nine*** different institutions since its establishment! This kind of continuous change does not give an environment conducive for institutional strengthening and capacity building.

Mandates

21. The major problems facing protected areas need to be addressed by institutions at the appropriate scale, within clearly defined roles and responsibilities. The first step in determining appropriate management responses is to clearly identify the problem being addressed. According to Caldecott (1997), when the main threat to a protected area arises from cumulative overuse by too many people to meet their day-to-day subsistence needs, local regulation and social control may be required, along with investments in improved agricultural practices or alternative livelihoods.

22. However, government conservation institutions have taken the exclusive mandate to manage protected areas even though they lack adequate human, financial, and technical resource capacities to carry out this mandate effectively. An over-emphasis on centralized protected area management over the years, under these circumstances has lead to undermined institutional mechanisms at local scales, e.g. traditional approaches to conservation based on local knowledge. To counter this, the FDRE has implemented its decentralization policy. Too much decentralization has led to passing over responsibility to institutions that have no capability to manage the protected areas effectively. This is not an either-or situation of decentralization versus centralization, but rather requires creation of new protected area governance systems with clearly allocated responsibilities at different scales in a balanced manner.

23. Although involving multiple stakeholders in protected area management has its many advantages, there is the key challenge of specifying appropriate non-overlapping functional roles. Although all agencies seem clear about what their mandate regarding protected area management is, there is lack of clarity as to where this mandate stops and that of other agencies begins (see Table 9). All agencies are aware that there is a lot of duplication and therefore a need to streamline the institutional set up.

24. Another problem encountered, which has led to conflict has stemmed from some of the agencies going beyond their mandate e.g. the EPA has undertaken protected area assessment and demarcation, piloting community conservation practices, etc. at the regional level. Their excuse is the lack of capacity within the agencies responsible for this. However, the approach to solving this would have been to make effort to build the required capacity of the relevant agency instead.

25. Many of the institutions are not aware of the programs of the other institutions in the same sector, showing lack of collaboration and absence of networking. There is a lot of overlap and some "territorial" behavior. Examples of areas of duplication include:

- Biodiversity conservation, the mandate of IBC, encompasses wildlife and forest management
- WCD claims conservation mandate in forest areas that have wildlife "because the forest simply provides habitat for wildlife"
- Both IBC and WCD claim the in-situ conservation mandate and technical back-stopping at regional level
- Regulating access to genetic resources handled by IBC, WCD, FD
- EPA undertaking some protected area related activities e.g. protected area assessment and demarcation, piloting community conservation initiatives

Table 9. The mandates of the concerned biodiversity conservation and protected area management organizations at a federal level

Mandates	Ministry of Agriculture			Prime Minister's Office
Supervisory Institution	• Draft laws on the conservation and utilisation of forest and wildlife resources; follow up and coordinate their implementation • Cause the undertaking of studies pertaining to protection of plant genetic resources • Ensure conducting of quarantine controls on plants, seeds, animals and animal products brought into or taken out of the country			The PM is government's chief executive according to the Ethiopia's Constitution cha with: • Overall supervision, follow up and ensurin implementation of laws, policies, directive adopted by the House of People's Representatives • Leading and coordinating activities of the Council of Ministers • Supervising conduct and efficiency of the Federal Administration and taking correct measures
	Wildlife Conservation Department	**Forestry, Land use & Soil Conservation Department**	**Institute for Biodiversity Conservation**	**Environmental Protection Authorit**
Mandates as legally stated	*Government departments* • Ensure proper protection development rational utilisation and management of forest and wildlife resources of the country. • Establish and administer national parks, game reserves and other conservation areas. • Agitate the broad masses to have better and greater participation in the development, protection, rational utilisation and management of forest and wildlife.		*Autonomous agency* • ensure appropriate conservation and utilisation of the country's biodiversity • has power and duties related to the conservation, research and utilisation of biodiversity including maintaining and developing international relations with bilateral and multilateral bodies having the potential to providing technical assistance for the support of biodiversity conservation and development. • has the responsibility and duty to implement international conventions, agreements and obligations on biodiversity to which Ethiopia is a party	*Autonomous agency* • Formulating policies, strategies, laws and standards that foster social and economic development in a manner that enhances hu welfare and sustainable environment. • Ensuring effectiveness of implementation process (monitor, enforce implementation environmental instruments).
Mandates as understood by the agencies	• Regulatory role as far as management of wildlife in regional PAs is concerned • Wildlife management in PAs and outside • Management of wildlife habitat	• Forest development and protection, soil conservation and fertility, land use planning and land administration.	• Conservation and sustainable utilisation of genetic resources • Access and benefit sharing and associated traditional knowledge • Conservation research on genetic resources • Ecosystem management.	• Spearheading actions designed for environ protection for sustainable development • ensuring synergistic approach to biodivers conservation • Developing regulatory systems and ensuri implementation through monitoring, educa and provision of incentives

Functions as understood by the agency	• Technical services to the regions e.g. in assessments, demarcating, management planning • Training the regional experts	• Preparation of guidelines, policies, strategies – provide to the regions who implement them • Develop projects and channel to the regions • Supervise projects especially those funded from government capital budget • Assist in preparation of management plans for the forest areas • Inventory / survey, analysis and mapping of the forest resource	• initiate policy and legislative proposals, enforce and follow up implementation • biodiversity surveys - diversity and distribution • Ex-situ and in-situ conservation • identifying areas threatened with genetic erosion and ensure restoration • implementing international treaties on biodiversity to which Ethiopia is party • registering germplasm of Ethiopian origin • `controlling / regulating collection, utilisation, dispatch, import and export of biological specimen	• Regulatory • Policy, Standards, Regulations • Technical backstopping for the regions • Focal point for CCD • Mainstreaming of environment concerns i sectoral actions • Ensure each sector has an environment un (legal requirement)

Participative management

26. Protected area management in Ethiopia, as indeed in most of Africa has been based on models that exclude local communities and perceive their concerns as incompatible with conservation. The situation is beginning to change with the realization that effective protected area management is not possible without the collaboration of the communities living within and around the protected areas. Some effort has been put to initiate the process that will lead to communities participating in decision making as far as protected area management is concerned. This is just the beginning and a lot still has to be done. The policy framework at the national level is in place. This needs to be developed further into detailed implementable organizational policies once the institutional framework is agreed upon.

The role of NGOs and bilateral organizations

27. Over the last 10 or so years, NGOs and bilateral organizations have increasingly played a critical role in protected area management across Africa. There are a number of NGOs and bilateral organizations involved in activities related to protected area management in Ethiopia. These include the Frankfurt Zoological Society, University of Oxford, CARE Ethiopia, the German Technical Cooperation (GTZ) and the Austrian Development Cooperation. Some of these are involved in community conservation while others are working on ecosystem conservation in general or specifically on conservation of endangered species. Some of them are trying to increase the conservation area for biodiversity through creating community awareness and skills building or contributing to the process of formalizing the protected area system of Ethiopia.

28. The self given mandate of the NGOs seems to be mainly centered on providing an interface with the local communities. This is done through their roles in promoting community level resource management. In addition to this, the NGOs should be encouraged to get involved in other areas like promoting sustainable agriculture, soil and water conservation and community based ecotourism services.

29. Basing on experience from other countries within Africa, NGOs can create partnerships with wildlife conservation agencies and are most effective in the following areas:

- community based conservation
- community based tourism development
- research and ecological monitoring
- ex-situ conservation especially of big mammals
- building capacity for protected area management through provision of technical assistance / training / skills building, provision of financial resources
- trans-boundary protected area management

Other agencies & cross-sectoral issues

30. Other relevant agencies, but which were not reviewed in depth include the **Ministry of Regional Affairs** (currently handles mostly security related issues and capacity building for the new regions. This ministry should provide the linkage between the federal and the regional governments); the **Tourism Commission** charged with formulation of tourism polices and strategies, tourism promotion / publicity and encouraging development of tourist facilities; the **Science and Technology Commission**'s mandate lies in the area of research promotion in science and technology – formulating policies and plans, carrying

out popularization of research and results, providing incentives for contribution to development of science and technology – the commission also hosts the 'Man and the Biosphere' Program, which is related to protected area management; and the **Authority for Research and Cultural Heritage Conservation** which is mandated to conserve cultural heritage including implementation of relevant international agreements ratified by the country.

Strengths

31. The heads of the institutions that were reviewed have a clear understanding of biodiversity conservation in general.

32. There is an understanding of what the problem with the institutional set-up is and what needs to be done to correct this.

33. There is acceptance of the weakness in functioning as a sector, which gives a good basis for any desired changes.

34. The will to promote collaboration and develop partnerships is there, at least on the surface

35. Although there are some gaps, the policy and legislative framework is in place

36. The umbrella organization for environment management is in place and seems to be functioning relatively well.

37. There is the realization that communities have to be brought on board and the efforts to do so have been initiated.

Major Issues Regarding the Institutional Framework

38. The major issues in terms of the legislative and institutional framework for protected area management in Ethiopia include:

39. The ad hoc development of policies related to biodiversity conservation that now calls for integration and harmonization of the policy framework.

40. Weak institution for protected area management – lack the required and appropriate manpower to function effectively.

41. Inadequate financial resources to implement the policies and inappropriate use of what financial resources that there are.

42. Departments charged with protected area management (wildlife and forestry management) not well facilitated to perform their functions.

43. Inadequate information and decision-making tools to support comprehensive policy development followed by planning and development control.

44. A significant degree of overlap in institutional responsibilities, despite inadequate institutional capacity.

45. Inadequate enforcement capability; no linkages with law enforcement authorities

46. No functional linkages amongst the institutions whose mandates are protected area related and lack clear strategy for sharing available expertise

47. The linkage between the Federal and Regional Structures is rather weak – no one being quite sure how this linkage is supposed to work out.

Current Capacity for protected area Management

48. Capacity is normally taken to refer to the ability of an individual or an organization to identify problems and be able to manage them. It does not stop at the mere existence of potential. Capacity is used to manage change towards desired outcomes. It can be looked at from three different levels – that of the individual (skills), that of the institution (operating systems) and that of the system as contained within policies and legislation.

49. This was not an in-depth review covering all the three levels above but rather focused on policy / legislation and operating systems. It was decided to focus at this level because it would not serve much purpose to do an individual capacity analysis at this stage. This would come later once the institutional changes are complete and a staffing and training needs assessment is done. To analyze institutional capacity called for looking at whether the existing institutions can provide the means of delivering the required services as dictated by the principles of biodiversity conservation and as established by policy and legislation. The interests of the various institutions and their capabilities in effective protected area management were reviewed in the areas highlighted below.

Understanding of the policy framework

50. There is a general understanding (albeit state-centric) of the governance and policy framework, especially at the federal level and good knowledge of the strength and current weaknesses. However, this knowledge is not well translated into action. The level of implementation of the existing policies is low, despite the fact that some good strategy documents e.g. the CSE, the EFAP, the National Biodiversity Strategy and Action Plan (NBSAP), do exist, while acknowledging that others are weak (e.g., the Wildlife policy).

Strategic and management planning

51. A lot of planning has been done at the federal level, encompassing environment protection in general and natural resources management (Conservation Strategy for Ethiopia). In addition to this, there has been effort put into planning for the forestry sector – the Ethiopia Forestry Action Plan. Although the former has been implemented to a certain extent, all the good intentions of the latter remain just that. At organizational level, there is lack of strategic, management and operational planning capacity. Some effort has gone towards protected area management planning but production of the very few plans existing was not participatory and neither did it take into considerations the current principles of protected area management such as financial sustainability, contribution to economic development, community participation, etc.

Monitoring and Evaluation (M&E)

52. M&E is one of the weakest areas for most of the institutions related to protected area management. The protected area institutions do not have a functional M&E system. Some of the strategy documents mentioned above have provisions for establishing this system but no effort has been expended in this direction. The hindrance here is the lack of skills for developing this kind of system that integrates all relevant sectors; once the skills were in place, whether financial resources were limiting could be analyzed. These institutions also do not seem to consider this aspect of management as a priority.

53. Many of the protected areas are threatened with degradation and are in danger of losing the values for which they were established. Assessment of management effectiveness has not been carried out. This sort of analysis would assist in establishing the exact areas for strengthening at that level.

54. The major issue here is to ensure that as an enhanced awareness develops of the benefits of evaluation, so too does the willingness to use such systems and capacity to do so.

Information management and communication

55. Information management relates to the collection, analysis, storage and presentation / interpretation of information. Sound decisions are based on solid, up-to-date information. Given the limited amount of resources available for conservation, it is critical to ensure that the right decisions are made, for which it is crucial to have the right information. Therefore, protected area management cannot be successful in the absence of relevant, accurate and up-to-date information. This information must be accessible to all who need to make protected area management decisions including the public sector, private sector, civil society, communities and individuals. The core skill required here is the ability to acquire and process information in such a way as to make it useable for decision making.

56. Information needs vary with different situations, but generally, the most important information required is that which enables decision makers to understand the protected area assets and the options for their conservation and management. These require a minimum level of knowledge of the biodiversity resources themselves, the threats to their conservation and the causes of those threats. Availability of such information enables making of plans for protected area management activities and establishing priorities for limited resource allocation.

57. Although some considerable information exists, there is hardly any effort towards management of information and ensuring a system for communication for Ethiopia's protected area system. A number of libraries and a few websites do exist but do not have much of the information that would be required to inform management decision making or to be used for public awareness. There is no overall information management system for protected area management. Yet this is an important area if the need to have a variety of stakeholders involved in protected area management is to be achieved. There is need to expose the stakeholders and the general public to protected area management information thus a need for an information and communication strategy.

Quantifying resource values

58. We need to quantify the values of protected areas so as to increase political, financial and community support for these areas. There is not much work that has gone into this area and yet quantifying the values of Ethiopia's protected areas can demonstrate that they are productive assets in the economy; build support for protected area management from policymakers and the public; provide a stronger rationale for expanding the protected areas system; integrate them into national economic planning and support requests for funding from government and donors.

Partnership development - institutional networking and collaboration

59. To a great extent, development of partnerships has been ignored both within the sector and across the various government sectors. This lack of partnership and coordination amongst the stakeholders is a key weakness in Ethiopia's protected area management. Some limited work has gone into collaboration with Non-Government Organization (NGO) and there exists a protected area management agreement with the private sector for one of the protected areas.

60. Within the sector itself, the various institutions are working in complete ignorance of each others' programs. To quote one of the heads of the key agencies, "we don't like each other, so we do not meet nor talk to one another". The key partners that need to be brought to work together include the NGO, communities, private sector (including those that are tourism related), regional administration and government institutions involved in environment and natural resources management.

61. Among these partnerships, that with local communities is critical and this has already been recognized through the existing policy on wildlife management and the CSE. Community participation may be attained through two ways: - having an informed community; and the community being organized. The strategy here should not only focus in community participation in planning and protected

area management but also on ensuring that protected area management and wildlife conservation do contribute to rural livelihood development.

62. Guidance for this coordination and forging of partnerships should be spelt out in a "partnership development policy" once the institutional set up for protected area management has been decided upon. This policy can draw on experiences from other countries e.g. Uganda and South Africa. Ethiopia would therefore do well to forge strategic relationships with other countries that have gone through similar experiences within the region.

Education and Training

63. Ethiopia still lacks an education policy that adequately caters for integration of environment management in general and protected area management specifically into the formal education sector. Although there are academic programs targeting forestry, and of recent wildlife management, there has not been enough effort towards developing capacity to impart additional skills in protected area management such as management planning, partnership development, monitoring and evaluation, law enforcement, etc.

Resource mobilization strategies

64. The capacity for mobilization of resources does exist in a number of institutions e.g. the EPA and the IBC, but is on the whole lacking. The EPA and the IBC seem to have the trust of a number of NGO and donor agencies and have no critical resource access problems. Actually, the EPA seems to be good at resource mobilization and could be used to strengthen other institutions in this regard. They are willing to assist in this aspect. The Wildlife Conservation and the Soil, Land use and Forestry Departments do not seem capable of mobilizing resources for protected area management. This limitation stems mainly from government policy restricting financial autonomy of government departments rather than from lack of the capability to do so.

Tourism Development

65. Tourism has become a major economic activity across the globe. Development of tourism, if not well managed can lead to conflict with biodiversity conservation. The apparent conflict between tourism development and biodiversity conservation is not insurmountable. It can be solved by considering protected areas not only as wilderness areas set aside for conservation purposes, but also as ecosystems composed of several interacting elements and actors which must live in harmony.

66. Ethiopia's tourism industry is mainly based on the rich Ethiopian culture. There is need to diversify into nature based tourism in order for protected area management to contribute to economic development. Sustainable nature based tourism can generate jobs and revenues, thus providing an incentive for protected area conservation. This kind of tourism can also raise public awareness on the many products and services provided by protected areas and the importance of traditional knowledge and practices.

67. Before Ethiopia can tap into this kind of tourism, there is need to develop the required capacity to manage it so as to offer quality service while avoiding degradation of the protected area system. There is need for training and infrastructure development both within and outside of the protected area system. This can be done in collaboration with the private sector and the communities surrounding the protected areas.

Proposals Based on the Analysis

68. From the above analysis, it can be concluded that the key factors for successful protected area management in Ethiopia revolve around policy review, institutional strengthening, covering a reorganization of the current set up and building the capacity for protected area management.

Policy Development

69. In consideration of the policy analysis above, it is clear that the policy revisions required should aim at improving the system that underpins organizational and individual performance that translates into effective protected area management. The overall objective of the policy for wildlife is to create an enabling environment for sustainable protection and development of wildlife and their habitat so as to contribute to the country's economic development. This points to the need to achieve sound sustainable development by reconciling economic development and conservation of wildlife resources.

