

**Conservation of
Biodiverse
Resource Areas
(COBRA)
Project: Kenya
(1992-1998)**

Summary Report

Prepared for the United States Agency for International Development under the COBRA
Project Contract number 623-0247-C-00-3002-00

Andrew Watson

February 1999



7250 Woodmont Avenue, Suite 200, Bethesda, MD 20814

**Conservation of Biodiverse Resource Areas
(COBRA) Project: Kenya (1992-1998)**

Summary Report

Development Alternatives, Inc

February 1999

ACKNOWLEDGEMENTS

I would like to thank all those people who provided information and shared their knowledge and understanding of the many complex issues relating to community involvement in conservation and development through discussions in Kenya, elsewhere in East and Southern Africa and in the US. In addition to those individuals listed in the annex to this report, I am grateful to Bruce Byers, Steve Johnson (SADC-NRMP, Malawi), Irene Kamau (WWF/Washington), Tim Resch (USAID/Washington) and David Soroko (USAID/Zambia) for sharing their opinions on many of the challenges and opportunities facing the implementation of community-based natural resource management in Africa.

I am especially grateful to James Ndirangu (USAID/Kenya) and to Paul DeLucco (COBRA Chief of Party) for their detailed and insightful comments on the first draft of this summary report.

TABLE OF CONTENTS

INTRODUCTION	1
BACKGROUND	3
General Ecological Information	3
Social Considerations	4
Economic Considerations	4
Landscape Approach to Conservation—Parks Beyond Parks	5
COBRA	7
THE COBRA PROJECT AGREEMENT AND INSTITUTIONAL CONTRACT	9
COBRA PROJECT COMPONENTS	10
COBRA PROJECT COMPONENT I DEVELOPMENT OF KWS' MANAGEMENT	
SUPPORT FOR THE COMMUNITY WILDLIFE PROGRAM (CWP)	10
Lessons Learned	14
COBRA PROJECT COMPONENT II HUMAN RESOURCES DEVELOPMENT ACTIVITIES	14
COBRA PROJECT COMPONENT III WILDLIFE FOR DEVELOPMENT FUND	16
COBRA PROJECT COMPONENT IV STUDIES, RESEARCH AND POLICY ANALYSIS	22
COBRA PROJECT COMPONENT V MONITORING AND EVALUATION (M&E)	23
OVERALL ACCOMPLISHMENTS OF THE COBRA PROJECT	26
FUTURE DIRECTIONS OF THE KENYA WILDLIFE SERVICE AND THE COBRA PROJECT	29
Future Challenges	31
Financing of KWS	31
Financing of the WDF and Partnership Department Activities	32
Monitoring and Evaluation	33
Environmental Impact Assessment (EIA)	33
RECOMMENDATIONS FOR USAID SUPPORT TO KWS AND COMMUNITY-BASED	
WILDLIFE MANAGEMENT	33
REFERENCES	37
 ANNEX I PEOPLE INTERVIEWED	 I-1
 ANNEX II OVERVIEW OF COMMUNITY-BASED WILDLIFE MANAGEMENT IN AFRICA	 II-1
 ANNEX III COBRA REPORTS	 III-1

EXECUTIVE SUMMARY

DAI implemented USAID/Kenya's Conservation of Biodiverse Resource Areas (COBRA) Project over the five-and-a-half years from the end of 1992 to June 1998. The project was designed to help the Kenya Wildlife Service establish a link between wildlife as a national resource and wildlife as a source of economic and social well being for rural communities. Over the course of the program, the Kenya Wildlife Service has evolved from being a paramilitary organization dedicated to preventing poaching of game in national parks and reserves to an agency that has the institutional structure and internal capacity to address its revised goals:

- To maintain and develop a viable conservation area system, ensuring that a representative and sustainable sample of biodiversity is protected,
- To build partnerships to conserve biodiversity and to ensure that custodians benefit, and
- To take a lead role in developing sustainable nature tourism by maximizing the economic benefit to the nation and minimizing negative environmental effects

The goals of KWS closely reflect the overarching purpose of the COBRA program, which is **to increase socioeconomic benefits to communities living adjacent to parks and reserves from conservation and sustainable management of wildlife and natural resources**. In this respect, one of the fundamental objectives of the program has been realized through changes in the mission and mandate of KWS: the concept and practice of community-based management of natural resources has been institutionalized.

The COBRA Project has five components and for each of these there have been demonstrable successes and specific lessons that have been learned over the course of program implementation. These are summarized in the table below:

Overall success of the COBRA Project is evidenced by the central role that the Partnership Department plays within KWS and the acknowledged importance of community-based management of wildlife in Kenya. The concept of *parks beyond parks*, which encapsulates the need to conserve wildlife throughout ecological landscapes for broader than the designed protected areas, is a central theme of the COBRA initiative.

The lessons that COBRA has taught us since 1992 should be used to help define the future strategy for donor involvement in conservation efforts in Kenya. KWS and the Partnership Department should also use them to assess their current needs and future development strategy. The key lessons are:

- Mobilization is only the first step in developing a truly participatory approach to biodiversity conservation: control will remain in the hands of outsiders if a community development strategy is not promoted. Since participatory development strategies share some level of control with local stakeholders, they are capable of generating significant levels of sustainability if the project output meets a strongly felt community need. KWS

COBRA Component	Accomplishments	Lessons Learned
1 Development of KWS management support for the Community Wildlife Program	<ul style="list-style-type: none"> • Creation of the KWS Partnership Department • Conflict Resolution Unit now resolves up to 40% of animal control issues through dialog • Wildlife Utilization Unit has helped change the perception of wildlife in rural communities • Enterprise Development Unit has supported successful community enterprise initiatives • Mobilization and Education Unit has supported the Naivasha Training Institute thereby building sustainability 	<ul style="list-style-type: none"> • Strong donor support for institutional development backed up by on site technical assistance is essential • KWS decentralization has not received the necessary management support at the regional level • Devolution of authority planning and decision making will require further capacity building within KWS especially for mid level managers
2 Human resource development activities	<ul style="list-style-type: none"> • Training of community game scouts, regional officers of KWS and game rangers • Partnership Department has the capacity to define and address training needs 	<ul style="list-style-type: none"> • Modular courses must be adapted to the needs of the participants • It is essential to ensure that people receiving intensive training are committed to staying with the organization • Within KWS there is a need for general training in financial administration information systems and management techniques
3 Wildlife for Development Fund	<ul style="list-style-type: none"> • Additional funds leveraged from other donors and from the Government of Kenya • Development and implementation of an effective model for revenue sharing and enterprise development that fully involves local groups • Activities extended beyond the original four focal areas to become a nationwide program • Hundreds of community development programs initiated 	<ul style="list-style-type: none"> • The Partnership Department's community mobilization procedures are effective in designing and implementing enterprise development projects • Confusion over the purpose of the WDF has hampered its usefulness in promoting enterprise development • Without guidance there is a tendency for PRAs to focus on problems and constraints rather than identifying opportunities and building successes • Once a PRA is completed it is essential to follow through with implementation • The Partnership Department does not have the expertise to provide the technical support needed to develop business plans and financial and administrative procedures for enterprises • All community projects must be planned and coordinated with the full participation of relevant stakeholders and partners • Community initiatives require skills in business management marketing legal services and conflict resolution • There is limited potential for creating viable commercial enterprises that rely on the sustainable use of wildlife resources
4 Studies research and policy analysis	<ul style="list-style-type: none"> • Reports on critical issues ranging from wildlife conservation game counts and consumptive use of wildlife to analyses and draft revisions of wildlife law • Support to KWS in key aspects of wildlife policy reform 	<ul style="list-style-type: none"> • By supporting research and policy analysis COBRA has ensured that a broad range of stakeholders has a voice in the conservation agenda • It essential to forge strong linkages across KWS operational departments
5 Monitoring and evaluation	<ul style="list-style-type: none"> • Key databases have been created and their use institutionalized the WDF database the mobilization and education workshops database the conflict resolution occurrence register and the knowledge, attitude and practices survey database 	<ul style="list-style-type: none"> • It is essential to design and implement a project monitoring system at the very outset of the program • Users of an M&E system must be involved in its design and in the selection of indicators • While sharing of data collection and analysis responsibilities can be cost effective it is essential that the information can be disaggregated allowing individual users access relevant data • Many indicators reflect a lack of concern for the cost of data collection availability of data relevance to users, user friendliness and gender sensitivity • Difficulties in implementing the COBRA and KWS M&E systems reflect a lack of understanding of the purpose of M&E inappropriate indicators, and heavy involvement of outsiders rather than users

does not have the resources to undertake this effort alone. In order to accomplish these goals, KWS must rely on other partners such as other government agencies, other donor-funded projects, NGOs and, most importantly, the private sector.