Harmonization of policies

70. Ethiopia's policies relating to environment and natural resources management must be harmonized. There is need to formulate an overall biodiversity conservation policy that brings together both ex-situ and in-situ conservation strategies, wildlife and forestry management and conservation both inside and outside protected areas.

71. The changes in policy and thus legislation should focus on economic development through improvement in the quality of human life, restoring the equilibrium of ecosystems and maintain ecological processes and life support systems. The policy strategy should also aim at efficient utilization of the limited resources and achieving a sustainable level of resource consumption.

72. This would be achieved partly by establishing a policy / legislative framework that caters for effective coordination in biodiversity conservation, establishment of workable partnerships and involvement of the primary resource "owners" and users – the local community. The legislation should establish a corporate body with perpetual succession, a common seal, which in its own name is capable of acquiring property and holding property, suing and being sued, with financial autonomy and decision making powers (Uganda Wildlife Statute, 1996).

73. This calls for dialogue across the various sectors relating to or impacting on biodiversity conservation and protected area management. The policy dialogue would be centered on the following key areas:

- Improving the institutional framework since the mechanisms to coordinate activities between government institutions at the operational levels is missing. The need to consolidate the country's PA under one government agency cannot be over emphasized.
- Strengthening the legislative framework. Despite the many legislative instruments on biodiversity and wildlife conservation, the legislation remains outdated and is insufficient to address the current and potential threats to the country's ecological resources. There is need to draft and enact a new all encompassing legislation.
- Controlling decentralization of protected area management. Although the policy of decentralization has been adopted, there is need for it to be reviewed to ensure that protected areas are managed at appropriate levels depending on their status or level of importance.
- Fostering Participatory protected area management. There is need to cater for delegation of protected area management responsibility to the private sector, NGOs, communities, etc. This can be done on a pilot basis. The current adverse relationship between protected area management and the communities living in and surrounding protected areas poses a significant threat to wildlife conservation and protected area management. Collaborative management must not only be catered for but also be seen to be done. Policy should be developed to cover active involvement of the community, benefits

sharing, resource access, etc. Without this, effective protection of the protected areas will not be possible over the medium to long term.

- Financing protected area management / Wildlife Protection. Revenues generated by PA should be ploughed back for management purposes and more funding guaranteed by government through establishment of protected area fund.

74. In order to achieve the goal of sustainable development, the policy on environment and natural resources management must pursue broad objectives for protected area management that are complementary and mutually-reinforcing:

- Maintain the diversity of ecosystems, species and genes.
- Maintain and enhance the natural productivity of ecosystems and ecological processes.
- Optimize the contribution of protected areas to Ethiopia's economic development.
- Optimize the contribution of natural and environmental resources to social and cultural development.
- Prevent and mitigate the negative impacts of development on protected areas and biodiversity in general.
- Fulfill regional and international responsibilities.

75. Some of the other policy interventions required revolve around developing instruments that will help address issues such as development of an integrated system of monitoring and reporting on implementation of national and international policies and instruments.

Requirements for Effective Legislation

76. The implementation of a policy for protected area management must be supported by effective legal, planning and management instruments. The legislative mandate of the protected area institution should enable it to implement its identified organizational structure, required systems and procedures for management, identify issues that need to be addressed, and formulate the desired strategies. The legislation should therefore clearly define:

- The functions of the institutions.
- What a protected area is and the different categories of protected areas, together with the procedures for declaration and identify the management authority.
- The relationships with other lead agencies, federal and regional governments, local communities, etc.
- General management measures including the requirement for management planning, Environmental Impact Assessment (EIA) and reporting.
- Measures for resource access, wildlife utilization and benefit sharing.
- Measures for development of incentives for biodiversity conservation
- Problem animal control and declaration of protected species
- And other important areas as identified

77. The legislation should allow for development of regulations and guidelines to assist in implementation of its various provisions.

Land use planning

78. Protected areas are best conceived as parts of a national system of land use. The Convention on Biological Diversity highlights the need for each country to treat its protected area system as different parts of a system designed to provide different kinds of benefits to different groups of stakeholders. Ethiopia's protected area system needs to be conceived as a national system, with some protected areas designated to cater for national concerns or obligations, while others are assigned to primarily meet the needs at local level.

Policy Monitoring and Evaluation

79. Policy making is a continuous process that calls for specific institutional arrangements and mandates to monitor implementation progress. This monitoring should encompass issues like continued assessment of trends, needs and issues and evaluation of policy impact.

Institutional Setup

80. A protected area system needs diversity in institutional approaches. There is need for new and improved institutional arrangements that are efficient and effective and that are based on the principles of efficiency, cost effectiveness, collaboration, social participation and partnerships. There is also need for finding a balance between promoting decentralization of protected area management responsibilities and ensuring effective protected area management. This can be done through effective delegation of relevant regulatory functions to regional institutions as opposed to complete decentralization of responsibility.

81. Ethiopia follows the conventional model of protected area management and thus needs a substantial paradigm shift towards more participatory forms of management so as to improve effectiveness and ensure sustainable conservation and social justice. There is need to increase the role of other stakeholders, notably the private sector and the indigenous and local communities in the conceptualization and management of protected areas.

82. The key to effective implementation of national protected area management related policy is effective coordination and integration, at all levels. It involves coordination and cooperation between state agencies, the private sector and civil society. There has to be clarity and accountability in the allocation of roles and responsibilities among the various institutional players.

83. While making institutional arrangements for protected area management, one needs to keep in mind what the various key institutions' main roles and responsibilities could be. Some suggestions are made here below.

Table 10. Protected area management Roles for the General Stakeholder Categories

Major role in PA mgt	State	Community	Civil society	Private sector	Individual
Current roles	Leadership in policy and management Exclusive role in enforcement Primary and often exclusive role in all aspects of protected area management	Extremely limited, and dependent on initiative of NGOs working with community leaders & government	Limited & isolated instances of civil society involvement	Extremely limited & dependent on individual initiative & ability to negotiate with government	Non- existent

		organizations		agencies	
Desirable roles	Continued leadership role in policy development Increased facilitating role Shared enforcement role	Self-regulation Local initiative for conservation outside protected areas Partnership in protected area management	Active involvement in some aspects of management Encouraging community participation	Investment in protected area management Tourism development Delegated role in protected area management	Self-regulation Individual initiative for conservation outside protected areas
Changes needed to perform desirable roles	Policy reform to streamline mandates and facilitate partnerships Review of decentralization system Increased capacity in coordination and partnership development	Development of community organizations Establishment of system for community participation Awareness and education	Policy reform to facilitate community empowerment and delegation of protected area management Increased capacity of civil society organizations	Incentives to ensure investment in protected area management and tourism development	Empowerment through awareness raising

Adapted from the National Environment Policy and National Environmental Management Strategy for Saint Lucia, 2004.

84. Effective functioning of the different institutional arrangements requires capacity building at all levels of management within government (federal and regional), civil society, the private sector and local communities. In some instances, it will also require formal partnership development by way of memoranda of understanding or agreements. This will improve collaboration, remove duplication of roles and efforts, thus optimizing the use of resources.

85. The set up of the institution to manage Ethiopia's protected areas should take into consideration the various existing mandates and ensure that there is clear indication of who is mandated to do what. The said mandates in the broadest terms would involve ex-situ conservation, in-situ conservation, protected area management (forestry and wildlife), research coordination, biodiversity conservation outside of protected areas, etc.

86. EPA should be maintained as the coordinating and supervisory body for environment management and should be at such a level as to do this function effectively both at federal and regional level.

87. In creating or strengthening a protected area management institution, several principles that have been developed over time through experiences across the region and from elsewhere, have to be considered:

- There is need for effective coordination – therefore the institution that is set up must have the ability to coordinate other institutions or partners with mandates complimentary to its own. Cross sectoral linkages are required in order to have effective management and harmonize conflicting interests. This institution must be provided with the power (legal back up) to effectively play this role.
- The enabling policy must be in such a way as to remove any conflicting interests.
- It is necessary to create a new institution or strengthen an existing one and give it a place in government that would allow it to effectively carry out its mandate.
- Protected area management requires political support at both the federal and regional levels. To obtain this, protected areas must demonstrate the ability to contribute positively and significantly to government's policy of socio-economic development and poverty eradication. In view of this, there is

need for close links with government's agencies charged with economic development and social planning.

- The protected area management institution needs to command respect among government agencies, NGOs, international and other partners. Therefore its management both at the top and the protected area level must have the required skills and professional management ability to create an institution that is seen as a professional body whose opinions and pronouncements are considered as such.
- The institution should be flexible, able to respond to changing circumstances. Therefore it must be given some flexibility within the policy and legislation set-up.
- The protected area management agency should also be provided with the necessary legal backing to enforce compliance as far as protected area management and wildlife conservation are concerned.

Capacity Building

88. Capacity building refers to the development of an organization's core skills and capabilities which enable it to perform its functions with effectiveness and sustainability. Effective protected area management calls for capable management, which in turn depends on effective institutions, trained professionals, and staff with multiple technical skills. The capacity strengthening process gives institutions both at federal and regional levels the ability to achieve conservation results by ensuring they have the technical and financial resources required to address the existing challenges.

89. From the analysis carried out, the current system is ineffective due to weak institutional capacity, inadequate managerial skills and technical capacity, and lack of resources. Building the ability to foster greater interagency cooperation is also fundamental for a more strategic approach in addressing conservation priorities.

The Principle of Good Governance

90. Strengthening capacity for protected area management works within the framework of good governance. This includes aspects like political will and the regulatory framework. Generally speaking, policy and governance refer to the processes and systems which determine how power is exercised and how decisions are made. The relevance of these is in how they influence the way protected areas meet conservation objectives and contribute to socio-economic development.

91. This relatively new concept of *governance* in the field of conservation and protected area management can help design planning and management systems compatible with resident or user communities, whose presence can be regarded as a conservation asset rather than a liability.

92. The aim is to particularly create effective policy makers, managers, enforcers, etc. In general, the overall target is to attain quality protected area management. In targeting building capacity one must look at the willingness of stakeholders to develop and reform. This refers not only to the communities currently resident within and around the protected areas but also government employees and the civil society. The required reform involves development of social responsibility of all these people. For society to be able to change, they need to be empowered to do so. Depending on the target group, empowerment comes from creating public awareness, training, etc.

Policy Implementation and Law Enforcement

93. There is need to build the capacity of those responsible for protected area management not only to be able to interpret the law but to also enforce it. For example where poaching of endangered species is a

major problem, like it is in Ethiopia, law enforcement is a critical element. However, it should be noted that many of the factors leading to Ethiopia's loss of biodiversity and protected area degradation originate in national government policies that have been formulated without due consideration to the situation on the ground. These include national development priorities that focus government priorities on other areas of economic development, to a large extent ignoring protected area management.

94. Enforcement is a key element of policy implementation. In order to ensure that the laws are properly enforced, there should be encouragement for voluntary compliance. The public must be made aware of institutional roles and responsibilities and the capacity of enforcement agencies must be built through training, resource mobilization and networking. There should also be fostering of coordination and sharing of resources and information among enforcement agencies; empowering regional government agencies and selected civil society organizations with enforcement capacity and mandates whenever practicable.

Protected Areas and Economic Development

95. All over the world, the value of protected areas is poorly understood. Because of this, they tend to be greatly under-valued in the markets, by political decision makers and the general public. The commonly accepted market-based economic values of protected areas are centered on tourism revenues and income from extractive utilization.

96. This problem of insufficient quantification of the protected area values usually leads to their low priority when land use decisions are being made. Quantification provides protected area management with a powerful tool to make a better case for establishing more protected areas and increasing financial and political support.

97. The capacity for carrying out such valuation in lacking and should be built both through training and actual hands on experience.

Skills Based Training

98. The capacity building needs vary at the different levels of management. They vary from preparing high-level staff to develop policy and participate in complex global negotiations to training park guards on law enforcement issues. As such, there are many different types of skills required to enable effective protected area management. They range from leadership, fundraising, and scientific knowledge to administrative expertise in areas such as human resources and bookkeeping.

99. The challenge for capacity building, especially training, for Ethiopia's protected area management lies in ensuring that it is taken up by local institutions who are able to provide the required services in the long-run. Reliance on donor funding to enable personnel undertake external courses is not sustainable considering that there will always be staff turn-over and the need for continuous updating of skills.

100. The objective for this aspect of protected area management is to provide technical and other professional staff with the skills required to carry out protected area management. The skills required for protected area management include Planning, M&E, information management, awareness rising and education, community conservation and development, tourism development, law enforcement, collaboration and partnership development.

101. Emphasis here should be on a hands-on approach to skills building. These skills should be imparted mostly through short courses and on the job training. This is much cheaper and more effective than support to long term training aimed at achieving academic qualification.

102. There is also need for qualifications in wildlife management, forestry, HR development, business administration, environmental law, etc. A system should be established to ensure inclusion of protected

area management subjects in the formal education system, through continued inclusion in school curriculum both at primary and secondary levels.

103. There should be a revision of the job descriptions to suit the revised mandate and to capture the functions of the new organizations. New recruitment should be undertaken for ALL the jobs, only retaining those old staff who measure up to the required standards for protected area management. Rather than trying to build this kind of capacity within the protected area management institution, effort should be made to obtain staff that is already qualified in these areas. In order to minimize on expenditure for building staff skills, the policy of "quality at the gate" should be adopted so that as much as possible, the new organization gets already skilled staff.

Research and Information Management

104. Research should become a central part of protected area management. This can be through capacity building and strengthening of research institutions e.g. provision of financial and technical support plus creation of linkages with external research agencies so as to build up research skills in-country.

105. The national policy for protected area management shall promote and support establishment of a system for dissemination of information, development of positive attitudes and behavior, and a broad-based appreciation and understanding of issues related to biodiversity conservation in general and protected area management in particular. A central database for information on protected areas should be established. This information shall be used for decision making and pubic awareness campaigns.

106. This system shall also target the sensitization and training of media personnel to enhance their capacity to report on protected area management.

Non-Human Resources Capacity

107. Capacity building does not begin and end with human resource development. There is therefore a need to look at the required infrastructure development and equipment for effective management of the proposed PASP. Kidane (2005) has attempted to highlight the required resources to some level of detail. It should be noted however that there is some level of uncertainty with the anticipated change in the protected area system for Ethiopia.

108. **Financial Capacity -** Long-term funding is an essential component to enable effective protected area management. Currently, Ethiopia lacks the mechanisms to ensure adequate funding levels for her protected area system. Overall, funding for protected areas is exposed to changes within government priorities and those established by the MoARD. The lack of guaranteed and adequate funding hampers the ability to develop and implement protected area management plans. Diversification of funding sources is needed to provide a buffer against unanticipated reduction in funding stemming from shifts in government and donor priorities.

109. **Infrastructure Development -** At this stage in the PASP, it would not be prudent to give detailed recommendations. What can be said here however is that the infrastructure required will include office and staff housing, ranger outposts, gates into the protected areas, roads for management and tourism and tourism trails. These are detailed by Kidane (2005) but will need to be reviewed in light of the new PASP as approved. Lodges and camp site development should be on concession to the private sector so that the protected area management authority charges a fee for this without having to develop management capacity for tourism services beyond playing the coordination role.

Existing Opportunities

110. The FDRE is carrying out what is being referred to as the "Business Process Engineering". A federal government led process targeting review of the current government system, assessing the current

functions …. ”what is each government agency doing in reality?” … within this process, the WCD is proposed to be upgraded to an autonomous authority.

111. The EPA is implementing a “National Capacity Needs Self Assessment Program” funded by the GEF, where the capacity needs of the various sectors are being assessed in regard to environment management. The objective is to facilitate establishment of environment units in each government ministry.

112. There are several NGOs operating within the sector, including CARE Ethiopia, FARM Africa/SOS Sahel, Frankfurt Zoological Society, Ethiopian Wildlife & Natural History Society, etc. The efforts of these partners should be appreciated. They should be formally brought on board, be well coordinated and some of the protected area management functions delegated to them.

113. The above opportunities could be taken advantage of and brought into harmony with what this project aiming to achieve – strengthening protected area management within Ethiopia.

Conclusion

114. The FDRE must recognize that protected areas are only able to contribute to national economic development if they are managed in a way that compliments their conservation objectives, encourages their sustainable use and creates linkages with other sectors of the economy. Conditions must be created that enables the relevant institutions to meet the costs of protected area management. Government therefore must ensure the necessary legislation and institutional arrangements for protected area management. The management of protected areas requires partnerships like those described earlier and cooperation among managers and users. The current situation offers Ethiopia an excellent opportunity to institute a workable system and explore the potential of collaborative management

Annex 7: Lessons Learned

1 The design of the project has incorporated lessons learnt from other Protected Area projects that have been fully or partially implemented in the past decade. Given the current poor state of the protected areas of the country, it must be concluded that these projects have mostly failed.

2 Most recent projects have included a CARE Ethiopia intervention in Awash National Park; an EU-funded project in the National Parks in the Southern Nations, Nationalities and Peoples Region; a WWF-DGIS project in the Bale Mountains; and the ongoing Austrian Development Cooperation project in the Simien Mountains National Park, and the UNDP project on emergency support to protected areas. The UNDP-GEF regional project on community conservation for IBAs (NGO – Government Partnerships) finished two years ago

3 In contrast to the failures, there have been a few outstanding successes. These have mainly included some ancient and effective community-based natural resource management systems, such as Guassa-Menz (Tefera, 2001). Some recent projects have built on the strong community foundations that exist among many rural communities in Ethiopia, with success. However, the role of the state in the management of natural resources has yet to be resolved in some instances, with the state being reluctant to fully empower traditional structures.

4 "Lessons Learned" links to projects and institutional processes across Africa. We analysed the pattern of change within Protected Area Institutions, from countries where we have working experience (East Africa) and from recent GEF project reviews (Zambia, Rwanda). Whilst financially autonomous parastatals are recognized as institutional modalities of choice (and are followed here), they are not without their own internal and external problems. The past five years' politicizations of Kenya's Wildlife Services demonstrates many potential pitfalls. Project management must be aware of this. We note that in the last 1-2 years the GEF has funded several Protected Areas "BD1" projects – six in Anglophone Africa (Namibia via Kwa-Zulu Natal and Zambia to Rwanda and Uganda, and this Ethiopian proposal). This provides sufficient critical mass for a Knowledge Management Network of Project Managers, linked to GEF process. The GEF IW programme – I Learn offers a useful model.

Table 11. Summary of the lessons learnt from the interventions that have taken place in protected areas. Also included are community-based projects in discrete areas that focus on sustainable natural resource management systems.

Intervention	Lessons learnt
Summary of many unsuccessful projects	Inappropriate definition of the optimal role of the "state", including both central and local government. Duality and parallel systems of state and local communities leading to profound disconnect between state and local communities Poor linkages among projects – no coordination, little sharing of experience or knowledge, no partnerships, active (but destructive) competition among projects. No complementarity in activity meant that each intervention was seeking its own enabling environment. Little or no monitoring and evaluation attached to interventions
Guassa-Menz	Ancient (*c.* 17th Century) and effective community-based natural resource management system rehabilitated. Noting the robust and resilient nature of the system, except for decline during social and land tenure upheaval of the Agrarian Reform of 1975.

National Parks Trust Fund – UNDP support	Little buy in from weak institutional structure in government; responsible people moving on to other jobs/positions – no institutional sustainability or planning.
WWF-DGIS Bale Mountains Project	Poor institutional planning undermined the implementation of the project, particularly the inadequate linkages: federal – region – protected area organizations. The inappropriate placement of project in the federal organization did not allow successful implementation. More of the project should have been seated in the regional organization, mandated to manage Bale. Project HQ was therefore in Addis Ababa, not in field. Project staff with inappropriate skills to plan and implement participatory forest management. Unwieldy, large Project Advisory Team led to conflicting advice, this coupled with an inappropriate decision making structure with little autonomy in the field and no monitoring or evaluation procedures led to no impact or sustainability The inefficiencies and ineffectiveness of working in isolation of other development actors The need to have considerable committed presence on the ground Limited linkages between development components and natural resource conservation Poor planning of intervention Leadership with poor experience in Integrated Conservation and Development Projects and Community-Based Natural Resource Management Capacity building should be related to operational requirements Need for adequate monitoring and evaluation
CARE Ethiopia (Awash National Park)	Poor linkages with park management authority, lack of continuity with EWCO meant there was no assignment of single, mandated counterpart to lead the project. Complex interplay between conservation and development forces, with weak national leadership.
EU Southern Region Parks (various national parks)	Poor planning; and limited stakeholder participation Hiatus through decentralization process, and management and training gains were dissipated.
UNDP Emergency Park Rehabilitation (various national parks)	Poor planning processes leading to inadequate intervention: much of the infrastructure put into place was not effectively used by parks, some remains unfinished.
FARM Africa /SOS Sahel (Borana – Chilimo – Bonga forest projects)	Good stakeholder identification, negotiation and agreement over use of natural resources Proved that community-based forest management is possible even in areas where pressures are extremely high Proved that working with tradition structures and management systems is possible; however, government not ready to legitimize and empower

	tradition community structures Focus on long-term benefits rather than short-term costs when use of resources becomes regulated
GTZ – Adaba-Dodola project (Bale Mountains)	Non participatory infrastructure development (grinding mills, clinics, etc), which was not used and thus wasted Giving community ownership of natural resources fosters regulation and protection seemed successful (but model of giving each household 12.5ha may not be applicable elsewhere; in addition, non-members were excluded and lost access and user rights – leading to displacement and intensified use in adjacent areas – thus, more rapid degradation). Legal framework is essential for security of local communities. Establishing 'boundaries' requires the input and involvement of a number of government organizations. Heavily-dependent on external technical advice and funding No expansion in adjacent non-project areas Private-community (tourism) partnership should have been initiated from the outset (not tried post hoc)
French Cooperation (Yangudi-Rassa NP)	Project never started because of changing commitments of French Cooperation and because of realized lack of capacity to monitor and evaluate the project. Lack of effective follow-up with the donor by EWCO
JICA	Input of JICA volunteers showed that good people could achieve but only sustainable if integrated into the overall protected area management system.
Austrian Development Cooperation (Simien Mountains National Park)	No planned exit strategy, and little monitoring and evaluation of management effectiveness in its first phases – Now Improved. Little attempt to redefine the role of the state in the management of the area, include no attempts to form partnerships with the local communities Limited stakeholder analysis or negotiation for access to or use of resources
Swiss Cooperation (Simien)	Whilst there were some strong technical achievements, the project was dogged by poor relationships with government for some time, as donors were over-critical in demanding change.
SIDA (Orgut) support to CBNRM in Amhara	Showed success where there were sufficient incentives for communities to get really involved.
UNDP-GEF NGO Government Partnership Project (Regional)	Showed the success of community based initiatives at 2 out of 3 field sites, and showed importance of community capacity building and furnishing incentives for conservation.
Ethiopian Wolf Conservation Programme	Good public-civil society partnership Good planning; sustainable financing
Previous attempt to establish a Trust Fund	The previous attempt to establish a Trust Fund in Ethiopia failed primarily because it was made the responsibility of one person. When that person was transferred within the government system, the Trust Fund portfolio was not transferred either with him or to another person.

Past New York Zoological Society (WCS)	Inadequate stakeholder participation and state-centric approach
Parastatals have failed elsewhere in Africa. What are the lessons to ensure the organization does not fail in Ethiopia	Following extensive analysis, we conclude that establishing a parastatal organization is the optimum option available to ensure: i) the ability to be largely or completely self-financing, ii) improve management through results-based activities and financing, iii) more participatory (both within the administration as well as at a site level), including through a management board, iv) more accountable (through the results-based management, performance related indicators and through financial transparency), v) their capacity to enter into legal contracts, vi) freedom from government human resource management, and vii) their capacity to monitor and evaluate performance. *The principal objective of forming a parastatal organization is to improve sustainability by making the organization independent of the vicissitudes and vagaries of the government*. A parastatal organization will enhance the management effectiveness of the protected area system by introducing business planning principles. Indeed, in recognition of the lack of business planning in the civil service, over the past eighteen months, the government of Ethiopia has initiated a "Business Planning Review" within its agencies. The aim is to improve service delivery. Thus, this project pre-empts the changes from the conclusions of the review within the Ministry of Agriculture and Rural Development. That the government is driving this process enhances sustainability and country driveness. The majority of sub-Saharan African countries have opted to move towards a parastatal organization to manage their protected area systems. However, there are lessons to be learnt from these, including: 1. In the past year, the Board of TANAPA, the Tanzanian protected area parastatal organization, has become too executive (rather than advisory) and thus too unwieldy and powerful. To avoid such a situation, the Board, as with all other institutional arrangements, will have clearly defined Terms of Reference. In addition, their performance will be monitored and evaluated against performance related indicators that will, in turn, be related directly to the management effectiveness of the protected area system (primarily through the METT). 2. The Kenya Wildlife Service (KWS), the Kenyan protected area parastatal organization, has been running efficiently until recently when it has become highly politicized. The very purpose of the Board (and stakeholder participation at a site level) is to counteract such politicization of the protected area system. 3. Extensive institutional analysis in Uganda led to the formation of UWA, the Ugandan parastatal organization for the protected area system. The GEF/WB project to achieve sustainability within the system concludes that there is no other alternative to ensure business planning principles are adopted. Indeed, the only other alternative is for the protected area

	organization to remain unchanged within the government system. This has proven to be highly ineffective at managing the protected area system[4]. Botswana is one country where the protected area authority still remains within the mainstream government system – thus, it has not become a parastatal organization. However, the government of Botswana operates under similar business principles to those of parastatal organizations elsewhere in sub-Saharan Africa and, thus, the institutional restructuring was not necessary.

[4] Bill Farmer (consultant to PAMSU, the GEF/WB project with UWA), pers. comm. to Alan Rodgers.

Annex 8: Demonstration sites

1. Four sites have been selected to demonstrate the innovative management partnerships proposed in this project document. They were selected on the basis of the following criteria: i) they all had partnerships either in place or in the process of being negotiated, ii) they all had secure co-financing and were therefore not reliant on GEF funding, and iii) they all encompass important elements of biodiversity, ecosystems and/or ecological processes.

Bale Mountains Project

Biodiversity, ecosystems and ecological processes

2. The Bale Mountains harbors the finest and most intact remnant of the Highland's original vegetation and the largest patch of Afroalpine ecosystem on the continent (2,067km² or 17.5% of all Afroalpine areas on the continent; S.D. Williams & I. May, unpubl. data). There are 1,321 species of flowering plants, 163 of which are Highland endemics, including the 27 Bale endemics (e.g., *Euryops prostratus*, *Gladiolus balensis*, *Maytenus harenensis,* and *Solanecio harennensis*). The Bale Mountains also contain more than half the global populations of both the Ethiopian wolf and mountain nyala. Of the mammals that have been recorded in the Bale Mountains, 26% are Ethiopian endemics (including the Bale monkey, Starck's hare, *Lepus starcki*, and eight species of rodent, including the Bale endemics – the giant molerat, the unstriped grass rat, *Arvicanthis blicki*, and harsh furred mouse, *Lophuromys melanoyx*). Among several rare endemic amphibians, there are four species found in Bale alone, including one monotypic, endemic genus, the Bale Mountains narrow-mouthed frog (*Balebreviceps hillmani*, EN) (Largen, 2001), and there are two chameleons that are Bale endemics (Largen, 1995; M. Largen and S. Spawls, pers. comm.). The conclusion is that if conservation efforts in the Bale Mountains are not successful and people continue to exploit the resources in an unsustainable way, more species of mammal (and the analysis remains to be done for other taxa) would go extinct than any other area of equivalent size on the globe (J. Malcolm, pers. comm.).

3. Being a highland area, the distribution of fauna and flora is sharply associated with altitude. The treeline is dominated by *Hagenia abyssinica* and *Hypericum revoltum.* Above this, the heathland scrub is dominated by the heathers such as *Erica arborea*. Besides the red-hot pokers of the genus *Kniphofia,* a distinctive feature of the vegetation in this zone is the giant *Lobelia rynchopetalum*, which is particularly characteristic of Afroalpine vegetation. However, the flora is not sharply delineated from that of the ericaceous belt at slightly lower altitudes (Davis et al., 1994).

4. At the southern end of the Bale Mountains lies the enigmatic Herenna forest. The altitudinal cline on which the forest grows has resulted in marked vegetation belts. The uppermost belt is dominated by *Rapanea* and tree heathers, while the moist slopes of the Herenna forest are typified by a shrubby zone of *Hagenia* and *Schefflera* growing alongside with giant lobelias, *Lobelia gibberrosa*. Dense stands of mountain bamboo (*Arundinaria alpina*) are also found. Below 2,400m, clouds and localized rain support a dense, moist forest, with trees over 30 m tall, their branches covered with epiphytes. While the Herenna forest appears to be relatively impoverished, it does harbor endemic species, many of which are at the higher altitudes. These include the Bale monkey (*Cercopithecus djamdjamensis*), a little known endemic primate, and a rich endemic amphibian fauna (Largen, 2001). The very lowest and driest part of Herenna serves as an example of the sort of forest that once covered a much larger part of Ethiopia (Kingdon, 1989).

Protected areas

5. The Bale Mountains area or landscape contains four different land uses that could be defined as being 'protected.' These are: i) the Bale Mountains National Park, which, because of the above factors, is the single most important conservation area that has been proposed in The Ethiopian Highlands, ii) three hunting concession areas with further areas under consideration, iii) the Adaba-Dodola community-based natural resource management system (WAJIB developed with the assistance of GTZ), and iv) a number of forest priority areas.

6. Following the redefinition of the areas, there will be a core conservation (which may remain to be called the Bale Mountains National Park), community-based protected areas, and limited harvesting areas (incorporating the sport hunting areas and potential timber harvesting areas).

Partnerships

7. There are a number of partnerships that operate in the area. First, the Bale Mountains Natural Resource Project includes a partnership among the Oromiya Regional State, FARM Africa/SOS Sahel and Frankfurt Zoological Society with the objective of increasingly including other stakeholders and particularly the local communities in the planning and management of natural resources and the area. The interventions are funded by a consortium of bilateral donors (the Netherlands Embassy, the Norwegian Embassy and Development Cooperation Ireland) and FZS. Second, the hunting concession areas are operated by their respective private companies. Third, the area adjacent to the project area includes the Adaba-Dolola WAJIB community-based natural resource management system.

8. The development represents the good practice model (when private sector not involved), including:

   a. developing and establishing partnerships among government, civil society, communities and donors

   b. developing conservation targets as the main objective of the protected area, with the livelihood of communities living in the areas around the core conservation areas

   c. working to identify stakeholders in the area, negotiating with the stakeholders on access to and use of resources, including the responsibility that accompanies this; the baseline of current levels of access and use of resources is not negotiable as they are not sustainable.

Nech Sar National Park

Biodiversity, ecosystems and ecological processes

9. Nech Sar National Park includes two ecosystems of importance: i) the Rift Valley lakes, namely Lakes Chamo and Abaya and ii) the Acacia woodland and savannah mosaic. It contains a small number of Swayne's hartebeest but also has populations of plains zebras, greater kudu and Nile crocodiles.

10. It contains two endemic species of bird, including the Nech Sar nightjar, known only from one wing.

11. It also has important hot springs and a groundwater forest.

Protected areas

12. The area is focused on the Nech Sar National Park. This currently stands at 514km² but there are proposals to extend the area.

13. The area was proposed in 1967 with the boundary being described in 1975 but it is not currently gazetted.

Partnership

14. The management of Nech Sar National Park has been transferred to African Parks (Ethiopia) Ltd. for a 25-year period in the first instance with the option of a 15-year extension.

15. In financial terms, the company retains all rights to accrue revenue, but once they show profits, 33% will be paid to the government up to the first US$ 1 million; thereafter, 49% will be paid to the government

16. The development represents the good practice model when private sector is involved.

Omo National Park

Biodiversity, ecosystems and ecological processes

17. Omo National Park is found in the southwest of the country and falls within the broad ecosystem area of the Acacia-Commpihora bush- and shrublands with elements from the Somali and Northern eco-region. It has riparian woodlands, savannah and deciduous woodlands.

18. It is of less international biodiversity value, but contains important populations of common eland, tiang, elephant, giraffe and buffaloes.

Protected areas

19. The area is focused on the Omo National Park but the area borders on Mago National Park and Tama Wildlife Reserve. This currently stands at 4,068km².

20. The area was proposed in 1963 and established in 1966 with the boundary being described in 1975 but it is not currently gazetted.

Partnership

21. The agreement to confer the management of Omo National Park to African Parks (Ethiopia) Ltd. is currently under discussion with the Government of Ethiopia. The agreement is expected to be signed within the coming month.

22. With Nech Sar National Park, the development represents the good practice model when private sector is involved.

23. There are important local community issues with scared sites and livelihood resource needs found within the current nominal boundaries – thus, requiring redefining the boundaries or negotiating regulated level of access to and use of resources in protected area.

Guassa-Menz Community Protected Area

Biodiversity, ecosystems and ecological processes

24. The Guassa-Menz area of North Shoa is found on the Rift Valley escarpment over 3,100m ASL. It is therefore a patch of Afroalpine ecosystem – and specifically, Afroalpine grassland and moorland with a suite of endemic fauna and flora. It harbors an important population of Ethiopian wolves.

25. It is also an important water catchment area for the Great Abbai river (later forming the Blue Nile).

Protected areas

26. Local communities implemented a sustainable natural resource management system in the area in the 17th Century. The system, known as *Qero*, allowed equitable use and distribution of natural resources (thatching grass, fuelwood and grazing) that were, and still are, important for the livelihood security of the community. By regulating exploitation of the area, the management system has also effectively protected the biodiversity of the Afroalpine ecosystem of the Guassa-Menz area.

27. When the *Qero* arose, it was supported by the authority of the Ethiopian Orthodox Church, a powerful component of this ancient society. The system declined in 1975 as a result of the Agrarian Reform of 1975, which was introduced under the socialist regime that came to power in the revolution of 1974. People that were previously excluded from resource use gained uncontrolled access through their constituent peasant association. When it became apparent that the resource management system was declining under the land tenure reform, the community responded by establishing the Guassa Committee, known locally as *Idir*. The Committee retained significant community representation, but was deemed acceptable to the political and social order of the socialist regime. The remarkable adaptation and subsequent persistence of the system suggests that it is stable and resilient in the face of significant political change (Tefera, 2001)

Partnership

28. The revival of the natural resource management system in recent years was assisted by the Ethiopian Wolf Conservation Programme that stems out of the University of Oxford, UK. Much of this work has been assumed by the FZS under the same project leader, Dr Zelealem Tefera. A management plan for the area has been developed and the recognition of the area and its management system is being sought from the Amhara National Regional State.

29. The project is currently being financed by FZS but it is notable that the incentive for local communities is not monetary; the incentive is to gain access and user rights, with accompanying management responsibilities, of the area. Thus, there is currently no financial sustainable plan – because the management of the area does not demand funds. The regulation of use of the area is carried out by the community themselves – thus, use of the resources is benefit enough to ensure regulation.

30. The area is scenically outstanding and therefore there is the possibility – currently being explored – of establishing a private-community partnership for tourism development. This would provide an added incentive for the local community to sustainably manage the area.