- In order to ensure full participation in community-based natural resource management, stakeholders must be empowered to design as well as implement activities. By placing the highest levels of responsibility and control in the participants' hands, the highest levels of potential sustainability can be attained. However, if such an empowerment strategy is to be developed in Kenya, fundamental changes in land and natural resource tenure, and the potential for wildlife utilization will be essential. The COBRA Project has helped launch a series of analyses of possible policy changes and these have generated considerable discussion. The future direction of community-based natural resource management in Kenya hinges on changes in current policy.
- Future funding for Partnership activities will require fundamental changes in the way the current WDF operates. The private commercial sector, particularly tour operators and ranchers, will have to become much more involved in community planning if enterprise development projects are to succeed.

Overall, the COBRA Project has performed well, meeting most of its original performance objectives and outputs. At this time, USAID should develop a strategy to reinforce the positive impact that the project has had on Kenyan institutions and on community-based wildlife management. There are many lessons that have been learned and the accumulated knowledge should be disseminated to other programs and institutions in Sub-Saharan Africa. USAID should promote opportunities for sharing information with similar programs that the agency sponsors elsewhere in Africa.

INTRODUCTION

The bilateral Grant Agreement between the United States Government and the Government of the Republic of Kenya for the COBRA Project (Conservation of Biodiverse Resource Areas) was signed in April 1992. At that time, the Kenya Wildlife Service (KWS) had been in existence for less than 2 years having replaced the Wildlife Conservation and Management Department (WCMD), which had been created as the central institutional structure for implementing the 1976 Wildlife (Conservation and Management) Act. The creation of KWS and the launching of the COBRA initiative came at a critical period in the history of wildlife conservation efforts in Kenya. During the period from 1976 to 1990, Kenya saw a drastic reduction in wildlife populations to the point where several species were on the brink of extinction. The elephant population had decreased by 85 percent and the number of remaining black rhinoceros had fallen to less than 500—just 3 percent of their former number. The main reason for the decline of these two species was rampant poaching to feed the demand for ivory and rhino horn. Over roughly the same period, however, most other game animals saw their numbers fall to between 40 and 70 percent (Heath, 1995). The reasons for this decline included natural phenomena such as drought and disease, notably Rinderpest, as well as hunting and loss of habitat as a result of agricultural expansion.

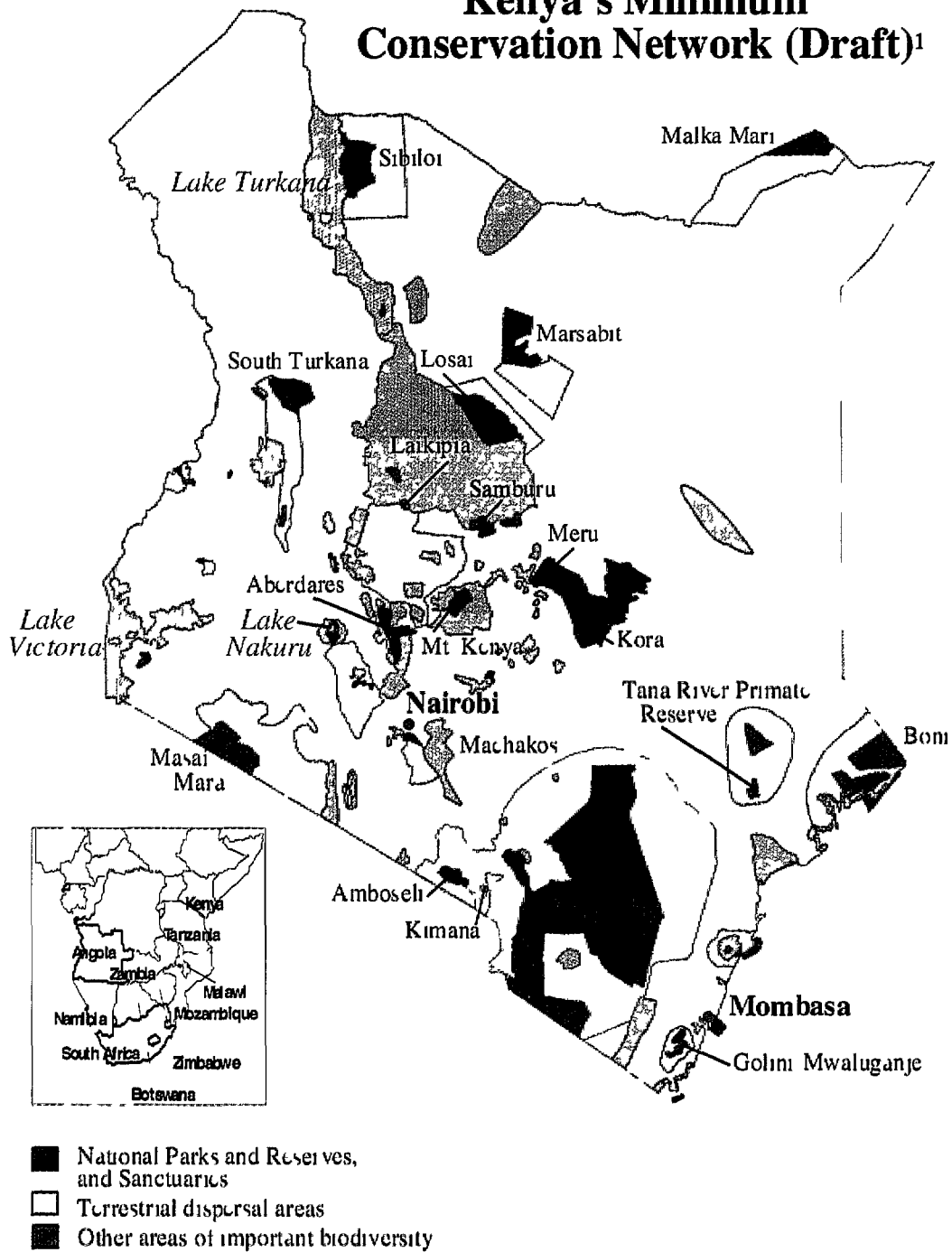
The first order of business for the newly created Kenya Wildlife Service was to put an end to poaching and to attempt to stabilize wildlife populations. KWS was established as a uniformed and disciplined service by virtue of the 1989 amendment to the Wildlife Act. In addition, the organization had more administrative and financial autonomy than its precursor had been afforded.¹ These conditions enabled KWS to accomplish its immediate goals (no rhinoceros were poached from 1990 to 1997) and embark upon an ambitious program that was elucidated in the policy framework and development program (the Zebra Book) covering the period from 1991 to 1996. The stated goals of KWS were

- To conserve the natural environments of Kenya and their fauna and flora,
- To use the wildlife resources of Kenya sustainably for economic development, and
- To protect people and property from injury or damage from wildlife

In order to accomplish these ends, KWS recognized that several fundamental changes in the approach to wildlife management were essential. Some 53,000 km² of the country have been set aside as 26 national parks, and 29 national reserves and sanctuaries, this 8 percent of the land area harbors perhaps 25 percent of Kenya's wildlife (see map). In effect, the remaining 75 percent of the natural flora and fauna of the country are found in areas that are not formally protected. Moreover, many of Kenya's large mammal species are migratory, so even those that are found within protected areas often move to adjacent private land at certain

¹ The WCMD had been under the Ministry of Tourism and Wildlife. KWS was organized as a *parastatal* with much more autonomy from the ministry. The normal autonomy of a parastatal was further enhanced when the Kenya Government officially relieved KWS from certain requirements of the Parastatal Act.

Kenya's Minimum Conservation Network (Draft)¹



¹ After Mutero, W K Odongo R Tokro G and Muthui, T (1998)

times of the year in search of food. In effect, sustainable conservation efforts would necessitate that people living in areas with significant wildlife become more involved in conservation, management and utilization of these resources if the broad objective of conserving biodiversity as a national heritage was to be attained (Kibwana and Wanjala, 1995)

The COBRA Project was designed to assist and support KWS in its efforts to accomplish this overarching objective. Today, six years after project inception, KWS has an institutional structure that more clearly reflects the organization's goals. Moreover, administrative and operation procedures have been developed and staff have been trained to tackle the many challenges that face the organization in its efforts to fulfill its mandate. The COBRA Project can rightfully claim much of the credit for these successes. This notwithstanding, the past six years have seen enormous institutional, social and economic changes in Kenya and it is sometimes difficult to dissociate the strengths and weaknesses of COBRA from the successes and failures of other programs and policies that have had an impact on KWS and on wildlife conservation efforts in the country.

The purpose of this summary report is not to present an evaluation of the COBRA Project or DAI's institutional contract since both a mid-term evaluation (Hall *et al* , 1996) and a draft final assessment (USAID, 1998 b) have already been completed. Rather, this summary aims to provide an overview of the achievements and successes of the project and to examine the problems that have been encountered in order to identify lessons that will help shape and determine the success of future initiatives.

BACKGROUND

General Ecological Information

Kenya exhibits a great diversity of ecosystems ranging from arid deserts to humid forests, from mangrove swamps to soda lakes, and from coral reefs to alpine moorlands. These habitats harbor a great variety of plants and animals, many of which are critically endangered and threatened with global extinction.² Overall statistics show a significant decline in the numbers of large herbivores since the mid-1970s despite the 1977 ban on hunting. There are, however, significant variations in this trend from species to species and from region to region. Nationwide, numbers of Burchell's zebra, Hunter's hartebeeste and ostrich increased between 1977 and 1994. In two districts, Kwale and Laikipia, overall numbers of large herbivores increased over this same period while in other districts there were major declines. In Turkana, for example, 76 percent of the larger herbivores were lost and elephant and eland were virtually extirpated (Heath, 1995).

² The 1997 mission statement of KWS acknowledges this unique natural heritage. It states: "On behalf of the Government of Kenya, KWS holds in trust for present and future generations locally, nationally and globally the biological diversity represented by its extraordinary variety of animals, plants and ecosystems ranging from coral reefs to alpine moorlands and from deserts to forests. Special emphasis is placed on conservation of large mammals found in few other places on earth." (KWS, 1997 a)

Social Considerations

The reasons for these changes are diverse and often complex. In addition to natural phenomena that affect animal populations, socioeconomic factors have had a major influence. A rapidly growing human population has placed increasing pressure on natural resources particularly on land for agricultural expansion, on natural forests for fuel wood, and on wild animals for food and income. With the significant decrease in poaching over the past decade, the main threat to maintaining ecologically viable animal populations remains loss of habitat, especially as land is fenced for farming. As a result of landscape transformation, some of the main corridors of wild animal movement have been severely constricted or lost and the ecological viability of major herds of herbivores and their attendant predators is threatened.

This transformation is occurring despite the fact that the economic and environmental sustainability of both ranching and agriculture are uncertain in the semi-arid rangelands that cover much of Kenya and the rest of East and Southern Africa (Child, 1990). This notwithstanding, the absence of sustainable economic benefits accruing from such landscape conversion will not be a deterrent to further agricultural extensification if other broader economic failures continue to protect individual farmers from having to bear the true economic cost of their actions. Moreover, the potential benefits of conservation cannot be realized if the markets for "conservation" products are missing or if there are distortions resulting from government intervention in the workings of the market place (Pearce and Moran, 1994). In Kenya, both market failure and government failure have contributed to undervaluing of wildlife resources and a concomitant overvaluation of agricultural land use in areas adjacent to national reserves and in marginal environments.³

Economic Considerations

In 1996, tourism accounted for 11 percent of GDP and 18 percent of wage employment in Kenya. Over the past decade tourism has been the main foreign currency earner in Kenya. Most of this tourism is based on wildlife which also has a higher value added than tourism based on coastal resources and, therefore, makes a significantly higher contribution to the national economy. Despite this macro-economic importance of the wildlife sector, the benefits accruing to the people who bear many of the costs contingent upon wildlife conservation have been uneven. This discrepancy was to be addressed by COBRA, the goal of the project has been **to promote socioeconomic development through conservation and sustainable management of Kenya's natural resources** (USAID, 1991).

³ While the economic valuation of biodiversity is fraught with difficulty, shadow pricing and efforts to quantify existence value indicate that wildlife has an economic value far higher than is typically attributed to it (see Pearce and Moran, 1994). This notwithstanding, the true worth of biodiversity cannot be realized by those who conserve natural resources unless mechanisms are developed to compensate them fully.

Landscape Approach to Conservation—Parks Beyond Parks

The COBRA Project's support for community-based management of wildlife resources has helped KWS undertake a significant institutional reorganization and to effect a fundamental change in KWS' goals

- To maintain and develop a viable conservation area system, ensuring that a representative and sustainable sample of biodiversity is protected,
- To build partnerships to conserve biodiversity and to ensure that custodians benefit, and
- To take a lead role in developing sustainable nature tourism by maximizing the economic benefit to the nation and minimizing negative environmental effects

As of 1997, the objectives of KWS have been summarized by the slogan—*parks beyond parks* (KWS, 1997 a) This concept is central to the purpose of the COBRA Project, which is **to increase socioeconomic benefits to communities living adjacent to parks and reserves from conservation and sustainable management of wildlife and natural resources** (USAID, 1991) Considering the origins of KWS as a uniformed, paramilitary institution created to combat organized, armed gangs of poachers, such a change in emphasis reflects not only the successful achievement of the project's original mandate but also an inherent capacity to adapt to changing priorities in a dynamic political and socioeconomic environment This in itself should be seen as evidence of institutional strength and resilience that augurs well for future sustainability In 1997, the Community Wildlife Service was fully integrated into the institutional structure of KWS with the creation of the Partnership Department This should be seen as an acknowledgment of the importance of the fundamental tenets of COBRA by the senior management of KWS

Community-based wildlife management as a formal conservation policy evolved in Africa in the 1980s notably with legislation that gave rise to the CAMPFIRE program in Zimbabwe and with efforts in Kenya to combat the incursion of pastoralists into the Amboseli⁴ and Maasai Mara protected areas This is not to say that the use of natural resources including wildlife has not been managed on a sustainable basis by many communities in Africa and elsewhere since pre-historic times Nevertheless, during the 20th Century, population growth and the resulting need to adapt customary practices of natural resource use had rendered older, traditional systems non-sustainable in many developing regions of the world By the late 1980s, perhaps 65 percent of wildlife habitat in Africa had been lost and the populations

⁴ It should be noted, however, that the Maasai were intended from the beginning to share in the management of the Amboseli ecosystem In fact, one of the reasons that the park is so small is that it was only intended to guard a core area encompassing the usually dry lake bed to the north and the lush area around the Ol Tukai springs In compensation, the Maasai were to have spring water piped to cattle troughs at a number of watering points outside the park The Maasai were expected to collaborate or at least cooperate in the conservation of the ecosystem's wildlife by permitting elephants to live on or migrate through their land Amboseli was only gazetted as a park in the 70s The reserve area that predated the park was much larger in extent and was open to multiple-use by the Maasai The Maasai would say that if any incursion had been made it was by the government into their ancestral dry season watering point

of many large mammals had been reduced to less than 10 percent of their former numbers. In effect, in the absence of formal policies governing the use of natural resources, the rate of environmental degradation had accelerated to a point where some feared that key species would become extinct by the end of the century (Bonner, 1993)

By 1990, communities were actively participating in the creation of protected areas and management of wildlife on surrounding in Zambia, Botswana, Tanzania, Uganda, the Central African Republic, Niger, Burkina Faso, and Madagascar (Kiss, 1990). Though the approach was heralded by IUCN's World Conservation Strategy in 1980, there had been few demonstrable success stories by the time KWS, supported by COBRA, launched its own initiative. Two reasons for this lack of tangible success were the difficulty in being able to show, first, that wildlife populations had been stabilized at sustainable levels and, second, that real economic benefits were accruing directly to local communities and, thereby, encouraging them to adopt viable wildlife management strategies.