Annex 9: Sustainable Financing Options for Ethiopian protected areas[5]

1. The purpose of biodiversity conservation in Ethiopia is to sustain the local, national and global value of Ethiopia's biodiversity resources. This, however, usually costs money. Funds must therefore be found to manage the country's biodiversity resources.

2. The Strategic Priority BD 1 of GEF sees financial sustainability as a key part of an overall sustainable protected area system. Financial sustainability is defined broadly as when incomes or revenues are sufficient to meet realistic management needs covering both capital and recurrent costs. Achieving such financial sustainability therefore needs some balancing of the books – which in itself means an understanding of incomes and outgoing expenditures. This inevitably requires some level of a business planning approach to Protected Area Management. Business planning can be at each individual Protected Area (where each Park balances its books) or at the system level or a combination of the two. This Protected Areas project addresses financing at the overall system level, and recommends the development of a Business Plan philosophy and use of business plans within the administration of the sector, as well as at the site level.

3. One of the key aspects of sustainability is the chicken-and-egg mutual interdependence of protected area management and tourism development, typical of most African countries.[6] Two main types of investments are needed – investments in enforcement and protected area management to restore wildlife populations; and investments in infrastructure and promotion that are needed for tourism development.

4. This project will develop tools, including a rationalization, reclassification and protected area system plan that will strategically guide investments in these two areas. These tools will be developed so that the investment resources available can have maximum impact on biodiversity conservation of priority sites and high impacts on tourism development and poverty reduction through management systems and partnerships that are as financially sustainable as possible.

5. Project activities have been specifically designed to accelerate the uptake of good management practices across the protected area estate. This cannot be achieved all at once, but in a carefully sequenced manner, progressively seeking to ensure sound management effectiveness in all priority protected areas. The assessment and economic analysis of protected area management effectiveness will focus on identifying the forms of protected area management partnerships that are financially the most efficient, that provide the greatest incentives for protected area managers and that are financially self-sustainable. Some promising forms of partnerships will be tested in the demonstration sites. The development of a clear policy framework for public/private/civil society/community partnerships will simplify and render transparent the entry conditions for potential private and community protected area management partners.

6. The project will build on Ethiopia's fledgling experience with public-private partnerships for management of national parks - seeking to expand on this to also bring local communities into the public/ private partnerships within the redefined protected areas. The overall plan to be developed will seek to better define the state's roles and responsibilities in conformity with their absorptive capacity and in line with the assessed potential for self-financing of protected areas that they will manage in the absence of partnerships. The government's commitment to the policy reforms specified in this document and their timely approval will be key elements to sustainability.

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[5] Note – this is based on a collaborative report by regional and national consultant expertise in the PDF B process. This will be available as a full report.

[6] This interdependence will be the subject of analysis across many African countries, within a developing GEF-UNEP project "APAI" or African Parks Initiative.

7. The identification of tourism as the one of the highest priority sector in the forthcoming SDPRP II will contribute to sustainability through increased investments in the sector resulting in increased tourist entry fees and other sources of revenue that provide incentives and cover protected area management costs (details below). Preliminary analyses conducted as part of project preparation indicate that investments in protected areas management *can* be financially viable in Ethiopia. The project will continue to refine the conditions under which different forms of management and of management partnerships will yield positive returns on investments and will use this information to mobilize new management partnerships.

8. In line with the provisions of the CBD, Ethiopia has developed a National Biodiversity Strategy and Action Plan (NBSAP) (UNDP - GoE, 2005)[7]. The draft NBSAP indicates that Ethiopia has a large potential for tourism revenue generation for most protected areas (IBC, 2004; Ethiopian Tourism Commission, 2002; Muramira and Wood, 2003). The report indicates that tourist receipts are considerable, with 1998 figures indicating total receipts at about ETB 230.16 million. The report also indicated that the receipts were growing at the rate of 26 percent per annum. While this level of increase is probably not sustainable (particularly because of the Eritrea-Ethiopia war in 1998-2000), with a more realistic growth rate, tourism could make significant contributions to the national economy[8].

9. Despite the degree to which biodiversity conservation – and protected areas in particular – have been marginalized from the development context in Ethiopia, the protected areas have, somewhat surprisingly, been largely subsidized by the government, albeit at very low rates (at an average of US$ 30/km^2/year across all protected areas). [In contrast, it is interesting to note that the funding from the Amhara Regional State for the Simien Mountains National Park (SMNP) for 2003/04 is, in fact, in excess of the sub-Saharan average of US$ 230/km²; this reflects a 45% increase in funding for the SMNP from previous years.] But despite the potential capacity to generate internal revenue, no protected area in Ethiopia is covering its recurrent costs (although SMNP is very close to doing so). In part, this has led to further marginalization of the sector.

10. Factors such as poor management effectiveness, poor use of the available budgets, inadequate planning, poor human resources management and an absence of results-driven financing have meant that even the meagre funding for protected areas has been badly used. This has resulted in calls for periodic emergency injections of funding from the donor community for protected area rehabilitation. For example, previous support has been provided by UNDP provided support (1996 -2003) to the tune of US$ 1.3 million for emergency conservation support to Bale Mountains, Simien Mountains, Abiatta Shalla and Awash National Parks and Senkele Swayne's Hartebeest Sanctuary; WWF-UK provided US$ 72,000 for conservation activities in the Bale Mountains National Park; the Netherlands Government provided US$ 1.74 million for conservation activities through WWF in Bale Mountain National Park; the Austrian Development Cooperation provided US$0.87 (fourth phase) to support integrated protected areas management and community development initiatives for the Simien Mountains National Park; while CARE-Ethiopia funded an Integrated Conservation and Development Project in the Awash National Park.

11. This annex analyzes the potential of a number of financing mechanisms to support sustainably protected areas management in Ethiopia.

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[7] Being printed in September 2005.

[8] Derived from estimates by Muramira and Wood (2003).Ethiopia's National Biodiversity Strategy and Action Plan. Economic and Option Assessment. Institute of Biodiversity Conservation and Research (IBCR), Addis Ababa, Ethiopia.

Funding Mechanisms and Instruments for the Management of the Protected Areas of Ethiopia

12. This section will highlight both existing and potential funding mechanisms for the management of the protected areas of Ethiopia. The discussion of the funding mechanisms is done within in four broad sections including:

(i) public funding from the treasury by leveraging equity, grants or credit;

(ii) internally generated revenue from ecotourism and tourism fees, levies and payments for ecosystem services,

(iii) fund raised resources pooled as grants, trust funds and,

(iv) private capital flows

13. Revenue or income to the protected area system comes from several sources. The most important of these are: i) Government Allocation or Contribution at National or Federal Level, ii) Government Allocation or Contribution at State or Regional Level. Note that currently all tourism revenues (gate fees, camping fees etc) and hunting fees go to the federal or regional treasuries and *not* back into protected areas. This is of course no inventive to managers to increase revenues!

14. This income comes in three categories: i) funding for salaries for substantative posts, ii) funding for recurrent expenditures such as travel, vehicle running, and iii) funding for developmental infrastructure such as new vehicles, new scout posts, staff housing etc. Training opportunities such as scholarships may be an occasional extra category (e.g., overseas MSc degrees, Mweka Diplomas etc).

15. At the federal level, the Ministry of Agriculture and Rural Development provides funds for central administration costs (the old EWCO and now the WCD in Ministry of Agriculture and Rural Development), plus management costs for four protected areas. These are protected areas are those which straddle regional state boundaries: Awash National Park, Babile Elephant Sanctuary, Senkelle Swayne's hartebeest sanctuary and Yangudi-Rassa National Park.

16. The funding to regionally managed protected areas comes from the federal 'grant' to each regional state; thereafter, the allocation to the administration and protected areas is decided by the regional state government themselves.

17. In contrast, expenditures can be classified in several ways. First, the ACTUAL expenditure, which is the amount of funding received from the government for the protected areas. Second, is the requested amount in the form of a BUDGET. Finally, there is the estimate of what efficient and effective management would cost.

Public Funding from the Treasury

18. Public funding (thus, revenues provided by the state) for protected areas may be the easiest leveraged and most reliable source of funds for Ethiopia's protected areas. In part, this is because protected areas should be net generators of income and jobs (particularly important in the marginal areas in which the protected areas are found) – but they can only be so after sustained investment and support from their governments (Scholes *et al*., 2005).

19. Public funding may be leveraged as equity from the national treasury, or as grants or loans from donors. Public funding, however, requires visibility of the sector with clear demonstration of the sector's potential to contribute to economic growth and poverty reduction (Emerton and Muramira 1999). There are two primary ways in which these contributions may come in: i) through revenue generated from taxes, levies, fees or other payments, and ii) from savings, usually long-term, through the protection of environmental services (see below).

20. Muramira and Wood (2003) estimated that tourist receipts, tourist accommodation, transport and miscellaneous purchases contributed over ETB 2.3 billion to the economy in 1998 (thus, greater than 10% of GNP). However, little effort has been made to make accurate estimates on an annual basis of these figures – and it is probable that the contribution is proportionally greater at present. As a consequence of the lack of information, no effort has been made to communicate these figures to policy and decision makers despite the fact that doing so would greatly improve the visibility of the sector. Sectoral visibility is clearly an important criterion in prioritizing sectors during budget allocations (Sgobi and Muramira, 2003).

21. There is another, effectively public, mechanism for funding protected areas: Debt for Nature Swaps. This allows bilateral donors to write off debt on the condition that the government provides some proportion of the funding that it would have otherwise used for servicing the debt for the protection on the environment – in this case, for protected area management. The Ministry of Finance and Economic Development (MoFED) Debt Department reported that the majority of Ethiopia's debt had been written off (as a HIPC), but that five debts were outstanding with one country and four banks. The Ethiopian government was happy for the project to take up negotiations with these lenders to form Debt for Nature Agreements – on the condition that over 92% of the debt was written off. Under this mechanism, instead of servicing the remaining debt with the lender, the lender would agree that the country could use the equivalent of the debt service in local currency for protected area management.

Internally Generated Revenue Tourism and Eco-Tourism Based

22. Ethiopia's share of tourist arrivals to Africa is still low compared to Kenya or Tanzania where tourism has been nurtured over a much longer time. Tourist receipts (thus, unlike the analysis above, do not include many of the other revenue generated from tourism) are, therefore, correspondingly low and are estimated at ETB 3.76 million in 2003 (US$ 470,000) mostly from park entry fees and sport hunting. This can be compared with about US$ 650 million for Tanzania in the same year[9]. But this is only park entry fees and sport hunting, which, with appropriate reforms (a marketing study would indicate that there is a 'willingness-to-pay' higher rates[10], if these were related to park management and growth), will grow.

Table 12. Protected Area Revenue Generation Estimates-Park Entry Fees 1999 - 2003

Year	Awash NP	Simien MNP	Abiatta Shalla	Bale MNP	Gambella NP	Omo NP	Nechsar NP	Mago NP	TOTAL Eth Birr
1999	117,719	120,857	50,428	53,047	-	-	62,480	53,803	458,334
2000	175,053	120,303	77,278	64,886	-	2,003	67,587	91,450	598,560
2001	104,148	136,608	77,609	55,220	-	1,280	58,398	66,297	499,560
2002	119,395	302,614	102,060	55,000	161	4,970	148,420	178,462	911,082
2003	138,528	346,771	53,849	-	1,209	980	218,409	-	759,720
TOTAL	654,843	1,027,153	361,224	228,153	1,370	9,233	555,294	390,012	3,227,276

Source: Ministry of Agriculture and Rural Development, Wildlife Conservation Department, Addis Ababa.,

[9] These figures should be considered in context: the Tanzanian figure represents all tourism associated receipts, while that for Ethiopia represents *only* park entrance and sport hunting fees. As indicated above, *total* tourism receipts in Ethiopia in 1998 was estimated to be approximately US$ 26.8 million.

[10] While there may be a 'willingness-to-pay' higher rates, the challenge of sustainable financing is to cover sustainably the 'consumer surplus' – thus, the difference between the amount that consumers (in this case visitors) are willing to pay, and the actual cost of managing the protected area.

Table 13. Tourism entrance fee payment structure for various protected areas in Ethiopia

National Parks	Types of Entrance fees	Fees (Birr)	Fees (S US)	Hours stay
Omo Mogo & Nechsar	Foreigners	70.00	8.10	48
	Ethiopians (Nationals)	10.00	1.25	48
	Local People	5.00	0.65	48
	Camping	20.00	2.50	48
	Vehicle fee up to 6 personal	20.00	2.50	48
	Vehicle Fee above 6 Personal	40.00	5.00	48
	Travel agent (Nationals)	30.00	3.60	48
	Travel agent (Foreigner)	60.00	7.20	48
	Scouts for accompanying tourists	50.00	6.00	48
Abiyata & Bale Senkele	A) Ethiopian per person			
	-Adult	3.00	0.40	48
	- Child	2.00	0.25	48
	B) Foreign Resident			
	-Adult	30.00	3.60	48
	- Child	10.00	1.25	48
	C) Tourist /personal			
	-Adult	50.00	6.00	48
	- Child	25.00	3.00	48

Table 14. Revenue Generation - Sport Hunting Permits 1998- 2004

Year	Wildlife Conservation Department	Oromia	SNNPR	Afar	TOTAL Eth Birr
1998	272,334	689,454	550,087	303,686	1,815,561
1999	358,921	718,105	444,552	324,223	1,845,801

2000	242,387	650,982	213,494	295,846	1,402,709
2001	429,838	1,330,046	526,551	468,375	2,754,810
2002	445,807	1,535,565	395,974	11,397	2,988,744
2003	458,139	1,521,197	398,100	24,153	3,001,591
2004	414,516	67,205	552,668	29,032	2,763,443
TOTAL	**2621.942**	**6512,554**	**3081,426**	**1456,712**	**20,234,021**

Source: Ministry of Agriculture and Rural Development, Wildlife Conservation Department, Addis Ababa, Ethiopia.

23. The above revenue capacity, though still modest, demonstrates that with stepped up investments and innovative ideas, particularly in tourism infrastructure including tourist accommodation (within protected areas – there is no functional accommodation *within* a protected area in Ethiopia!), hotels, lodges, *bandas*, roads and advertising, the tourism sector in Ethiopia could greatly improve. In addition, protected areas could market the unique opportunities of viewing endemic or charismatic species (e.g., visits to Ethiopian wolf dens; visits to hides at lammergeyer feeding sites; safaris to observe African wild asses and Grevy's zebras; ornithological tours to see the endemic avifauna). It is also extraordinarily apparent that the current hunting license for mountain nyalas is extraordinarily undervalued – but that the numbers being harvested at present are unsustainable. Indeed, mountain nyalas are the most threatened large mammal still being sold on a sport hunting license in the world. This in itself could be used as a marketing tool: a small number of animals (say, four) could be auctioned each year in exclusive safaris, with a reserve of, say, US$ 80,000[11]. This is simply a question of marketing.

24. However, there are a number of challenges to this optimistic view that need to be addressed. They touch on the institutional setups in the sector, the institutional capacity, and basic marketing expertise, plans or strategy for the sector. This project will therefore, need to fund a restructuring exercise aimed at re-engineering the sector into a modern and upbeat one, with new and appropriate staff expertise in business planning, tourism development and marketing, and conservation economics. Once this is done and the Ethiopian tourism sector is in tandem with the other tourism sectors in the region, a regional approach to tourism circuit development can be adopted to further benefit Ethiopia's tourism revenue generation potential.

Payment for Ecosystem Services

25. Other sources of internally generated revenue include payments for ecosystem services including payments for carbon sequestration, watershed protection, biodiversity conservation and bio-prospecting. These funding mechanisms are now well understood at the international level, but have yet to be explored in Ethiopia.

Carbon sequestration

26. Payments for carbon sequestration are now online following the coming into force of the Kyoto Protocol on Wednesday 16 February, 2005and the establishment of the European Emissions Trading System (ETS).[12]

[11] This favourably compares with black rhino hunting in southern Africa with asking fees of over US$ 200,000.

[12] Updates on carbon credits performance, value and sales may be obtained from the e-based Newsletter, *The Ecosystem Market Place* see http/www.ecosystemsmarketplace. com/

Box 1. Carbon Sequestration Potentials

The recent coming into force of the Kyoto protocol and signing by Russia brings online a big opportunity for carbon trading. A carbon credits market place was launched in Hong Kong early this year, followed by an e-based market information system called the Ecosystems Market Place. These mechanisms for the sale of both carbon storage and conservation (off-market) and reforestation, afforestation and clean energy (on-market) carbon, could be explored as potential sources of funds for protected areas management and conservation activities. Source: *The Ecosystems Place*, Issue 15, 2005. e-based Newsletter of the Katoomba Group

27. Analysis during the NBSAP process estimated a total annual carbon sequestration value of Ethiopia's forest area (including all protected areas) at US$ 73.5 billion (Muramira and Wood, 2003). This amount of money indicates the bargain the Ethiopian Government has in her argument for international financing of protected area management in the country.

Watershed Management

28. The Abbai (Blue Nile) river watershed covers an area of over 250,000km² of the land area of Ethiopia. This includes both the Semien Mountains and the Guassa-Menz areas. Only 180 km^2 of this entire watershed falls within a protected area (of any definition); this is in the Semien Mountains National Park. Recently a further 150 km^2 has been proposed to be added to the protected area estate as the Guassa-Menz protected area. If this succeeds, the total protected area within the Blue Nile watershed area will then increase to 330km². Nonetheless, this represents only 0.13% of the total watershed area – despite the fact that it is this part of the country that slopes are steepest and most fragile.

29. While watershed management and protection can take many forms, its basis – as with protected areas – is the regulation of human activities to ensure environmental values are not eroded or degraded. Protected areas can form the foundation in two key areas of watershed management: i) the areas in which the majority of the rainfall occurs (thus, by ensuring that indigenous vegetation remains intact, the protected area, first, keeps the water clean and, second, regulates its flow – thereby reducing seasonal variation or flooding), and ii) protection of fragile areas (thus, by regulating human use of fragile areas, erosion and associated loss of soil is reduced).