Over the past ten years, numerous specific studies and synthesis reports have attempted to tackle the frequently intractable issues surrounding sustainability in community-based management of natural resources (Kiss, 1990, Biodiversity Support Program, 1993, Byers, 1996a, Lutz and Caldecott, 1996, Borrini-Feyerabend, 1997, Russell and Harshbarger, 1998). In Kenya, some early successful initiatives were implemented around Maasai Mara (Talbot and Olindo, 1990) and Tsavo West (Poole and Leakey, 1996). In both these cases, however, economic benefits accruing to the communities were more in the nature of compensation rather than the result of sustainable, conservation-based economic development. Moreover, the participation of community groups in determining the approach to these initiatives was less than optimal.

The COBRA Project was able to draw lessons from these foregoing efforts and over the past six years has been successful in helping KWS develop a process of community mobilization, planning and project implementation that is flexible enough to suit the needs of Kenya's diverse cultural and ecological heritage. This approach differs greatly from those adopted elsewhere in Africa where legislation has provided communities with the right to manage their natural resources (notably in Namibia and Zimbabwe) or where strong local institutions or Non-Governmental Organizations (NGOs) have been able to facilitate the process (as in Zambia and Tanzania). The Kenyan model that has been honed by KWS with the support of COBRA is well suited to the legislative, institutional, and cultural characteristics of the country and its diverse ecosystems. That is not to say that the Kenyan approach is inappropriate elsewhere, or that lessons learned in other countries could not be helpful in improving the Kenya model. Such opportunities for international collaboration and exchange of information and knowledge are discussed elsewhere (see annex 2).

The COBRA Project is just one initiative that falls under the multi-donor Protected Areas and Wildlife Services (PAWS) program. Some \$143 million have been allocated to the PAWS program that was initiated in 1991 and is scheduled to end in September 1998. Donors to the overall program have included The World Bank, the European Community, DFID (formerly ODA), KfW, the Dutch Government, JICA, and others.

Much of the support for KWS through the PAWS program has been in the form of support to cover recurrent operating costs, notably salaries and equipment, and for infrastructure development in several protected areas. It is striking, however, that World Bank supervisory missions in October and November 1996 and November 1997 have focused much of their attention on KWS institutional development and efforts to move the organization toward financial sustainability. These missions and the preliminary work undertaken to design a PAWS follow-on program (Kiss, 1997, Kiss and Kaguamba, 1997) have been highly critical of KWS management and, to some extent, also of the work that KWS has undertaken in promoting community-based management of wildlife. This debate has been polarized by some of the personalities that have been at its heart. The recent exchanges in the journal *Science* demonstrate, if nothing else, that the work of KWS lies at the nexus where politics, conservation science and international development meet (McRae, 1998, Western, 1998, Benirschke *et al* , 1998, Raven, 1998). Although it is clear that KWS has not been successful in achieving all of the goals that were set in the early 1990s, it is inappropriate to attribute all the shortcomings to internal deficiencies. KWS management has made significant strides in reducing recurrent costs through retrenchment in staffing levels (see, for example, KWS, 1997 b). While the IDA Credit still funded 40 percent of operating costs in 1997, this was a 50 percent decrease over the original level. The recent decline in tourism resulting largely from security problems led to a 25-30 percent fall in gate revenues by mid-1997 and a predicted 70-80 percent drop in revenues for the 1997/1998 financial year (ending June 30th). Under such severe budgetary constraints, it has been impossible for KWS to plan strategically and belt-tightening has had an inevitable detrimental impact on staff morale and on operating efficiency.

As will be outlined below, the future of KWS will require further refinement of its mandate that has become increasingly broad and more diffuse over the past few years (KWS, 1997 b and c). In addition, efforts to achieve financial sustainability will have to be thoroughly reassessed—especially if KWS' responsibilities expand into areas where revenue generation for the organization is limited. Very few protected area systems anywhere on earth can claim to be financially self-sufficient and economically sustainable. The economic benefits accruing from the conservation of biodiversity are often difficult to quantify and impossible to realize in monetary terms (Pearce and Moran, 1994). Hence, the economic viability of an organization such as KWS can be accurately gauged only when the numerous externalities relating to wildlife and ecosystem conservation are entered into the accounts. This question will be revisited below.

COBRA

The COBRA Project was designed to help KWS establish a link between wildlife as a national resource and wildlife as a source of economic and social well being for rural communities (USAID, 1991). This was to be accomplished by focusing activities outside of the protected areas in regions where there was a potential for decreasing competition between people and wildlife and for promoting utilization of natural resources for socioeconomic development and increased incomes. The development of ecotourism was seen to be a major potential source of revenue for rural communities around certain key protected areas.

The approach that COBRA was to adopt was based on the assumption that if communities could derive direct benefits from the presence of wildlife, either through conservation-based enterprises or ecotourism, they would have an increased incentive to conserve these natural resources since the benefits would outweigh the costs. The possibility of deriving economic benefits from the consumptive use of resources was also seen as a potential incentive provided that it was carefully managed and monitored. The goal of COBRA has been to promote socioeconomic development through conservation and sustainable management of natural resources. The express purpose of this has been to increase the socioeconomic benefits to communities adjacent to protected areas from the conservation and sustainable use of wildlife. In general terms, this has been accomplished both through disbursement of funds through the Wildlife Development Facility (WDF) and other commercial initiatives to which COBRA has lent support.

In designing COBRA and outlining USAID's expectations of the Project, three key assumptions were made:

- That the Government of Kenya would maintain and continue to develop supportive policies relating to the environment and tourism sectors,
- That Kenya would continue to experience growth in the tourism industry with an annual increase in foreign exchange earning of 5 percent, and
- That the Government of Kenya would remain committed to developing and operationalizing principles of landuse management that are rational and sustainable

It is debatable whether the first of these has proven to be valid, some would argue that the Government's poor handling of internal security and other political and economic issues has exacerbated the decrease in the number of tourists visiting Kenya.⁵ The second is patently not the case since the tourism sector has seen a precipitous decline in the past year or two (1997 and 1998). The third is also invalid since the present Government has been actively discouraging communal ownership of land and also encouraging further subdivision of group ranches through individual titling (Mwangi, 1996). This has led to constriction and loss of wildlife corridors and to fencing of land in key dispersal areas around several protected reserves. Elsewhere, fragmentation of integral ecosystems is occurring as land is converted to agriculture and woodlands are overexploited for timber and fuel and cleared for farming.

The COBRA Project Paper (USAID, 1991) identified two expected overarching achievements for the project:

- Target community and landowner income and employment increased, and

⁵ The significant decline in tourism has been attributed to a variety of factors. It was probably a combination of security concerns aroused by the pre election violence at the coast, lurid reporting in the European press about outbreaks of cholera and Rift Valley Fever due to the unusual El Nino weather, the collapse in transportation infrastructure owing to lack of capital investment but brought to collapse by torrential rains and the bad weather itself. In general, the Kenyan tourist industry has long been based on tropical beaches.

- Distribution of no less than \$4 7 million in KWS revenue sharing in four geographical areas where communities derive socioeconomic benefits

Owing to a lack of socioeconomic data, it is impossible to obtain an objective assessment as to whether the first of these has been accomplished. While the available information from follow-up surveys such as that undertaken for Amboseli (Ndung'u, 1998 a) provides a strong indication that many direct benefits have been realized and are increasing, employment figures do not show a great deal of change. In the case of the Amboseli study, some 92 percent of respondents classified themselves as farm owners and all respondents had a stated occupation. Under these circumstances, it is unclear whether the level of employment is a valid indicator of changing economic conditions.