30. The main challenge to increase the cover of protected areas as a form of watershed management is availability of funds to offset the short-term opportunity costs of the decision against the long-term need to ensure the environmental stability of the watershed. The costs also include developing sustainable livelihoods among communities that incur the short-term opportunity costs. Therefore, this decision should be taken with the participation and agreement of stakeholders, including local communities; without such agreement, the regulations will not be enforceable.

31. Considerable work has gone into developing watershed based negotiations for fundraising tie-ins for hydro-electricity, clean water supplies, beverages and beer sales in a number of countries including Tanzania, Indonesia and the Philippines.[13]

32. As part of the project preparation process, discussions were held with the World Bank and the Norwegian Embassy in Ethiopia regarding the potential to link the upcoming hydro-electric developments

[13] Breweries that depend on the watershed for the supply of clean water may pay 5 % of the price into a conservation fund for watershed protection.

on the Abbai, the sustainable land management program and the Nile Basin Initiative (NBI) to the development, establishment and management of protected areas. This has been accepted in principle.

33. Further, the NBI provides a good platform and funding opportunity for tie-in negotiations for trans-boundary protected area negotiations.

Biodiversity Conservation and Bio-Prospecting

34. This section will focus on rent capture from commercial use of biodiversity resources in pharmaceutical, industrial and agricultural businesses as a mechanism for raising funds for biodiversity conservation[14].

35. Ethiopia has a large potential for her biological resources and ecosystems to be used in the recreation, pharmaceutical, industrial and agricultural advances of the future. The country is one of the centers of plant domestication and is therefore a primary source of original genetic material for key crops including coffee, teff and khat, among others (Muramira and Wood, 2003). Various studies actually indicate that the partial global value of the conservation of crop genotypes for coffee alone is about US$ 0.5-1.5 billion per year[15].

36. The CBD prescribes mechanisms that countries can apply to recover the benefits to the global community of the pharmaceutical, industrial and agricultural use of biodiversity sourced from their biodiversity stocks. This project should determine which of these CBD mechanisms can be applied to repatriate global financial benefits of biodiversity conservation to Ethiopia to assist with financing the Protected Areas Systems Plan (PASP).

Box 2: Examples of Access and Benefit Sharing Schemes in Africa

Protocols to manage access and sharing of the benefits of genetic resources in Uganda and Kenya were recently established by national regulations on the matter. The protocols prescribe the authorities, fees and permit structures third parties must go through or expend before they can utilize genetic material sourced from Uganda and Kenya. The protocols also designate the National Councils for Science and Technology in the respective countries as the competent authorities on all matters on the protocols. Source: NEMA (2000). National State of the Environment Report for Uganda 2000. National Environment Management Authority, Kampala, UGANDA.

Conservation Trust Funds

37. The previous sections of this report presented a variety of financial resources that may be leveraged to fund biodiversity conservation including protected areas. However, leveraging funds requires a practical, intermediary mechanism to manage and disburse financial resources to users. Conservation trust funds have emerged as one of the most efficient, flexible and cost effective institutional instruments for this purpose. Conservation trust funds are regional, national or community based instruments for financing sustainable development or the conservation of biological diversity. They manage money and disburse it to people or projects that help protect the environment. The best ones help build local capacity for

[14] See the CBD formulation of rent capture as the co-efficient or factor of total profit commercial use mostly in pharmaceutical developments.

[15] These figures have been suggested by a number of professionals in this area including Franz Gatzweiller, Manfred Penich, Tadesse Woldemariam. They argue that the figures represent the amount of money that should be paid by global coffee farmers whenever they access original coffee genotypes from Ethiopia to buffer problems associated with the genetic erosion in their coffee crops.

managing financial resources while leveraging existing funds to generate additional financing (Bayon and Deere, 1998).

38. The key aspect of conservation trust funds is that they are locally driven and locally managed mechanisms designed to address the priorities of the region, country, province or community in which they are based.

39. The structures of these funds vary. Some are set up to address a specific environmental issue or a specific locale. Others provide finance for a broad range of environmental activities. Still others are set up to address issues of "sustainable development" including poverty alleviation and the well-being of children (Bayon and Deere, 1998). Some devise their own strategic plans and define the issues for which they will provide money, others finance activities called for by a national or provincial conservation strategy. Trust funds thus vary according to the needs, priorities and desires of their creators. Moreover, they may serve as important vehicles for bringing together representatives of government and civil society, promoting participation by civil society in the formulation of policy, and building national capacity (Bayon and Deere, 1998).

Box 3: The Bwindi Impenetrable Forest Conservation Trust Fund

The Bwindi Trust was established as a private, non-governmental, endowment fund with a mixed board in 1995. The fund's initial capitalization by the GEF was US$ 4.3 million. This has increased through market appreciation and re-investments to US$ 6.5 million. This amount affords conservation an annual flow of about US$ 400,000 per year. Source: Moyini, 2005. UNDP-GEF PDF B Debriefing Notes for the Protected Areas System Planning process for Rwanda, Kigali, Rwanda.

40. Conservation trust funds may be distinguished based on their approach to providing finance for environmental activities. Endowments act as foundations that invest their capital or principal, and use only the interest on the capital to support activities, consistent with the objectives of the foundation (i.e., grant-making foundations like the Mgahinga Bwindi Impenetrable Forest Conservation Trust Fund in Uganda, which was established by GEF). Sinking funds avail both the capital and interest to finance conservation activities until they are fully liquidated. Revolving funds on the other hand, function as banks or micro-credit lending facilities, providing small loans at concessionary rates to individuals or organizations carrying out environmental activities. The interest obtained from these loans is either put back into the fund or used to finance the fund's management and operation. The GEF supported Eastern Arc Forest Trust Fund in Tanzania will use a mixture of these modalities.

41. Previous discussions have indicated a willingness by the GEF to consider supporting the creation and some level of initial capitalization for a trust fund for Ethiopia's Protected Areas. This opportunity should be immediately pursued, with the view to setup the structure (see Table below) in the first stage and to capitalize it at the onset of the second stage.

42. The most important rationale and basis for establishing a Trust Fund is a strong enabling environment for it. Government is starting to put in place a series of complementary measures to support the development of mechanisms for improving biodiversity conservation and management, and sees the Trust Fund as an important opportunity for introducing another approach outside of the public sector to do this. These include Government's strong support for the development of partnership in protected area management, and support for NGOs and private sector who are capable of delivering on the biodiversity management agenda

43. Recognizing the constraints inherent in donor-financed initiatives and public sector investment for protected areas, the government's strategic choices with respect to biodiversity conservation require the

promotion of a diverse range of instruments, institutions, and mechanisms for financing. Support for the establishment of a Trust Fund as a privately managed and independently financed institution has to be understood in this context, and a reflection of a concern that long term sustainability should increasingly be integrated into biodiversity conservation initiatives (see NBSAP, 2005).

44. Most promising, however, are the linkages that have been developed during the project preparation (PDF-B) phase with the World Bank, the Norwegian Embassy and the Nile Basin Initiative. These organizations are key players in both the upcoming Sustainable Land Management Program in the country, large-scale hydro-electric developments and watershed management initiatives under the Nile Basin Initiative. These organizations have agreed in principle that funding protected area establishment and management will be provided as components of these programs.

Lessons learnt from the previous attempt to establish a Trust Fund

45. The previous attempt to establish a Trust Fund in Ethiopia failed primarily because it was made the responsibility of one person. When that person was transferred within the government system, the Trust Fund portfolio was not transferred either with him or to another person.

46. However, in this project, *sustainable financing* will be a central feature in the protected area system. This has not been the case up to now. As such, one of the five outcomes from the first stage will be focused on developing sustainable financing plans, including the trust fund.

Table 15. The process to establish a Ethiopian Protected Areas Conservation Trust Fund based on experiences in Tanzania with the Eastern Arc Trust Fund

Step	Activity
1.	Following GEF best practice for trust funds, the Trust Fund would be launched outside of the framework of government, though with Government's clear and explicit endorsement.
2.	Satisfy four critical prior conditions (as identified in the 1998 *GEF Evaluation of Experience with Conservation Trust Funds*): i) ensure that the policy and institutional framework could support the establishment of a Trust Fund, ii) it could be justified on the basis of the globally significant biodiversity values found in Ethiopia, iii) that a Trust Fund working group should be established, iv) that a profile of the fund should be prepared
3.	During the first stage of the GEF project, there should be a focus on further development of the design of the fund
4.	A Trust Fund specialist would be employed by the project to begin the process of designing and establishing the Fund, and to work with key stakeholders and interests in the Fund
5.	Support for establishment and operation of the Fund will be done in two stages
6.	**Stage 1,** which is expected to last four years, will build the capacity within Ethiopia to carry out their respective roles in the management of the Trust Fund, and the coordination and implementation of activities.
7.	At the end of year 4, an assessment of the achievement of the agreed indicators of institutional capacity and readiness will serve to trigger the release of capital into the Fund. Indicators will include: • Successful design of the Secretariat (i.e., TOR for key positions in the Secretariat have been drafted, costed etc), following GEF best practice • A 2-year work plan is developed • A fund-raising strategy and fund disbursement strategy agreed • Finalization of the *Financial, Operations, and Management Manual* which defines and

	clarifies procedures and operations for the Trust Fund • Establishment of the Trust Fund Board • Documented significant co-financing
8.	A GEF Grant Agreement would specify that the income from the GEF investment will continue to support the incremental cost of activities that directly enhance biodiversity protection, including both direct conservation activities and assistance for development of environmentally compatible alternative livelihoods for rural populations who would otherwise bear the opportunity costs of enhanced biodiversity protection. The income stream from the GEF grant therefore will not substitute for, but will remain complementary to, continuing support from Government and others to meet the ongoing costs of meeting sustainable development objectives
9.	**Stage 2** will deal with implementation, which will begin at the start of year 5. Assistance from the GEF is requested to provide the seed capital of US $1.0 million to catalyse further capital investment

Private Capital Flows

47. Private capital flows into conservation come in a number of forms. They may be direct investments in the management of protected areas (such as in Nech Sar National Park and the proposed management of Omo National Park) or indirect investments in downstream/supportive segments of the tourism sector. They may also be direct investments in various biodiversity use options including wildlife farming, timber harvesting, ranching and/or sport hunting. One of the downstream segments of the tourism sector in Africa is tourism curio shops that sell artifacts and images of wildlife. Most such shops in Ethiopia, however, currently sell artifacts and images based on culture and history. This portfolio has to be expanded.

48. The agreement between the government of Ethiopia and African Parks for the management of Nech Sar National Park (and potentially for Omo National Park as well) is a progressive and encouraging step in i) redefining the optimal role of the state in the management of protected areas and ii) ensuring broad governance types for protected areas[16]. African Parks plans to rehabilitate, develop and manage Nech Sar and potentially Omo National Parks with the ultimate objective of transforming the currently dilapidated parks into model facilities with viable bases for tourism activities (Hall-Martin, 2004).

49. Further liberalization, financial integration and globalisation of the broader national economy will stimulate more private flows into the protected area system of Ethiopia. Once more opportunities avail themselves, deals like those for Omo and Nechisar National Parks should be negotiated and implemented. Ideally, if more organizations become interested in such management agreements, then this would be done through a transparent tendering process (that would, itself, require capacity development).

50. The parks that should be taken for private sector management should be those with the highest potential for revenue generation; in contrast, the government and/or NGOs should backstop to manage those where the revenue generation potential is low. This way, the financial revenue accrued with be optimized.

51. However, throughout this, it is imperative that well thought out and transparent guidelines are developed and strictly followed during the negotiations when entering management agreements with any organization.

[16] African Parks has pledged to spend up to US$ 30.5 million in the management of national parks in willing countries in Africa, and a specific budget portfolio of over US$ 875,000 per annum for Nech Sar National Park (African Parks Management Plan and Budget for Nechisar National Parks, 2004).

Community conservation and natural resource use rights

52. The Convention on Biological Diversity specifically requires parties to integrate the conservation and sustainable use of biological resources into national decision making (Article 10). It also requires parties to adopt measures that support/promote the sustainable use of biological resources to avoid or minimize adverse impacts, and to contribute to poverty reduction (IBC, 2004). This, by definition, demands the inclusion of local communities and other stakeholders in biodiversity conservation processes.

53. Although Ethiopia ratified the CBD and also captures the above sentiments in her National Biodiversity Strategy and Action Plan (NBSAP), conservation of biological diversity mostly remains a state-centric activity. Involvement of stakeholders is minimal and community-based natural resource management systems are not fully recognized by the government (IBC, 2004). Communities, therefore, benefit little from the protected areas of the country. This may be remedied by levying a 'community charge' over and above the normal entrance fees for a protected area. The community charge can be pegged to the opportunity costs incurred through the protected areas[17].

54. Yet *de facto* successful examples of community natural resource management and use programs exist in Ethiopia. The community-based natural resource management systems of Guassa-Menz, and the systems supported by the FARM Africa/SOS Sahel programs testify to this.

55. In addition, civet farming by local farmers (for the production of civet musk) generates considerable financial resources (see table below). Similar resources could be mobilized if Ethiopian farmers were assisted to replicate the Kipepeo Project of Kenya, and the integrated cinnamon and natural forest farms of Madagascar. The certification of such products (as organic, environmentally friendly, as contributing to conservation in Ethiopia, as environmentally and socially sustainable, as adhering to the highest levels of animal welfare) are good marketing tools for such products.

Table 16. Revenue generated from civet musk sales and sales tax, 1998-2004

Year	Sales (kg)	Sales Tax (Birr)	Export Earnings (US$)
1998	1,162.0	84,826	552,900
1999	1,131.0	82,592	509,130
2000	530.0	48,180	238,500
2001	632.5	46,172	234,625
2002	1,559.0	113,807	701,550
2003	702.0	51,289	316,170
2004	573.0	62,200	258,214
TOTAL	6,291	489,067	2,861,089

Source: Ministry of Agriculture and Rural Development, Wildlife Conservation Department, Addis Ababa, Ethiopia

[17] But see below (Annex 11) for the problems of such a mechanism because these communal benefits rarely if ever offset the costs that are incurred by individuals. Therefore, equity of benefits is essential for such mechanisms to work.

56. This project proposes the institutionalization of sustainable use systems through requisite legal and policy reforms, and well planned community conservation and natural resource use programs. Examples of community conservation programs, and requisite policy and legal reforms are available in the region (e.g., Kenya, Uganda and Tanzania), and include development of National Regulations on Wildlife Use Rights; National Policies on Community Conservation, special Export Permits and other instruments permitting the utilization of natural resources including wildlife.

Business Planning for Conservation

57. In order to organize the many ideas and sources of funding, the Protected Area Sector must be well organized and focused. One of the key instruments that can help the sector to achieve this is a business plan. The concept of business planning for conservation in Africa is now well entrenched through the Conservation Finance Program of the Wildlife Conservation Society (WCS) and The World Conservation Union (IUCN). Conservation business plans have been developed for the wildlife sectors of Madagascar and Rwanda, and the forest sectors in Uganda and Rwanda (GoU, 2003; Moyini, 2005). This should also be done for the protected areas system of Ethiopia.

58. The proposed project should therefore fund the preparation of a protected areas business plan for Ethiopia as an integral and first part of the proposed Ethiopian Protected Areas System Plan (PASP). Similar logical organization is however, also necessary at the protected area level. The project will therefore need to replicate business plans at the individual protected area levels.

Box 4: Contents of a Business Plan

A typical protected areas business plan includes an Executive Summary highlighting the enabling national legislation, mission statement and inventory of the protected area or protected area system. It also describes the management, resourcing (funds), operating expenditures and investments taking place in the protected area. A business plan therefore elaborates the financing situation, gaps and options for the protected area in question. It is also a key management, strategic planning and communication tool for the strategic planning and management of the protected area. Source: Moyini, 2005

59. The key elements of protected area business plans include articulation of the sustainable funding options for the sector with detailed elaboration of the funding situation, gaps and options; and a strategic framework for ensuring cost effectiveness through enhancing revenue generation and the cutting of costs. Business plans are management, strategic planning and communication tools which inform key stakeholders including government agencies, local communities, the private sector, investors and donors of the vast potentials in the sector. They are also effective marketing instruments that should be widely utilized (Moyini, 2005).

Conclusions and Recommendations

60. The economic benefits associated with the conservation of Ethiopia's biodiversity are high and accrue throughout the economy. Ethiopia's protected areas, for instance, generate revenue through tourism, the harvest of timber and non-timber forest products (NTFPs) including wild coffee. They also have potential to generate revenue through development of eco-tourism, and the sale of natural resource and ecosystem based products and services. Currently this revenue is not tapped.

61. Currently, the government cannot fund protected area development or conservation alone, or provide all the necessary funding for biodiversity conservation. Funding partnerships, involving private sector partners, local communities and donor contributions and probably a Trust Fund are necessary.

62. To mobilize such funding partnerships, however, requires re-organization of the sector including institutional reforms and restructuring. The analysis points to the need to create a new, autonomous and business like parastatal organization capable of generating, managing and spending resources according to sound business principles. There is also an urgent need for new staff, and new terms and conditions of service to bring in needed expertise in conservation finance, economics and tourism development and marketing. A number of proposals emerge from these conclusions:

(i) Develop a Protected Areas Business Plan as part of the ongoing process for developing the Protected Areas System Plan (PASP).

(ii) Create an autonomous protected area authority charged with the generation, management and use of both external and internally generated resources. This will be appropriately staffed, self accounting and business-like parastatal organization.

(iii) Develop protected area based business plans specifying in detail, protected area level revenue and expenditure options;

(iv) Explore various financial mechanisms/options within the framework of the proposed business plans

(v) Develop well thought out communication and marketing strategies, specifically targeting policy and decision makers, and donors. They will also support various activities aimed at further demonstrating the contribution of protected areas to economic growth and poverty reduction through, for instance, studies to estimate the protected areas' sector contribution to GDP and employment, the accurate value of the environmental services provided by protected areas and other indicators of sectoral performance. This will improve the visibility of the sector.

(vi) Develop communication and marketing strategies to target the emerging tourism markets in the middle and far East

(vii) Determine whether Debt for Nature Swaps are a possibility with the remaining five bilateral donors.

(viii) There should be strong incentives for development within the tourism sector (akin to those offered to the emergent flori- and horticulture industries). The WB/IFC could be instrumental in facilitating this.

(ix) There is a need for an independent tourism development strategy within protected areas in the country.

(x) Develop innovative revenue generating activities such as accommodation concessions within parks, user fees, levies, and sale of new and augmented products like trekking, tracking, mountain climbing, white water rafting and other nature tourism based products

(xi) Design and implement access and benefit sharing mechanisms among local communities, and

(xii) Plan and implement a Protected Areas Conservation Trust Fund for Ethiopia, with GEF capitalization facility.

Annex 10: Stakeholder Analysis and Participation Plan

1. One of the key barriers identified during the project preparation phase was the lack of stakeholder involvement. This has its root cause in a number of factors: i) the state-centric focus of the protected area system to date (thus, no legislation or policies allowing for community managed or public-community partnerships in areas, ii) state-community duality – state being unable to regulate communities and communities largely operating independently of state, and iii) a reluctance to decentralize. To this can be added the reluctance to involve stakeholders in policy or legislation, which is in part related to lack of confidence, institutional competition and poor knowledge management.

2. As a consequence, one of the key aspects of this project will be broadening governance types to allow other stakeholders become involved in the planning and management of the protected area system. In part, stakeholder participation will assist to overcome the barriers of mistrust and competition among organizations. It will also ensure and consolidate linkages among relevant organizations.

Stakeholders

3. In the PDF-B process, the lack of communication and linkages among government agencies was identified as a barrier to success and effective protected area management. Linkages are particularly important as protected areas are mainstreamed in the development framework in Ethiopia. This requires identification and involvement of the sectoral organizations in the protected area organization.

4. Other non-state actors can also provide effective services to the protected area system. These include academic institutions and NGOs that may be able to carry out specific activities such as biodiversity surveys, GIS analyses, gap analyses, environmental economics analysis, establishment of community-based natural resource management systems, catalyzing activities in and around protected areas, brokering relationships among actors and donors – and even the management of protected areas themselves.

5. Because the opportunity costs of protected areas are largely constrained to local communities, they are key stakeholders in the planning and management of protected areas.

6. However, because of the highland-lowland system of Ethiopia and the watershed of the highlands, the stakeholders involved in this project are not simply constrained to local communities and a protected area authority. Instead, the highland-lowland system and the interdependence of communities, means that stakeholder identification is complex and can involve people far from the protected area itself.

7. Finally, because of the particular international importance of biodiversity and ecological processes in Ethiopia, the international community is involved as a stakeholder. In part, the GEF is representing the international community and its concerns over the internationally important values in Ethiopia by assisting with the incremental costs for this project.

Project preparation

8. The project preparation, PDF-B phase was a team process, led by National Project Coordinator, supported by a Technical Advisor with five years' protected area experience in Ethiopia. The team also included inputs from five Ethiopian specialist consultants supported by two regional experts from Uganda. The consultants covered the themes of i) Sustainable Financing (national and regional specialists), ii) Capacity Development and Institutional Arrangements (national and regional specialists), iii) Gap Analysis and Policy Review, iv) Community and Stakeholder Analysis and v) Demonstration Sites.

9. Oversight for the PDF-B phase was provided by a National Steering Committee (NSC) of 12 people, chaired by State Minister for Natural Resources and political support increased over the course of the

phase. Members of the NSC included representative from different agencies of the federal and regional governments, civil society organizations, and academic organizations. The NSC met three times to date and is due to meet twice more in the coming months.

10. The project preparation phase included a number of formal meetings, workshops, formal and informal discussions. Over the course of the PDF-B phase, an estimated 375 people were consulted at the federal, regional and local levels. They included sectoral ministries, regional governments, protected area wardens and scouts, local communities, NGOs, CSOs, academic organizations, donors and private sector organizations.

11. Close relationships were forged among donors, including the World Bank, to ensure comprehension of the development issues related to protected areas and most importantly the role that protected areas should play within the development context within Ethiopia. The possibility of co-finance for protected areas linked with development – such as the construction of hydroelectric dams – was discussed and agreed in principle.

12. A series of discussions with African Parks ensured the sharing of information and ideas, and led to the convergence of views.

13. The project development team has been involved in the development of the SDPRP II, particularly in the development of the indicator matrix. This is the key to the document as it is on the indicator matrix that the government and donors focus in the forthcoming five years. This will significantly enable protected areas to take their position in the mainstream of development within the country.

14. Finally, there has been strong links with the tourism sector, not only among private operators within the country but also with the World Bank led initiative to develop the sector.

15. As a result, a stakeholder meeting was held on 28 July 2005 to discuss the broad root cause and barriers analysis, and the interventions to be undertaken. The stakeholders endorsed the analyses and the proposed interventions, as did the NSC on 29 July 2005. In addition, these sectoral approaches fed up into the National GEF Committee (chaired by Ministry of Finance and Economic Development, MoFED) on 30 July.

Project implementation

16. Stakeholder participation will be a core value of the implemented project and will operate throughout the project at all organizational and institutional levels.

17. At the protected area organizational level, a board for the protected area organization will be established. This will include representatives from key cross-sectoral governmental agencies (Ministry of Water Resources, Ethiopian Tourism Commission and Environmental Protection Authority), non-governmental, academic and private partners. The organization will have representation within the regional governments; their main role will be to ensure linkages within the regional government agencies or bureaus, and to provide oversight to the management of the protected areas within their particular region.

18. It is essential that, in contrast to the current practice, stakeholders are included in the development of policies, regulations and legislation. In order to facilitate this, until this is integrated into the protected area organization's own budget, such stakeholder consultations will be funded by the GEF project

19. At the site level, a number of steps will be taken to ensure stakeholder participation. First, a joint management committee will be the primary oversight body for the management of a given protected area. The joint management committees will include key stakeholders – thus possibly including but not limited to: local communities or representatives thereof, communities further away if they are dependent on the resources from a particular source (and the best example is water), civil society organizations, local authorities (at the woreda level and if relevant at the kebele level), local law enforcement authorities,

donors and sectoral agencies. The joint management committee will thus be the primary body for ensuring linkages among the stakeholders and actors in the areas.

20. The Bale Mountains project will trial and demonstrate effective mechanisms for stakeholder identification at the site level. Importantly, because the Bale Mountains represents the watershed for the majority of the southeast of Ethiopia and for Somalia, and because of the international importance of the biodiversity, the stakeholders are not just local, but they include communities far removed from (but dynamically interlinked with) the area. The project will then negotiate with the stakeholder communities (primarily local) for access to and use of resources but taking into account the sustainable needs of other (downstream) communities and stakeholders.

21. By definition, local communities will be central to the community-based protected areas.

22. However, in the limited harvesting areas, the relationships are less clear but as important. The inclusion of local communities and the government in limited harvesting areas will be formalized through legitimate agreements that will be drawn up and signed. These will indicate the roles of these stakeholders in the management of the area.

23. Thus, stakeholders will be involved in planning and management of protected areas.

24. Stakeholders will not just be involved in the planning and management of areas. Their involvement in the monitoring and evaluation is also essential to ensure transparency. For example, it will be necessary for local communities to be involved in the monitoring and evaluation of the limited harvesting areas. In part, this is to ensure that the community benefits of these areas are realized.

25. In addition, contracts will be awarded for a number of independent assessments as part of the monitoring and evaluation framework.

26. The Knowledge Management System, developed as a part of Outcome 3, will assist with stakeholder involvement – thus, ensuring i) the exchange of ideas and experiences among government organizations both at federal and regional levels and ii) that lessons learnt and the good practice model will be adapted as a result of monitoring and evaluation practices. The system will not only operate at the federal and regional government level. The joint management committees that will be established at a site level will also have the opportunity to share ideas, practices and experiences through the system. In order to ensure this, the project provides (until such time as the sustainable financing mechanisms are in place and knowledge management becomes an integral part of the organizational budgets) for exchange programs, guidance materials, study tours and secondments to ensure knowledge and experiences are widely shared and replicated.

Annex 11: Protected area categories, planning processes and guidelines

27. As mentioned in the main body of the project document (section 3.2.2), the current categories of protected areas in Ethiopia are limited and require redefinition. Most importantly, they are state-centric and do not allow for other governance types, with the exception of the recent progression to allow for private sector management. Thus, even with the new policy and the law that is in progress, the definition of protected areas and the possibilities for governance types is not clear. Thus, the current categories and the guidelines associated with them are not clear about the roles and responsibilities of different stakeholders and on the mechanisms to ensure that these roles and responsibilities, with their biodiversity conservation implications, are legally binding.

28. One key shift in the redefinition of protected areas envisaged in this project is to move from the historic division between wildlife and forest areas to focus more on the *governance type* of a given area. This will give a unified approach to the areas with a focus on the management effectiveness of the areas.

29. A second key shift will be that the redefinition of the areas will provide a conservation and social framework for protected areas in Ethiopia. Thus, while the major objective of the areas will be biodiversity, ecosystem and/or ecological process conservation, given the socio-economic situation in Ethiopia, they will have a demonstrable, direct or indirect, impact on poverty reduction.

30. Further, a key barrier to effective management of protected areas in Ethiopia has been the overtly state-centric structure. This will be overcome not only through the redefinition of governance types but also inclusion of stakeholders in the management of the protected area system. At a site level, stakeholders, including local communities and authorities (primarily woredas but, where pertinent, kebeles), will be involved in the planning, management, and monitoring and evaluation. Stakeholder involvement will be based on partnerships that are formed in each protected area.

Planning processes

31. As also mentioned in the body of the project document, there is a need to rationalize the protected areas of the country. This will entail reexamining all existing protected areas and reclassifying them according to these protected area categories. Part of this process will include declassification of those areas whose conservation value is irreversibly eroded. Alternatively, if only a sub-section of the existing, nominal area retains conservation value and efforts must be focused on these areas, including legal recognition and securing agreements from stakeholders on those areas. A good example is the Borana Controlled Hunting Area which covers the majority to the far south of Ethiopia. Much of this area is heavily impacted by human use and has lost its conservation value. Within the area, however, there are areas that are important for their biodiversity, ecosystem and/or ecological process value. The process of reclassification would, in this case, declassify those areas where human impacts are great and the cost of their rehabilitation cannot be justifiably covered but focus on identifying the areas where conservation efforts should be focused.

32. As such, the process will build on current protected areas, albeit that many of them are nominal. In addition, the gap analysis will examine in detail the areas of significant conservation value that are not currently included in the protected area system. As in the Bale Mountains area planning process, where possible (i.e., when the boundaries of the area are not immediately definable through geographic or human created features) the process thereafter will entail zooming out from the existing (nominal) boundary to a landscape level. The process thereafter will involve a landscape level planning process to identify those areas of outstanding value. In this context, 'value' will be measured by: i) its conservation value from the biodiversity, ecosystem(s) and/or ecological process(es) harbored within the area and ii) its socio-economic value.

Protected area costs, values & compromises

33. In the project preparation process, the team was often confronted with the question: "protected from whom?" This question reflects two main things: i) that protected areas are seen to be in conflict with local communities and ii) that protected areas are rarely, if ever, seen in their regional, national or global context.

34. In turn, this reflects that the opportunity costs of protected areas are localized but their values are often regional or global. Thus, the costs of human-wildlife conflict (e.g., depredation by large carnivores of livestock or crop damage by large herbivores) are most often incurred at a household level. Similarly, the costs of reduced or loss of access to and use of natural resources can also be incurred at a local level. These costs to local communities are rarely offset through financial benefits, whether it be through community conservation fees that might be charged in addition to other protected area fees or through community-based tourism initiatives. These financial benefits are often communal and thus do not offset the individual or localized costs of protected areas. There is also the propensity to focus only on the (measurable) financial gains for local communities – arguing that the costs (whether livestock or crop or opportunity losses) can be indirectly quantified into currency. However, experiences in Ethiopia indicate strongly that local communities perceive that there are numerous other benefits to be gained (see table below). Moreover, the benefits, whether they be financial or otherwise, are likely to be long-term gains which need to be weighed up against the short-term costs.

35. In contrast, the costs of *not* protecting the biodiversity, ecosystems and ecological processes can be widespread – thus, not just local. As has been mentioned extensively through the document, in Ethiopia, the watershed values extend well beyond even the borders of the country. Thus, local overexploitation can lead to significant long-term costs to stakeholders far removed from the source of the resources. The value of such environmental services needs to be accurately estimated to make convincing arguments for decision makers.

36. In addition, a simple but important point is the uniqueness of the biodiversity of Ethiopia. Once it is gone, this is irreversible!

37. Resolving the local, regional, national and international costs and benefits of protected areas obviously demands a compromise depending on the values involved. Making the decision on the relative value of the protected area with appropriate categorization is, therefore, not simple and done properly would involve complex cost-benefit analyses that would include some parameters (e.g., responsibility, inclusion in planning processes) that are difficult to quantify.

38. Finally, it is recognized that protected areas require financial resources to ensure their management effectiveness[18], with different categories requiring different levels of funding. Up to now, in Ethiopia, the financial resources that have been made available for protected area management have been low: across the protected area estate in Ethiopia, only 5% of the globally estimated average requirement per unit area is provided[19]. It is futile to decide to protect an area before some level of sustainable financing planning. One of the main objectives of the GEF is to offset environmental incremental costs. These are the additional costs to ensure that global benefits of the environment – and in this case of the protected area system – are realized. This assumes that the system is currently fulfilling its national or local objectives. This is not the case because of the root causes and barriers (see the analysis elsewhere in this document).

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[18] cf. the Guassa-Menz area of Ethiopia which has operated as a successful community-based natural resource management system that has effectively protected the biodiversity of the area as well as contributing to the livelihood security of the local community – *without* the need for financial inputs.

[19] cf. the Simien Mountains National Park, where the funding is currently *higher* per unit area than this global average.

Table 17. The potential costs and benefits of protected areas to both local and regional and international communities. Note that the costs assume poor management while benefits assume effective management of protected areas which includes agreement by stakeholders

	Locally	**Regionally, internationally**
Costs	- Poor management leads to *de facto* open access to resources – and subsequent degradation - Human-wildlife costs (loss of crops or livestock) - Loss of responsibility, control and/or decision-making ability; no stakeholder involvement - Opportunity loss (restricted access to or use of resources) - Economic benefits are diffuse and accrue to society in general; local costs not offset by economic gains	- Loss of internationally valuable biodiversity, ecosystems and/or degradation of ecological processes
Benefits	- Economic benefits (community-based tourism and associated service provision, community-conservation fees) - Sustainable natural resource base - Rights of access to and use of natural resources with associated responsibilities - Involvement in decision making processes - Development, usually infrastructure, inputs (roads, power) - Capacity development (individual and across community) - Improved livelihood security through diversification - Increased natural capital - Reinforced socio-cultural values - Sense of local pride	- Economic benefits are diffuse and accrue to society in general - Protection of internationally important i) endemic and/or threatened species, ii) areas of outstanding natural beauty, iii) areas with ecological processes that are valuable beyond the local surroundings and iv) unrepresented ecosystems

Stakeholder participation

39. Therefore, there are costs and benefits that need to be considered before reaching the compromise that determines whether or not a protected area is warranted and, if so, the category of protected area that should be implemented. It would be both arrogant and undemocratic to impose the conclusion of this decision making (if, say, it were based on an academic exercise to determine the ecological or biodiversity values alone). Indeed, it is implicit in a *compromise* that some negotiation has occurred.

40. As described elsewhere in this document, the highland-lowland system that characterizes Ethiopia means that stakeholders may not just live in the near vicinity of an area but they may be far removed from the source of the resources on which they depend. Water is the most obvious example of this, but GEF is willing to consider funding the protected area system in Ethiopia because of the global value of its biodiversity alone.

41. Stakeholder identification is therefore an important step in the process of protected area planning and it needs to be as exhaustive as possible. All stakeholders (or representatives thereof) will be consulted in planning processes to arrive at the compromise position through negotiation. One important issue in the negotiation process is that the participants have sufficient capacity to enter into the process; capacity development and awareness creation are important parts of the process. No community representative will accept core conservation areas before being aware of the regional, national and international benefits of the area – and hence over which values the compromise will be reached.

42. The objective of categorizing protected areas is to allow for three options or generalized compromise positions at which to arrive following negotiations: i) community-based natural resource management systems, ii) the core conservation area, and iii) the limited harvesting areas. Each of these categories sets the management framework for realizing social and environmental goals; the corollary of this is that the categories set the environmental or conservation framework for use of the area. From the point of view of local communities, these represent, respectively: i) rights of access to and use of resources with the associated responsibilities, ii) no access to resources but participation in management and planning processes, and iii) a partnership with the private sector over limited harvesting of resources with negotiated and agreed benefits.

Protected area categories and their guidelines

43. All protected area management will use conservation targets[20] to design eco-regional portfolios, and develop and prioritize conservation strategies (TNC, 2004). Conservation targets are defined as being specific components of biodiversity, usually consisting of ecosystems, natural communities and species within a given area that are identified by biodiversity experts. They are aspects of the area that if their conservation is assured, then they will ensure the conservation of the whole ecoregion. As such, they function in a similar way to the 'keystone' species concept.