In the case of revenue sharing, over Ksh135 million were disbursed from the WDF up to June 30th 1997. As of that date, about Ksh64 million was carried over to the 1997/1998 fiscal year. While the COBRA Project originally focused its activities on four focal areas, this policy changed in 1996 with the creation of the Partnership Department (PD) at KWS. Since the PD had responsibilities nationwide, the COBRA Project was obliged to expand the geographical scope of its field interventions in order to maintain broad-based support for the department. It should also be noted that WDF disbursements include funds contributed by the Government of Kenya, The World Bank and USAID in addition to the revenue sharing funds that were supposed to represent 25 percent of gate receipts from the KWS managed protected areas.⁶ Taking into account a fluctuating rate of exchange, the total amount disbursed through the WDF was about \$2 million up to June 30th 1997. Assuming all available funds are disbursed during 1997/1998, this would represent an additional sum of more than \$1 million.

THE COBRA PROJECT AGREEMENT AND INSTITUTIONAL CONTRACT

The bilateral agreement between the United States Government and the Government of the Republic of Kenya (signed in 1992) originally called for a Project Assistance Completion Date (PACD) of September 30th 1996 and a maximum level of funding of \$7 million. An amendment dated June 15th 1995 extended the PACD to December 16th 1997 (with no change in funding). In March 1997 the PACD was further extended to December 31st 1999 and the level of funding was increased to \$8.5 million.

The institutional contract (no. 623-0247-C-00-3002-00) between USAID and a team headed by Development Alternatives, Incorporated (DAI) with the African Wildlife Foundation (AWF) and Management Systems International (MSI) as subcontractors, for implementation of the COBRA Project was signed in December 1992. The original contract was for a maximum funding level of \$3.5 million but the amendment of June 1995 raised the level to \$4.8 million and brought KWS grant funds under the institutional contract. Originally scheduled to terminate on September 30th 1996, the DAI contract was formally extended by

⁶ KWS's contribution to revenue sharing is currently 5 percent of net income from national parks. The original Presidential Directive called for 25 percent but KWS petitioned the President and he agreed that the contribution be reduced. Draft 5 of WDF Guidelines (October, 1995) provides additional details.

the June 1995 amendment to December 16th 1997. A further amendment extended the contract to June 18th 1998 but reduced the total estimated cost from \$4.8 million to \$3.8 million and returned the responsibility of administering KWS grant funds to USAID.

COBRA PROJECT COMPONENTS

The COBRA Project Paper (USAID, 1991) identified four elements:

- Development of KWS' management support for the Community Wildlife Program (CWP),
- Human resource development activities,
- A community and enterprise development fund, and
- Studies, research and policy analysis related to the CWP.

Subsequently, a fifth component was added—support for project specific and related KWS monitoring and evaluation (M&E). These five elements have remained essentially intact during the life of the project though the details and terminology have changed somewhat.

The following discussion will examine the specific goals and outputs that were expected from each of these components when the project was first designed and implemented. It will go on to identify the achievements of the project and will describe the problems that were encountered. Finally, we will endeavor to identify specific lessons that have been learned during the course of the project and suggest how these can be used to help strengthen possible future support for KWS and for community-based wildlife management initiatives in Kenya.

COBRA PROJECT COMPONENT I: DEVELOPMENT OF KWS' MANAGEMENT SUPPORT FOR THE COMMUNITY WILDLIFE PROGRAM (CWP)

The CWS was transformed into the Partnership Department when KWS was reorganized in 1996. This in itself represented a fundamental success of COBRA efforts to institutionalize community-based management of wildlife resources in Kenya. The Partnership Department is one of the three core operational departments within the new KWS structure, the other two being the Biodiversity Conservation Department and the Tourism Department. In the introduction to the first issue of the Partnership Department's newsletter, the Director of KWS, Dr. David Western,⁷ underlined the relevance of the creation of the new entity. He stated that:

⁷ Subsequent to the completion of the COBRA institutional contract (and preparation of the first draft of this summary report), Dr. Western was replaced as Director of KWS.

The establishment of the Partnership Department expresses the importance KWS places in reaching out to communities, government agencies, NGOs and other bodies with a significant role to play in conservation *Partnerships News*, November 1997

The stated goal of the department is **to build partnerships, to conserve biodiversity and ensure that custodians benefit** The department's mission statement is

To enhance sustainable conservation of biodiversity outside protected areas by forming partnerships with communities and other appropriate stakeholders with the aim of building capacity, devolving responsibilities and increasing direct benefits from wildlife while protecting people and their property from wildlife damage

These underlying tenets closely reflect the goals of COBRA support for the original CWS as outlined in the Project Paper (USAID, 1991) This document also listed five expected outputs from COBRA support for KWS management of the unit These were as follows

- A functioning CWS Headquarters Unit team with qualified and capable staff to coordinate, carry out and monitor the community wildlife program,
- An established capacity within the CWS Headquarters Unit to identify, formulate, and integrate policy issues and concerns into the annual plans and activities of the community wildlife program,
- An established internal management information system that communicates priorities, strategies, operational guidelines and procedures in a timely fashion from the Headquarters Unit to the field,
- A CWS Headquarters Units that is able to effectively program and budget the resources made available in support of Headquarters and field operations, and
- An established capacity to ensure that planning reflects agency policy and the needs, conditions and perceptions of field personnel

While it is very difficult to assess objectively whether these outputs have been achieved, there is strong evidence that the Partnership Department does embody most of these qualities and capabilities Despite budgetary constraints that have hampered KWS' ability to attain desired staffing levels, the Partnership Department has been structured to fulfill its mandate The Deputy Director of Partnership, Mr Simon Ole Makallah, reports directly to the Director of KWS Four unit coordinators report to the Deputy Director Mobilization and Education (Mr James Munyugi), Conflict Resolution (Mr Joachim Kagiri), Wildlife Utilization (Mr Philip Wandera), and Enterprise Development (a position that is currently open following the resignation of the coordinator in late 1997)

The management style and approach of the Director, Dr Western (see footnote #7), and Deputy Director of Partnership, Mr Ole Makallah, have been criticized as being both

insufficiently transparent and minimal devolution of decision making. While such an autocratic approach to management is not in vogue among many donor organizations, that is not to say that it is necessarily inappropriate or flawed. More significantly, KWS' senior management has also been faulted for their apparent inability to develop coherent strategic plans and realistic budgets. In part, this may result from a lack of expertise within the ranks of senior management but, in all fairness, there has also been a lack of adequate technical support from donors in certain key areas such as financial management.

The regional and local staffing pattern of the department is the same as for the other two operational departments of KWS. There are intended to be eight Regional Partnership Coordinators, 27 Area Partnership Officers, and a cadre of local Partnership Officers, Supervisors, Rangers and Technicians. Again, the need for retrenchment owing to severe budgetary problems largely resulting from a significant drop in revenues from park entrance fees, has constrained the KWS' ability to fully staff both its headquarters departments and line units.

Each of the coordination units has demonstrated major successes in fulfilling their objectives. COBRA support for the Mobilization and Education unit was critical in training Partnership Officers. The involvement of the Naivasha Training Institute in implementing the training program is seen to be a major step toward assuring sustainability in that there has been support not just for training field staff but also for training of trainers. With the help of COBRA, the Conflict Resolution unit has evolved from a group responsible for fencing mainly rhinoceros reserves, into a unit that provides a wide range of support to rural communities. Today, up to 40 percent of animal control issues are resolved through dialog with communities rather than resorting to expensive fencing programs or to shooting rogue animals. When fencing or other forms of wildlife barriers are required, the Conflict Resolution unit now has the capacity to involve communities in the design, construction and maintenance of the projects. Through community mobilization, training of fence technicians and subsequent monitoring, animal control projects are sustainable at the community level.

The Wildlife Utilization unit has experienced major successes in its ability to work with communities as a result of the support it has received through COBRA. Field staff have remarked that over the course of the project, rural communities have begun to refer to the local wildlife resources as "our animals" whereas previously these were "KWS' animals". This fundamental change in perceptions is largely the result of community mobilization work sponsored and supported by COBRA. Moreover, the work undertaken by KWS in this area underscores the fact that KWS itself has successfully changed its image through embracing a community-based approach to conservation.

The work of the Enterprise Development unit will be described in greater detail below in relation to the Wildlife Development Facility that funds several enterprise development projects. In addition to this funding, COBRA has helped the Enterprise Development Unit identify additional sources of funding that have led to the creation of conservation-based enterprises such as the Kimana Wildlife Sanctuary in Amboseli, the Ilngwesi Tourist Bandas in Laikipia, the Golini Mwaluganje Community Elephant Sanctuary and the Kitui honey enterprises and several fisheries project on the coast (see box).

THE GOLINI-MWALUGANJE COMMUNITY ELEPHANT SANCTUARY⁸

The Golini-Mwaluganje area is a corridor between the Shimba Hills National Reserve (and adjacent Mkongani Forest Reserves) and the Mwaluganje Forest. On the one hand, the elephants represent a threat to biodiversity in the area through their destruction of habitat, they also destroy property and crops of the farmers living in the area. On the other hand, elephants are a major tourist attraction and the Shimba Hills reserve is close to the main coastal tourist resorts on Kenya.

KWS was convinced that more needed to be done to address the human elephant conflicts and also allow freer movement of elephants through the area. One of the major challenges facing further efforts was the great diversity of stakeholders: three distinct groups of landowners, several government agencies and a number of NGOs were involved. The early involvement of the COBRA Project Enterprise Development Specialist helped facilitate the process. The Eden Wildlife Trust (an NGO) took the first steps by funding the construction of a four-kilometer long electric fence to prevent elephants from entering agricultural areas. In 1993, after a series of lengthy and sometimes contentious meetings, the Golini Mwaluganje Community Conservation Corporation was created. The stated objectives were to reduce human elephant conflicts and generate greater benefits for community members while permitting the movement of elephants through the corridor. The constitutional sub-committee and an attorney who represented local farmers wrote a lengthy document, the Memorandum and Articles of Association of the Golini Mwaluganje Conservation Reserve. It required that landowners "give legal right of vacant possession of their parcels of land" to the Corporation and agree not to dispose of their land or use it for collateral without the consent of the Corporation.

By 1995, fifty indigenous families were members of the Corporation. The Sanctuary had been fenced, game-viewing tracks had been established and an entry gate with two ticket offices had been constructed. In 1997, the Board of Directors distributed about one million Kenyan Shillings (over \$16,000) to shareholders. Payments ranged from Ksh 60,000 to Ksh 200,000 (about \$1,000 to over \$3,000) to each family holding title to their donated land. In addition, an investor has agreed to build a lodge in the Sanctuary and has agreed to a concession payment of Ksh 50,000 (about \$800) per month. The plans call for employing up to about 50 local people.

Problems still remain. Since profit sharing is based on the amount of land contributed to the Sanctuary, it is critical that ownership is clear, however, the adjudication and titling process has been extremely slow in some areas. Sanctuary management has also posed problems with the selection of a manager being handled by the Board of Directors rather than all members of the Corporation. In addition, the recent disastrous decline in tourism to Kenya is likely to have a detrimental effect on gate receipts. Nevertheless, the Sanctuary provides a valuable lesson in what is needed to create such enterprises: broad participation, transparent decision making, equitable distribution of benefits, and the forging of partnerships with NGOs and the private sector.

With the institutionalization and thorough integration of the Partnership Department into KWS and many of its field operations, the expected objectives of COBRA have been achieved. Certainly, as described above, some managerial and administrative difficulties have been encountered but none of these are insurmountable within the present organizational framework. The biggest constraint facing the department is one that faces the

⁸ From Cocheba, D. J. & Ndirangu, J. (1998). The Golini Mwaluganja Community Elephant Sanctuary: a community conservation poised for success but plagued by an elephant management dilemma. Unpublished paper.

whole of KWS the attainment of financial sustainability and the impact this will have on staffing and development of human resources through staff training. At this time, there appear to be some problems in the flow of information between Headquarters and the field offices. It is uncertain whether these difficulties are the result of systemic problems with communications and information management or whether a lack of capacity building and staff shortages at the regional level have exacerbated the situation. The COBRA Project has been successful in creating information management systems within KWS that have helped improve operational efficiency and that provide broader and easier access to data (Fishbein, 1997). Perhaps the most significant shortcoming of the Partnership Department has been the inability to use WDF funds for more than a few significant enterprise development projects. This will be discussed further below.

Lessons Learned

- Strong donor support for institutional development backed up by on-site technical assistance with the means to provide support for capacity building across a broad range of areas has been highly effective.
- USAID originally conceived COBRA's support to community wildlife management as being focused on building institution capacity at KWS headquarters. This has undoubtedly been accomplished. Nevertheless, KWS has undergone significant decentralization and there has been relatively little management support at the regional level. While systems are in place for communicating priorities, strategies, operational guidelines and procedures to the field, the capacity of field units to respond remains very limited. Without appropriate feedback mechanisms, the potential for efficient, adaptive management of KWS programs will remain severely constrained.
- If KWS is to have a less top-heavy chain of command, devolution of authority, planning and decision making will require further capacity building within the organization. The mid-level managers in the Partnership Department are all highly proficient field technicians that have been promoted on merit. In future, they will require training in management and a broad range of administrative skills if their demonstrated abilities are to be put to effect at KWS Headquarters.

COBRA PROJECT COMPONENT II HUMAN RESOURCES DEVELOPMENT ACTIVITIES

As originally conceived, the COBRA Project's support for human resources development was to focus on training of KWS field officers and extension workers, NGO personnel, and community leaders, as well as some specialized training for KWS Headquarters staff (USAID, 1991). During the course of the project, considerable support was provided in all of these areas. Moreover, as was pointed out above, COBRA also attempted to build Kenyan capacity to sustain a training program for community wildlife management through close collaboration with the Naivasha Training Institute.

The COBRA Project Paper identified three expected outputs from this component

- Over 500 KWS staff oriented to the community wildlife program strategy and philosophy,
- 36 well trained wildlife extension officers and 29 community wildlife wardens effectively implementing the program in the field by year 3 of the project, and
- An established capacity within CWS (Partnership Department) to define and address training requirements for the community wildlife program

Undoubtedly, in terms of numbers of individuals trained in the many different aspects of community-based wildlife management, COBRA's efforts have been a resounding success. It is unfortunate that poor administrative procedures on the part of project staff (including the original DAI Chief of Party and DAI's subcontractors) have rendered it impossible to determine the exact numbers of people trained over the course of the project. Nevertheless, by 1995 over 30 people were trained in natural resource and wildlife management techniques and at least 90 village game scouts had been trained (AWF, 1997). In the second half of 1997 alone, 88 community game scouts were trained, as well as 40 Area Partnership Officers and 160 game rangers who received training in techniques of problem animal control through the efforts of the Partnership Department. This clearly demonstrates that the department now has the capacity to define and address the training requirements to support its community wildlife management agenda.

The COBRA Project has supported the development and implementation of a series of modular courses that have dealt with various aspects of wildlife management. While the training was generally well regarded, concern has been expressed that the courses were too long in duration resulting in key managers being away from their field posts for prolonged periods. In addition, the curriculum was at times too broad in scope for the specific needs of the some participants. Another problem has been that some individuals that received intensive training through COBRA subsequently left KWS for higher paying positions in the private sector. It has also been noted that with the reorganization of KWS, training funds that had previously been allocated specifically to support the CWS became available to other departments resulting in some resentment on the part of Partnership staff.

Lessons Learned

- Modular courses must be adapted to the needs of the participants. Boilerplate approaches to the design of courses may have been appropriate and an efficient use of resources in the early days of COBRA's support for CWS but follow up courses should be more focused. The existing modules should perhaps be subdivided to allow more specialized and shorter training sessions.