44. Human-induced threats – both direct and root causes - to the conservation targets will also be identified. Further, spatial mapping of the threats can identify the areas of the protected area with the greatest need for focused effort.

45. In all sites and across the system, there will be a strong emphasis on monitoring and evaluation, and adaptive management. The World Bank/WWF Management Effectiveness Tracking Tool (METT) will be used as the principal means for monitoring the effectiveness of individual protected areas. The assessment of the management effectiveness in each area will be done through re-application of the METT every year through the project's life and will be institutionalized as the mechanism for monitoring effectiveness thereafter. In each site, there will be further monitoring of the conservation targets (or the ecological attributes for each target that are identified) and the threats associated with them.

46. The following guidelines for the management of the three categories of protected area will become regulations following a participatory process to secure their amendment, as necessary, and agreement in Yr 1.

[20] An example is the agreed conservation targets for the Bale Mountains: i) the riparian systems & watershed, ii) the Harenna Forest, iii) the Ericaceous belt, iv) the northern grasslands, v) the northern woodlands, vi) the Afroalpine ecosystem, vii) mountain nyala and viii) the Ethiopian wolf.

Community-based natural resource management systems

47. These areas are those with the objective of achieving sustainable use of natural resources by local communities.

48. They incorporate natural resource management systems, whether they be traditional or ancient, or those that are currently fully functional in Ethiopia. Examples of ancient or traditional natural resource management systems abound in Ethiopia, one being the Guassa-Menz system in north Shoa. They also incorporate the recent attempts to achieve sustainable natural resource management systems; in fact, many of these 'modern' examples build on existing or traditional systems that, often, have declined under the social reform of the militarist-Marxist regime of the Derg (1974-1991). Examples of these include the FARM Africa/SOS Sahel and GTZ models of participatory natural resource management.

49. Where possible, they will incorporate the current wildlife reserves and a number of forest priority areas.

50. In general, they will incorporate those areas that do not warrant becoming core conservation areas (thus, the loss of opportunity costs outweigh the national, regional or international benefits) - or, alternatively, these benefits can be justifiably attained through this governance type.

51. They will focus on the complete range of natural resources on which rural people are dependent – thus, could incorporate local communities using fish, forests, wildlife, wild plants, grazing, etc. This precludes agricultural areas because of the irreversible effect that it has on biodiversity.

52. In an ideal world, they would extend throughout the country – therefore, working to the goal of sustainability for the country. However, this project aims to produce good practice products; these will be replicable and may be scaled-up to other areas in the country.

53. By their definition, they will be included in the landscape areas (see below), but they may also be independent of landscape areas.

54. The Guassa-Menz example demonstrates that financial inputs and recurrent costs can be minimal even in effectively functioning community-based protected areas. This requires comprehending the linkages between the regulated use of natural resources and sustainable livelihoods for local communities. It also requires the comprehension that the rights of access to and use of resources comes with the responsibility to manage the resources sustainably.

55. Many 'modern' examples around the country that build on or rebuild (because of their decline during the Derg) traditional systems require some level of financing because of the process needs: i) to identify accurately stakeholders, ii) to renegotiate access to and use of resources, and iii) to arrive at and prepare agreements (to be signed between the local community representatives and the government) that permit legitimate access to and use of resources.

56. Because of the current disconnect between the government and local communities and until such actions become mainstreamed, arriving at, drawing up and implementation of agreements between the government and local communities will have to be brokered or mediated, usually by a technical partner. Current examples show that this is the case.

57. The process that will be used to establish natural resource management systems will be based on the good practice model developed by the FARM Africa/SOS Sahel Participatory Natural Resource Management Unit (Tache & Irwin, 2003). This is a four-step process of: i) stakeholder identification, ii) resource identification, iii) mediated negotiation and agreement and iv) implementation.

58. Environment modifying activities will be minimized in these areas, if not altogether stopped. In addition, because there are profound dangers of influxes of people and accelerated degradation during the planning and negotiation processes, moratoria will be sought on environment modifying activities (most importantly, agricultural expansion and settlement) during these stages. This is based on the principle

that all the viable agricultural land is already occupied and that further expansion of agricultural land into marginal areas will lead: i) to land degradation, and ii) biodiversity loss. Such moratoria are akin to the moratorium on mining, forestry, agricultural expansion and settlement that has been imposed by the Madagascan government in all *potential* protected area sites for two years while the actual protected areas are identified for a list of potential sites.

59. The sustainability of the system rests, in part, on the legitimate recognition through signed agreements of the natural resource management system that results from the process.

60. Care will be taken to ensure that if sustainable natural resource practices are implemented in a given area then the unsustainable practices are not simply displaced to adjacent areas – thereby accelerating degradation. In order to reduce this, planning will take place at a landscape level whenever possible.

61. Each community-based protected area may develop its own business plan (based on the model business plan that will be developed for the system). The business plan is primarily aimed at describing the way in which the protected area is to be developed, managed and financially resourced, as necessary, in order for management to enhance its operational efficiency and optimize its income generation. The plan would identify mechanisms for ensuring equity among stakeholders with regard to sharing the benefits, whether economic or not. The basis of this is the development of results-based management and financing. The business plan should i) identify and describe financial resources, ii) seek to make financial projections for viable and innovative tourism opportunities (including accommodation development within the protected area) that would benefit biodiversity conservation and iii) include an investment and marketing plan that will identify innovative ideas for attracting investors and donors to the protected area system, and for generating revenue. Thus, there will be an overall sustainable financing plan developed for each protected area to fit into the system's sustainable financing plan.

62. Monitoring and evaluation will be carried out by the local community in partnership with the technical partner until such time as the community has the capacity to do it itself.

Core conservation areas

63. These will be identified when the results of the cost-benefit analysis indicate that the national, regional and international benefits outweigh the opportunity costs to the local communities, even in a sustainable natural resource management system. The benefits may include: i) endemic and/or threatened species, ii) areas of outstanding natural beauty, iii) areas with ecological processes that are valuable beyond the local surroundings, iv) potential tourism value for the nation as well as local community, and v) unrepresented ecosystems.

64. Human activities will be limited in these areas to scientific research and tourism and even these may be zoned within the area.

65. As a result of the above guideline and because people live in all protected areas in the country at present, those people will need to move out of the identified core conservation areas. This resettlement will be strictly undertaken on a voluntary basis; it will, therefore, be as a result of: i) a mediated negotiation where the reasons why people will need to move with not only be clearly understood by those people, but they will agree to move, ii) ensuring that there is appropriate 'pull' for people to move – this could include access to services and secure land tenure, and iii) access to other benefits including involvement in the planning and management of the protected area. The movement of people will not be planned without their consent.

66. The category will include those currently listed as National Parks, Wildlife Sanctuaries and those forest priority areas that warrant this level of protection because of the biodiversity, ecosystem and/or ecological process values. Subdivision and splitting these categories is not justified because the mechanisms of management are the same.

67. The boundaries of the areas will be agreed on the basis of a cost-benefit analysis of the key biodiversity areas and the needs of stakeholders. The boundaries will be agreed through mediated negotiation with the stakeholders.

68. As with all areas, the core conservation areas will work towards the conservation of identified conservation targets.

69. They will be managed under formalized partnerships including but not restricted to public-private-civil society-community. The basis of the partnerships will be the negotiation of the optimal role for the partners in the management of the area

70. Management oversight will be carried out under a joint management committee that may include but not be restricted to representatives from local authorities (at least at woreda level and where advantageous at kebele level), local community representatives (possibly harnessing traditional systems), technical partners (NGOs), private sector (tourism), donors, cross-sectoral organizations (e.g., water resources authorities where watershed management is an important issue) and the management authorities.

71. The management of the areas will be underpinned by business plans that will be developed for each protected area. The business plans will define the operational standards for activities. At the basis of this will be results-based financing. The business plans will seek strategies for reducing operational costs while also seeking strategies to increase revenues. Communications documents will be planned and produced to ensure that marketing and investment is appropriately planned and implemented.

72. Where the management of an area is undertaken by an organization other than the state, the tender for the concession will be advertised in standard advertising newspapers. Private sector organizations or other organizations (thus, including but not restricted to NGOs, academic institutions, indigenous people and/or local communities) may bid for the management of the areas. Bids will be judged on agreed criteria that demonstrate the commitment of the organization to ensure the environmental and social sustainability of the area. Bids will also be subject to a detailed Environmental Impact Assessment (EIA). Monitoring and evaluation – and how stakeholders and primarily local communities are incorporated into it – will be a key criterion on which the bids will be judged. Bids will be managed transparently. In the circumstances that there is only one bid, the proposal will be judged on its merits to achieve conservation targets, and environmental and social sustainability for a given area. The management of areas, whether by the private sector or civil society organization such as NGOs, academic institutions, indigenous people and/or local communities will be done through a legally binding contractual agreement with the government (akin to the agreements into which African Parks has already entered into with the government).

73. Trans-boundary protected areas will be managed and operated in the same way as any other protected area with the added agreement being sought between the government of Ethiopia and the adjacent nation state. Representatives from the adjacent state will be included in the joint management committee for the area.

74. Each core conservation area will develop its own business plan (based on the model business plan that will be developed for the system). The business plan is primarily aimed at describing the way in which the protected area is to be developed, managed and financially resourced in order for management to enhance its operational efficiency and optimize its income generation, thus reducing its dependency on subsidy. The basis of this is the development of results-based management and financing. The business plan should i) identify and describe financial resources, ii) seek to make financial projections for viable and innovative tourism opportunities (including accommodation development within the protected area) that would benefit biodiversity conservation and iii) include an investment and marketing plan that will identify innovative ideas for attracting investors and donors to the protected area system, and for generating revenue. Thus, there will be an overall sustainable financing plan developed for each protected area to fit into the system's sustainable financing plan.

Limited harvesting areas

75. Limited harvesting areas may or may not be part of a landscape protected area (i.e., they could be encompassed by area of landscape area but other areas could be further away and independent of landscape areas.

76. Limited harvesting areas will incorporate sport hunting concession areas and limited timber extraction concessions.

77. As with all areas, the limited harvesting will have the legal obligation to achieve identified conservation targets. The identification of conservation targets, as with other areas, will be carried out in cooperation with biodiversity or ecological expertise within the country. The conservation targets will be related to the abundance and population structure of the target species.

78. Thereafter, the concessionaire will be able to set the quotas for the area and will have to take into account the conservation targets. This again should be taken in the context of the above: the concessionaire will be legally obliged to achieve identified conservation targets. Failure to do so will result in loss of the concession, loss of the license to operate in Ethiopia and, potentially, legal proceedings. Hence, they should be conservative.

79. The areas can be proposed by any interested person (including sport hunting companies, timber companies, NGOs, etc) so long as they fall outside core conservation areas.

80. Once identified and delimited (in agreement with stakeholders including local communities), the tender for the concession will be advertised in standard advertising newspapers. Private sector organizations or other organizations (including NGOs) will bid for the management of the areas. Bids will be judged on agreed criteria that demonstrate the commitment of the organization to ensure the environmental and social sustainability of the area. Monitoring and evaluation – and how stakeholders and primarily local communities are incorporated into it – will be a key criterion on which the bids will be judged. Bids will be managed transparently.

81. Management concessions will be awarded on the basis of the above process. Legitimate agreements will be drawn up and signed between the organization that submitted the winning bid and the government. The partnership between the concessionaire and the local community will also be formalized through a similar agreement (and may be the same agreement as that signed with the government).

82. The concession agreements will run for a period of six years; these will be shunted forward every second year *depending on the demonstration of achieving the conservation targets for the area*. Thus, in theory, the concession for the area could run *ad infinitum* so long as the conservation targets were being met and the environmental and social sustainability was being ensured. The fee for the concession will be re-negotiated every six years.

83. However, if the targets are not met or if there is a demonstrable loss of environmental or social sustainability, the concessionaire will lose the concession to the area and will lose the license to operate in the country. The concession will then be re-advertised.

84. Funds may be raised by the concessionaires to assist with ensuring the effective management of the areas.

85. The concessionaire will be eligible to set harvesting quotas for the area bearing in mind that the conservation targets and environmental and social sustainability is dependent on their management of the area. There is, therefore, much responsibility attached to setting the quotas.

Landscape areas

86. As mentioned above, where possible, further planning protected areas (including those that exist) will be carried out at a landscape level – thus, at an eco-region or ecosystem level. An eco-region is defined as a large unit of land and water typically defined by climate, geology, topography and associations of plants and animals and/or ecological processes. Eco-regions, not political boundaries, provide a framework for capturing ecological and genetic variation in biodiversity across a full range of environmental gradients. Eco-regions encompass more than one ecosystem such as in the Bale and Simien Mountains areas. This will ensure that i) core conservation areas will be surrounded by community-based natural resource management systems and ii) accelerated degradation does not occur in adjacent areas when over-exploitative practices are simply displaced.

87. Landscape areas will always include a core conservation area and community-based protected areas (following the guidelines mentioned above), and may include a limited harvesting area. There will be an overarching oversight joint management committee for the landscape area that will be drawn from the committees for the core conservation area, the community-based areas and, where relevant, from the limited harvesting concession areas.

88. Moratoria will be sought on environment modifying activities (most importantly, agricultural expansion and settlement) within landscape areas.

Annex 12: Monitoring and evaluation framework

1. Monitoring and evaluation (M&E) will be an integral activity of all objectives. The M&E framework will have a number of objectives:

a. Provide stakeholders and partners with information to measure progress

b. Determine whether expected impacts have been achieved

c. Provide timely feedback in order to ensure that problems are identified early in implementation and that appropriate actions are taken

d. Assess the project's effectiveness in protecting biodiversity

e. Evaluate the benefits accruing to communities and other beneficiaries

f. Appraise the underlying causes of project outcomes (positive or negative)

g. Track the level and quality of public participation in conservation activities.

2. The project will be implemented through an adaptive framework that feeds the findings of M&E into operational planning, thus enabling management strategies and activities to be adjusted as necessary.

3. A number of impact and progress indicators have been selected (see Logframe analysis in Annex 3b) at the goal, objective, and output levels.

4. The project M&E will include:

a. Two independent, external evaluations (one at the end of the first stage specifically to determine whether the 'triggers' for the second stage have been achieved)

b. Three internal evaluations (one during the Inception stage at the beginning of the project and one at the mid-term of each stage)

c. Annual METT assessments that will be carried out in each protected area (see detailed METT baseline scores below)

d. Site-level monitoring of key ecological attributes associated with each conservation target and the threats to them

e. Annual audited accounts for the project throughout its duration.

5. M&E will be carried out at each level within the system, but the primary indicator for the protected area system – including individual protected areas will be the METT scores.

System-wide monitoring

Key Performance Indicators	**Means of verification**
▪ Approval and adoption of the Protected Area System Plan by the Council of Ministers	▪ Council of Minister approval for the Protected Area System Plan (Yr2)
▪ Percentage cover of protected areas in the country	▪ Data from protected areas organization
▪ Percentage representation of ecosystems in the protected area system	▪ Data from protected areas organization
▪ Net improvement in management effectiveness of protected area estate	▪ System METT score
• The major indicators from this plan have been adopted in the SDPRP II	▪ *They have already been accepted* ▪ Publication of the SDPRP II (Yr 1)
• Increased protected area in major watersheds with secured co-financing	▪ Data from protected areas organization
• Protected areas are adopted as a key area of the	▪ Publication of the national sustainable land management

Key Performance Indicators	Means of verification
sustainable land management program	program
• Linkage with and adoption by tourism sector of protected areas as one of the key marketing strategies	▪ Publication of national tourism strategy
• Approval and enactment of amended policy and new legislation	▪ The amended policy and legislation are approved and enacted by the Council of Ministers and the House of People's Representatives
• Adoption of good practice model for each category of protected area	▪ Plans for six sites, stage II
• Gap analysis complete	▪ PAS database established ▪ Gap analysis report
• Financial sustainability plan is being implemented	▪ Production of sustainable financing plan
• Trust Fund established, capitalized and income generated	▪ Trust Fund annual reports
• Revenue generated by sustainable financing mechanisms	▪ Audited reports from protected area organization

Institutional

6. Individual monitoring and evaluation by supervisors relative to results-oriented workplans

Key Performance Indicators	Means of verification
▪ Approval and adoption of the Protected Area System Plan by the Council of Ministers. The plan is being implemented.	Council of Minister approval for the Protected Area System Plan (Yr 2)
• Linkage with and adoption by tourism sector of protected areas as one of the key marketing strategies	▪ Publication of national tourism strategy
• Approval and enactment of amended policy and new legislation	▪ The amended policy and legislation are approved and enacted by the Council of Ministers and the House of People's Representatives ▪ METT scores for gazetted sites ▪ System METT score
• Institutional re-structuring, mandate definition and staffing complete	▪ Data from protected area organization
• Protected Area System Plan adapted, adopted and implemented	▪ Independent assessment of PASP ▪ Council of Ministers approval of PASP
• Staff skill level	▪ Independent survey of skills using stratified sampling across all ranks ▪ Individual M&E system and incentive mechanisms in place ▪ Annual reports indicating qualifications of employees
• Career development planning for staff within protected areas organization	▪ As above
• Adoption of good practice model for each category of protected area	▪ Plans for six sites, stage II
• In-country training institutional capacity built	▪ Independent assessment of training institutions ▪ Number of graduates from training institutions
• Gap analysis complete	▪ PAS database established ▪ Gap analysis report
• Financial sustainability plan is being implemented	▪ Production of sustainable financing plan