- Try to ensure that people receiving intensive training—especially long-term, overseas courses—are committed to staying with the organization. This might be accomplished through modified contractual arrangements between KWS and the individuals concerned
- There is a need within KWS for general training in various areas ranging from financial administration, information systems and management techniques. Clear differentiation of the various components of training budgets must be undertaken at the outset of the project and when institutional changes threaten to blur eligibility for support

COBRA PROJECT COMPONENT III WILDLIFE FOR DEVELOPMENT FUND

The KWS Wildlife for Development Fund (WDF), or Wildlife Development Facility as it is sometimes known, has undergone considerable change since a Community and Enterprise Development Fund was originally launched through COBRA. Its purpose was to assist rural communities make fuller and more sustainable use of protected area revenues that KWS had committed to share with the communities adjacent to protected areas that were obliged to bear many of the costs associated with wildlife conservation. The component was designed to assist communities develop sound proposals for accessing shared revenues, to help communities develop, market and administer wildlife related enterprises, and ensure that communities had an active voice in developing wildlife management plans that would integrate conservation and development.

The expected outputs of this component were

- Organization and implementation of administrative models for revenue-sharing in at least 4 geographic areas where communities derive socioeconomic benefits,
- Establishment and implementation of at least 4 wildlife management units/plans that incorporate community roles/concerns,
- Enhanced local community expertise in wildlife management and utilization methods being employed in up to 4 locations'
- Establishment of approximately 2 wildlife users/operators associations, and
- Establishment of at least 24 community development projects and/or enterprises

One of the major problems that this component has encountered since the early days of the project resulted from the amalgamation of the KWS revenue sharing funds and the USAID Community and Enterprise Development Fund to create the WDF. This blurred the overall purpose of the fund since revenue sharing was largely seen as a compensatory measure while the CED was intended expressly for enterprise development. Despite these difficulties (that are discussed further below), the WDF has been successful in leveraging additional funding from both the Government of Kenya and The World Bank. From July 1st 1994 to June 30th 1997, the available funds (which include unspent funds from the previous fiscal year) have

climbed steadily from about Ksh32 million, to Ksh69 million and Ksh95 million last year (1996/1997)

Notwithstanding the problems, the COBRA Project has been successful in developing an effective model for revenue sharing and enterprise development that fully involves local communities and other shareholders in the design and decision-making process. The project activities have been expanded beyond the original four geographical focal areas and numerous communities have taken the opportunity to access the funds and develop wildlife management and utilization plans. In addition, several wildlife forums have been created (such as those in Laikipia and Machakos). These have been successful in mobilizing people and financial resources to take charge of developing ecologically sustainable and financially sound wildlife management plans with the initial assistance and support of COBRA and the Partnership Department.

The community development projects that have been initiated through access to the WDF number in the hundreds. Owing to the confusion over the purpose of the funds, the nature of projects are diverse and many must be classified as compensatory schemes that are neither financially sustainable nor focussed on any wildlife conservation agenda. Table 1 shows the percentages of total WDF disbursements that fall within four broad categories: education, infrastructure development (other than schools), salaries (other than paid to teachers), and enterprise development.

YEAR	1994/1995	1995/1996	1996/1997
Income (Ksh millions)	31.8	69.1	94.6
% disbursed	64	68	33
Education (%)	62	53	56
Infrastructure (%)	24	13	25
Salaries (%)	9	13	9
Enterprise Development (%)	5	21	10

It should be noted that some community development projects that are not classified as enterprise projects could be designed to generate income. These might include dispensaries, tree nurseries and boreholes where user fees could be charged. In reality, this is not the case. Conversely, some enterprise development schemes do not have a strong financial rationale and their benefits to wildlife conservation are at best tenuous. Nevertheless, table 1 does provide a representative summary of WDF disbursements. It should be noted that although many compensatory, good-will schemes that have been funded are probably not economically sustainable, they do play a critical role in informing communities about the benefits of conserving wildlife and they help "break-the-ice" in efforts to open participatory dialog these groups. It has been noted in Zambia that revenues from the ADMADE program have frequently first been used to build palaces for traditional, local leaders. While such projects may not be beneficial to the community as a whole, they do make a strong, and usually positive, impression that helps promote subsequent broad participation.

It should also be noted that the low total amount of disbursement in 1996/1997 is largely the result of the difficulties that KWS field operations experienced during the phase of reorganization

The community development approach that COBRA has helped KWS' Partnership Department develop is a model that can be used throughout Kenya. Moreover, it is an approach that has much merit and one that is applicable to other Sub-Saharan countries. The model comprises the following discrete steps:

- Identification of areas of importance for conservation of biodiversity—these might include forest areas, wetlands or other ecological significant ecosystems, or wildlife dispersion corridors. The Biodiversity Department of KWS is responsible for identification of these areas. The department has recently completed its draft map and inventory of the “minimum conservation network” for Kenya. This identifies all of Kenya's national parks, reserves, wildlife sanctuaries and other areas of importance for maintaining biological diversity and also defines the main areas of marine and terrestrial dispersal for key migratory species.
- Community extension prior to undertaking a Participatory Rural Appraisal to ensure that expectations are not unrealistic and that the objectives and goals of the upcoming PRA are clear.
- Completion of a Participatory Rural Appraisal (PRA) that helps familiarize communities and other stakeholders with the work of KWS and builds trust and confidence in KWS field staff and other partners. A major theme of the PRA is to assist communities or discrete interest groups think beyond solving their immediate problems and satisfying imminent needs. The goal of the PRAs is to help stakeholders identify opportunities that can generate tangible economic benefits from the sustainable use of natural resources. At present, most opportunities for sustainable development involve non-consumptive use of resources, mainly in the form of ecotourism. There are, however, examples of sustainable, consumptive utilization such as game ranching, game cropping and game-bird hunting that have been implemented on a limited scale.
- Preparation of a Community Action Plan (CAP) that outlines the community's and their partners' approach to sustainable use of natural resources in the area. The plan identifies how constraints to development will be dealt with and how environmental impact will be monitored. KWS has been instrumental in developing its own procedures for undertaking Environmental Impact Studies based largely on proposed national procedures though with some modifications that have resulted from training workshops organized by COBRA and USAID.
- Legal registration of the group, association or enterprise. When outsiders are involved in developing enterprises on community land, it is essential that the community is legally entitled to establish a binding agreement with the developers that ensures that each party's interests, and those of other stakeholders, are protected (Johnson & Dannenmaier 1997).

- Continued technical support and capacity building from partners during project implementation

This model has evolved over several years and, indeed, it was first tested in Kenya in the late 1980s and early 1990s in Tsavo (Snelson & Lembuya, 1990), Amboseli and Maasai Mara (Talbot & Olindo, 1990) and elsewhere (Poole & Leakey, 1996). There have undoubtedly been difficulties and there are still several problems that need to be resolved. It has become clear that while KWS' Partnership Department has been doing a remarkable job at

KIMANA COMMUNITY WILDLIFE SANCTUARY⁹

The Kimana/Tikondo Group Ranch is located east of the Amboseli National Park. It has hosted three tourist camps, one of which dates back to the 1920s. In the 1990s, the members of the ranch have gone step further by setting aside 40 acres surrounding a swamp that attracts abundant wildlife. Through this conservation effort, the swamp and its springs are off limits to Maasai cattle, except in severe drought when the group ranch committee can vote to allow access. Initially, the Maasai were reluctant to undertake this venture because they had lost much of the best dry-season grazing when Amboseli was created. Through the efforts of KWS and the COBRA project, members of the ranch visited a successful community enterprise in Laikipia and decided to proceed. KWS helped draw up a business plan and pledged half of the Ksh 9 million needed for infrastructure and capacity building, the remainder will be financed from the sanctuary profits.

The Kuoni Travel Group (U.K.) funded construction of a gatehouse, purchase of the scouts' uniforms and printing of brochures and tickets. The sanctuary opened for business in 1996 and hosted more than 800 visitors that year. The response from tourists and tour operators has been extremely positive. A surprise development was the British Guild of Travel Writers choice of Kimana as its International Tourism Project of the Year.

The next frontier will be domestic marketing. Kimana has entered into one commission agreement with Abercrombie & Kent. In addition to spreading the word among Kenyan tour operators, the group ranch committee now must reassure its own members that by conserving the wildlife around the swamp and adopting a more competitive land use, they will realize greater benefits than from cattle ranching alone, now and in the future. Tangible benefits such as cash for school fees or improved health care are likely to be the deciding factor. A group of investors has approached the committee with a proposal to build an exclusive hotel—in exchange for sole access to the sanctuary.