Site level

Key Performance Indicators	Means of verification

Key Performance Indicators	Means of verification
• Individual protected areas use business planning as a standard tool for protected area management planning and monitoring	▪ Existence of business plans ▪ Existence of monitoring plans
• Staff skill level	▪ Independent survey of skills using stratified sampling across all ranks ▪ Individual M&E system and incentive mechanisms in place
• Career development planning for staff	▪ As above
• Management effectiveness of protected areas	▪ Annual METT scores ▪ All demonstration sites gazetted
• Joint management committees	▪ Minutes of joint management committee meetings
• Proportion of budgets being offset by sustainable financial mechanisms • Sustainable financial mechanisms, including tourism, are providing recurrent costs for demonstration sites	▪ Annual audit reports, protected area organization ▪ Financial audits

Table 18. The detailed METT scores for protected areas in Ethiopia

	Babile Elephant Sanctuary	Awash National Park	Senkele Sanctuary	Alatish (proposed)	Simien Mountains National Park	Nech Sar National Park	Bale Mountains National Park	Omo National Park	Maze	Guassa-Menz Community Area	Yangudi-Rassa National Park	Gambella National Park	Chebera
Legal status: Does the protected area have legal status?	0	3	0	2	3	1	1	0	2	0	0	0	2
Protected area regulations: Are inappropriate land uses and activities (e.g. poaching) controlled?	1	1	0	1	1	1	1	1	1	2	1	1	1
Law enforcement: Can staff enforce protected area rules well enough?	1	1	1	0	1	1	1	1	0	1	1	0	0
Protected area objectives: Have objectives been agreed?	1	2	1	1	1	0	2	1	1	2	1	1	1
Protected area design: Does the protected area need enlarging, corridors etc to meet its objectives?	1	2	1	0	1	0	1	2	0	2	2	2	0
Protected area boundary demarcation: Is the boundary known and demarcated?	0	1	1	3	2	1	1	2	3	2	2	1	3
Management plan: Is there a management plan and is it being implemented?	0	1	0	0	1	0	2	0	0	1	0	1	0
Additional points	0	1	0	0	0	0	0	0	0	1	0	1	0
Regular work plan: Is there an annual work plan?	1	1	1	0	1	0	1	2	0	0	1	1	0
Resource inventory: Do you have enough information to manage the area?	1	2	2	1	2	1	1	2	1	2	0	1	1
Research: Is there a programme of management-orientated survey and research work?	1	2	2	0	1	1	2	1	0	1	1	1	0
Resource management: Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?	0	1	1	0	1	1	0	1	0	1	1	1	0
Staff numbers: Are there enough people employed to manage the protected area?	1	1	1	0	2	1	2	1	0	0	1	1	0
Personnel management: Are the staff managed well enough?	0	0	0	0	1	1	1	1	0	0	1	1	0
Staff training: Is there enough training for staff?	1	1	1	0	1	1	2	1	0	0	1	1	0
Current budget: Is the current budget sufficient?	1	1	1	0	1	2	1	1	0	0	1	2	0
Security of budget: Is the budget secure?	1	1	1	0	1	2	1	0	0	0	0	0	0
Management of budget: Is the budget managed to meet critical management needs?	0	1	1	0	2	2	0	1	0	0	1	1	0
Equipment: Is equipment adequately maintained?	0	1	1	0	1	1	2	1	0	0	0	0	0
Maintenance of equipment: Is equipment adequately maintained?	0	0	0	0	1	2	1	0	0	0	0	0	0
Education and awareness programme: Is there a planned education programme?	0	1	2	0	1	1	2	1	0	1	0	0	0

State and commercial neighbours: Is there co-operation with adjacent land users?	1	1	1	0	1	1	0	1	0	3	1	0	0
Indigenous people: Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?	0	1	0	1	1	0	0	1	1	3	0	1	1
Local communities: Do local communities resident or near the protected area have input to management decisions?	0	1	0	1	1	0	0	1	1	3	0	1	1
Additional points	0	0	0	0	1	0	0	1	0	1	0	0	0
Visitor facilities: Are visitor facilities (for tourists, pilgrims etc) good enough?	0	1	0	0	1	1	2	0	0	1	0	0	0
Commercial tourism: Do commercial tour operators contribute to protected area management?	0	1	0	0	1	0	1	1	0	0	0	1	0
26. Fees: If fees (tourism, fines) are applied, do they help protected area management?	0	1	1	0	1	3	1	2	0	0	0	1	0
Condition assessment Is the protected area being managed consistent to its objectives?	1	0	0	1	1	0	1	2	1	2	1	2	1
Additional points	0	0	0	0	0	1	0	0	0	0	0	0	0
Access assessment: Are the available management mechanisms working to control access or use?	0	1	0	0	1	1	0	1	0	2	0	0	0
Economic benefit assessment: Is the protected area providing economic benefits to local communities?	1	0	0	0	2	1	2	2	0	3	1	1	0
Monitoring and evaluation:	0	1	0	0	1	1	0	1	0	2	1	0	0
TOTAL SCORE	**14**	**33**	**20**	**11**	**38**	**29**	**33**	**33**	**11**	**36**	**16**	**24**	**11**

Table 19. Outline data for the Bale Mountains National Park METT. Similar data for all assessed protected areas are available and held in a database that has been established in the Ministry of Agriculture and Rural Development.

Name of protected area	**Bale Mountains National Park**
Location of protected area (country and map reference)	Ethiopia; UTM 37N 585000E 751000N (approximate central point)
Date of establishment	1969 (established), 1974 (boundary description), 1986 (revised boundary description), not gazetted
Ownership details	State owned
Management authority	Managed by Oromiya Regional State
Size (ha)	247,100ha
Number of staff	40 permanent
Budget	ETB 263,740 ≡ US$ 30,525 (or US$ 12.4/km²/year)
Designations	-
Reason for designation	-
Brief details of all relevant projects in protected area	DGIS-WWF project (1999 – 2004; failed); FZS Bale Mountains Project (ongoing); BMNRMP (proposal being finalized; funding pledged)
List the two primary objectives of the area	
Objective 1	Biodiversity conservation
Objective 2	Watershed management
List the top two most important threats to the protected area	
Threat 1	Agricultural expansion
Threat 2	Unsustainable exploitation of natural resources
List top two critical management activities	
Activity 1	Negotiating and implementing agreements with local communities on management (including core conservation area) and resource use
Activity 2	Monitoring and evaluation of management practices

Table 20. Detailed METT for the Bale Mountains including 'next steps'. Similar data for all assessed protected areas are available and held in a database that has been established in the Ministry of Agriculture and Rural Development.

Issue	Criteria	Score	Next steps
1. Legal status Does the protected area have legal status? *Context*	The protected area is not gazetted	0	Agree on boundaries to core conservation area; draw up management plan; assemble joint management committee with appropriate terms of reference; submit for gazettement
	The government has agreed that the protected area should be gazetted but the process has not yet begun	**1**	
	The protected area is in the process of being gazetted but the process is still incomplete	2	
	The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar)	3	
2. Protected area regulations Are inappropriate land uses and activities (e.g. poaching) controlled? *Context*	There are no mechanisms for controlling inappropriate land use and activities in the protected area	0	Negotiate and implement agreements with local communities for regulated access to and use of natural resources
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively	**1**	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	2	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	3	
3. Law enforcement Can staff enforce protected area rules well enough? *Context*	The staff have no effective capacity/resources to enforce protected area legislation and regulations	0	Establish linkages with local law enforcement agencies, including judiciary, police, etc. Train local law enforcement agencies.
	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	**1**	
	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	2	
	The staff have excellent capacity/resources to enforce protected area legislation and regulations	3	
4. Protected area objectives Have objectives been agreed?	No firm objectives have been agreed for the protected area	0	The 1986 (draft but neither adopted nor implemented) management plan identified the objectives for the area.
	The protected area has agreed objectives, but is not managed according to these objectives	1	
	The protected area has agreed objectives, but these are only partially implemented	**2**	

Issue	Criteria	Score	Next steps
Planning	The protected area has agreed objectives and is managed to meet these objectives	3	
5. Protected area design Does the protected area need enlarging, corridors etc to meet its objectives? *Planning*	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0	Further planning processes are necessary.
	Inadequacies in design mean that achievement of major objectives are constrained to some extent	**1**	
	Design is not significantly constraining achievement of major objectives, but could be improved	2	
	Reserve design features are particularly aiding achievement of major objectives of the protected area	3	
6. Protected area boundary demarcation Is the boundary known and demarcated? *Context*	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users	0	The boundary is neither known nor marked. The local community need to be involved in planning the boundaries relative to the key biodiversity areas within the landscape.
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users	**1**	
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	2	
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3	
7. Management plan Is there a management plan and is it being implemented? *Planning*	There is no management plan for the protected area	0	A management plan was written and agreed in 1986. A further interim management was being developed by WWF (not completed). The management plan needs significant updating with an implementation plan.
	A management plan is being prepared or has been prepared but is not being implemented	1	
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems	**2**	
	An approved management plan exists and is being implemented	3	
Additional points *Planning*	The planning process allows adequate opportunity for key stakeholders to influence the management plan	+1	The planning processes at present are now beginning to consider the role of stakeholders in planning processes. The plan should be designed to be adaptive and updateable. A monitoring and evaluation plan needs to be developed.
	There is an established schedule and process for periodic review and updating of the management plan	+1	
	The results of monitoring, research and evaluation are routinely incorporated into planning	+1	

Issue	Criteria	Score	Next steps
8. Regular work plan Is there an annual work plan? *Planning/Outputs*	No regular work plan exists	0	The M&E framework needs to be developed for the annually produced workplan.
	A regular work plan exists but activities are not monitored against the plan's targets	**1**	
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	2	
	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed	3	
9. Resource inventory Do you have enough information to manage the area? *Context*	There is little or no information available on the critical habitats, species and cultural values of the protected area	0	The M&E framework should include planned surveying. Further information should be gathered in the Herenna forest that remains relatively unknown.
	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making	1	
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained	**2**	
	Information concerning on the critical habitats, species and cultural values of the protected area is sufficient to support planning and decision making and is being maintained	3	
10. Research Is there a programme of management-orientated survey and research work? *Inputs*	There is no survey or research work taking place in the protected area	0	Research on the Ethiopian wolf is good, but there are gaps in knowledge among other species and ecological aspects of the area. These need to be prioritized and filled.
	There is some *ad hoc* survey and research work	1	
	There is considerable survey and research work but it is not directed towards the needs of protected area management	**2**	
	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	3	
11. Resource management Is the protected area adequately managed (e.g. for fire, invasive species, poaching)? *Process*	Requirements for active management of critical ecosystems, species and cultural values have not been assessed	**0**	Further information regarding active management is necessary. Most importantly, the effect of livestock grazing on the Afroalpine grasslands is not known.
	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed	1	
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	2	
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3	
12. Staff numbers	There are no staff	0	Staff numbers need to be increased

Issue	Criteria	Score	Next steps
Are there enough people employed to manage the protected area? *Inputs*	Staff numbers are inadequate for critical management activities	1	
	Staff numbers are below optimum level for critical management activities	**2**	
	Staff numbers are adequate for the management needs of the site	3	
13. Personnel management Are the staff managed well enough? *Process*	Problems with personnel management constrain the achievement of major management objectives	0	There need to be incentives to ensure that the staff carry out their duties optimally. Thus, even the staff that do exist are poorly managed.
	Problems with personnel management partially constrain the achievement of major management objectives	**1**	
	Personnel management is adequate to the achievement of major management objectives but could be improved	2	
	Personnel management is excellent and aids the achievement major management objectives	3	
14. Staff training Is there enough training for staff? *Inputs/Process*	Staff are untrained	0	Refreshment of training would be worthwhile but staff management is a more important issue. Training could, however, be provided as an incentive for the staff.
	Staff training and skills are low relative to the needs of the protected area	1	
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	**2**	
	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs	3	
15. Current budget Is the current budget sufficient? *Inputs*	There is no budget for the protected area	0	Budget needs to be increased (current funding levels are at US$ 13.9/km²/yr). However, what budget there is, is poorly managed.
	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage	**1**	
	The available budget is acceptable, but could be further improved to fully achieve effective management	2	
	The available budget is sufficient and meets the full management needs of the protected area	3	
16. Security of budget Is the budget secure?	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding	0	The budget from the regional government is relatively secure (although it has declined in the past year) but external funding is necessary to build the capacity of the protected area.
	There is very little secure budget and the protected area could not function adequately without outside funding	**1**	
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	2	

Issue	Criteria	Score	Next steps
Inputs	There is a secure budget for the protected area and its management needs on a multi-year cycle	3	
17. Management of budget Is the budget managed to meet critical management needs? *Process*	Budget management is poor and significantly undermines effectiveness	**0**	Budget management is a barrier to the effectiveness of the management of the area.
	Budget management is poor and constrains effectiveness	1	
	Budget management is adequate but could be improved	2	
	Budget management is excellent and aids effectiveness	3	
18. Equipment Is equipment adequately maintained? *Process*	There is little or no equipment and facilities	0	Equipment and facilities are present, but not always well planned. However, administration means they are rarely used properly. This requires improvement.
	There is some equipment and facilities but these are wholly inadequate	1	
	There is equipment and facilities, but still some major gaps that constrain management	**2**	
	There is adequate equipment and facilities	3	
19. Maintenance of equipment Is equipment adequately maintained? *Process*	There is little or no maintenance of equipment and facilities	0	Recurrent budget for maintenance and replacement is inadequate and needs to be improved. Much equipment is not used and thus does not require maintenance.
	There is some *ad hoc* maintenance of equipment and facilities	**1**	
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2	
	Equipment and facilities are well maintained	3	
20. Education and awareness programme Is there a planned education programme? *Process*	There is no education and awareness programme	0	The EWCP, FZS and MELCA have education projects that are carried out with the park authorities; these are being improved.
	There is a limited and *ad hoc* education and awareness programme, but no overall planning for this	1	
	There is a planned education and awareness programme but there are still serious gaps	**2**	
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area	3	
21. State and commercial neighbours	There is no contact between managers and neighbouring official or corporate land users	**0**	No cooperation and linkages. The kebeles allocate land to

Issue	Criteria	Score	Next steps
Is there co-operation with adjacent land users? *Process*	There is limited contact between managers and neighbouring official or corporate land users	1	agricultural households with no cooperation with park authorities. Linkages (through joint management committee) need to be institutionalized.
	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation	2	
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management	3	
22. Indigenous people Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions? *Process*	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	**0**	Collaboration with indigenous peoples needs to be improved (through joint management committee on which representative(s) will sit).
	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	1	
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2	
	Indigenous and traditional peoples directly participate in making decisions relating to management	3	
23. Local communities Do local communities resident or near the protected area have input to management decisions? *Process*	Local communities have no input into decisions relating to the management of the protected area	**0**	Collaboration with local people needs to be improved (through joint management committee on which representative(s) will sit).
	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions	1	
	Local communities directly contribute to some decisions relating to management	2	
	Local communities directly participate in making decisions relating to management	3	
Additional points Additional points *Outputs*	There is open communication and trust between local stakeholders and protected area managers	+1	Trust needs to be improved (through joint management committee).
	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1	
24. Visitor facilities Are visitor facilities (for tourists, pilgrims etc) good enough? *Outputs*	There are no visitor facilities and services	0	The quality of service at the Lodge needs improvement (through privatization of the management); further facilities are necessary.
	Visitor facilities and services are inappropriate for current levels of visitation or are under construction	1	
	Visitor facilities and services are adequate for current levels of visitation but could be improved	**2**	
	Visitor facilities and services are excellent for current levels of visitation	3	
25. Commercial tourism Do commercial tour	There is little or no contact between managers and tourism operators using the protected area	0	Cooperation needs to be improved (through the joint management committee). A marketing plan is necessary
	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	**1**	

Issue	Criteria	Score	Next steps
operators contribute to protected area management? *Process*	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values	2	which should be done with tour operators.
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	3	
26. Fees If fees (tourism, fines) are applied, do they help protected area management? *Outputs*	Although fees are theoretically applied, they are not collected	0	The revenue generated by Bale would not cover recurrent costs even if they remained. With growth, Bale will be able to cross-subsidize other areas and use the excess for its own development.
	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs	**1**	
	The fee is collected, but is disbursed to the local authority rather than the protected area	2	
	There is a fee for visiting the protected area that helps to support this and/or other protected areas	3	
27. Condition assessment Is the protected area being managed consistent to its objectives? *Outcomes*	Important biodiversity, ecological and cultural values are being severely degraded	0	The key biodiversity and ecological processes require further urgent protection.
	Some biodiversity, ecological and cultural values are being severely degraded	**1**	
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	2	
	Biodiversity, ecological and cultural values are predominantly intact	3	
Additional points *Outputs*	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	+1	There is no habitat restoration underway; this should take place in severely degraded and prioritized areas.
28. Access assessment Are the available management mechanisms working to control access or use? *Outcomes*	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	**0**	The coverage of the protected systems is limited to 1% of the area; this needs to be extended to priority areas (through mapping the highly threatened or used areas).
	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	1	
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	2	
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives	3	
29. Economic benefit assessment Is the protected area	The existence of the protected area has reduced the options for economic development of the local communities	0	The flow of benefits to local communities is significant but the linkage needs to be made with the protected area and the
	The existence of the protected area has neither damaged nor benefited the local economy	1	

Issue	Criteria	Score	Next steps
providing economic benefits to local communities? *Outcomes*	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy	**2**	wildlife. The benefits could be increased with planning. Given that the area is a de facto open access area, the flow of benefits is unsustainable.
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	3	
30. Monitoring and evaluation *Planning/Process*	There is no monitoring and evaluation in the protected area	**0**	M&E framework needs to be planned and implemented.
	There is some *ad hoc* monitoring and evaluation, but no overall strategy and/or no regular collection of results	1	
	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management	2	
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3	
TOTAL SCORE		**33**	

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