These developments hold promise for additional enterprise initiatives in future. Local farmers have recognized the demand for fresh vegetables for the tourist industry and have expanded their horticulture activities. Concomitant with this, however, is the need to protect the farm plots from wildlife—especially elephants. This required additional investment in electric fencing and other protective measures. The KWS Partnership Department and the COBRA team have been instrumental in nurturing these linkages and supporting their implementation. This notwithstanding, several Amboseli group ranches are in the process of discussing possible subdivision, which is likely lead to fencing and fragmentation of the broader ecosystem (David Lovat-Smith, pers. com., 1998). These issues can only be addressed through broad participation in an open dialog that leads to consensus on a development plan in which all parties have a significant degree of ownership. This in itself is problematic when individuals may have to walk 100 km or more in order to participate in meetings.

⁹ Based in part, on the Kenya Wildlife Service 1996 Annual Report (KWS 1997 a)

mobilizing local communities, it has limited expertise when it comes to providing support in specific technical areas notably financial management and business development plans. The most successful development projects have involved local or foreign entrepreneurs who have assisted communities by providing these services or helping build capacity in these areas. Examples include recent developments with the Kimana Community Wildlife Sanctuary near Amboseli (see box), where support was provided by a British tour operator, the Golini-Mwaluganje Elephant Sanctuary (Shimba Hills) where the Eden Trust provided essential technical and financial support, and Iingwesi Community Wildlife Sanctuary (Laikipia), where a neighboring private wildlife sanctuary provides bookkeeping assistance.

It is believed within KWS that without a significant change in the current WDF disbursement policy, it will be difficult to channel funds into viable enterprise development schemes. DAI's COBRA proposal suggested that enterprise development funds should be used to provide loans to communities and business that were able to demonstrate the economic merits and ecological sustainability of their projects. This approach was never attempted though in 1996 the outgoing COBRA Enterprise Development Specialist reiterated its importance (Makilya, 1996 a and b). Now, more than six years after the start of the COBRA Project, senior management within KWS has strongly endorsed such a strategy.

At present in Kenya, there is very limited potential for developing enterprises that are based on the consumptive use of wildlife. Game ranching and cropping have proven to be economically risky operations even when the best expertise, adequate infrastructure (abattoirs, transport and good roads) and markets are available. Current wildlife policies do not allow sport hunting in Kenya (with the only exception being gamebird hunting) and law forbids the export of trophies. Community-based wildlife management programs in Zimbabwe and Zambia derive virtually all their revenues from sport and trophy hunting. The potential to develop a similar industry in Kenya is currently being explored with the preparation of a new Wildlife (Conservation and Management) Bill (Kibwana & Wanjala, 1995, Government of Kenya, 1998).

The COBRA Project has supported several studies of potential wildlife off-take rates (for example, for large herbivores and game birds). Heath's (1995) estimates of off-take rates and the value of cropped game and trophy animals, suggested that there is a potential for a highly lucrative hunting industry in some districts. It should be noted, however, that these estimates are based on ecological and economic data from southern Africa and they do not take all the likely costs into account. Moreover, such consumptive use of wildlife is not allowed at present without special permission from the Director of KWS¹⁰ and any changes would require revision of current Kenyan policies and laws.

In several cases where WDF funds have been used to implement education and infrastructure projects, there has been a woeful lack of coordination between KWS and other Government of Kenya agencies. Examples of understaffed or under-attended schools represent a serious waste of resources and unconscionably poor planning. Elsewhere water tanks have been

¹⁰ The Director's permission is required for game cropping operations. trophy hunting is not allowed under Kenyan law.

constructed without provision for water supply and community projects that cannot be adequately maintained owing to high recurrent costs have been funded

Lessons Learned

- With the support of the COBRA Project KWS' Partnership Department has established effective community mobilization procedures that can be used to design and implement enterprise development projects. The model is sufficiently flexible and the Partnership personnel have been well trained enough to allow its application throughout Kenya. This is a major accomplishment of COBRA and KWS and information about the model should be more widely disseminated in the region.
- Confusion over the purpose of the WDF has severely hampered its usefulness in promoting enterprise development.
- As has been noted elsewhere (see, for example, Byers, 1996a), Participatory Rural Appraisal techniques can often provide a forum for a community or groups within the community to air their grievances. Without the guidance of experienced practitioners, there can be a tendency for participants to focus on social and economics problems and constraints to development rather than identifying opportunities and building on past successes. PRA teams must be aware of these potential pitfalls.
- Once a PRA is completed, it is essential that the team follow through with helping implement the proposed actions. If this is not done, the community loses faith in the process, in the team and the organizations it represents.
- KWS' Partnership Department does not have the in-house expertise to provide communities with all the technical support that is required to develop viable business plans and appropriate financial and administrative procedures for enterprises. While continuing to support community mobilization, in future, the Partnership Department should focus on facilitating the creation of partnerships between NGOs and the private sector to help communities launch enterprises.
- It is essential that all community projects—whether good-will or enterprise development schemes—are thoroughly planned and coordinated with all relevant stakeholders and partners, not the least of which are other government agencies and donors working in the same locality.
- Most of the successful conservation-based community enterprise schemes in Kenya have relied on technical support from the private sector and NGOs. The importance of such mentoring cannot be over-estimated. Community initiatives require skills in business management, marketing, legal services and conflict resolution—none of which are typically available within the communities or through government agencies.

- At present there is limited potential for creating viable commercial enterprises that rely on the sustainable use of wildlife resources. The past few years have seen the successful launching of several tourism enterprises but the current downturn in visitors to Kenya does not augur well for their future. Additional sources of revenue from wildlife should be explored. These could include various possibilities for consumptive use that may be opened as a result of changes in wildlife utilization policy and law.

COBRA PROJECT COMPONENT IV STUDIES, RESEARCH AND POLICY ANALYSIS

The COBRA Project has been very active in this area though many of the specific activities have been reported under other components of the project. For example, studies on carnivore conservation (Frank, 1998), game-bird hunting (Bennun *et al* , 1997), and various game population counts (Department of Resource Survey and Remote Sensing & Mpala Research Centre, 1997) and potential harvesting analyses (Dobson and Georgiadis, 1997) have been undertaken in relation to WDF and enterprise development activities. A complete listing of reports relating to this component is provided in annex 3.

The COBRA Project Paper (USAID, 1991) identified four main areas of research: wildlife utilization rights, revenue sharing mechanisms, community and tourism sector initiatives, and landuse planning. All of these have been the subject of COBRA studies and policy discussion though landuse planning has received comparatively little attention other than studies on how land tenure issues relate to KWS' ability to develop ecological sustainable conservation units based on broader landscapes. Present KWS management has long acknowledged that in Kenya the maintenance of viable conservation areas must include preservation of wildlife dispersal zones and corridors around the core protected areas. However, current pressure on land is resulting in changing land-ownership patterns and conversion of open rangeland to agricultural land that must be fenced. In the case of Nairobi National Park, for example, the wildlife dispersal corridor that leaves the park open to the southeast is gradually being closed as the land is bought, developed as residential property or small farms, and fenced. As a closed park, this area has little ecological viability owing to its small size and the wildlife population dynamics required to maintain the current diversity of herbivores and their predators.

The expected outputs of this component as listed in the Project Paper were:

- Landuse management plans in COBRA Project target areas that reflect the results of community assessments defining socioeconomic and legal systems or concerns.
- CWS Unit develops draft strategy/plan for collaboration with private sector on CWP initiatives.
- CWS unit documents models for revenue sharing and operational guidelines.
- Preparation and presentation of a "white paper" or similar options paper defining additional reforms/changes needed to effectively regulate and promote utilization.

As is mentioned above, there remains a need to define KWS' role in developing landuse management plans in zones lying outside of the designated protected areas. The Biodiversity Department's efforts to map a minimum conservation network for Kenya is an essential first step. Future efforts will have to focus on more difficult issues relating to land tenure, zoning, and the perennial issue of wildlife utilization rights. COBRA has assisted KWS undertake a series of policy studies relating to revision of the 1976 Wildlife (Conservation and Management) Law and its 1989 amendment (Kibwana & Wanjala, 1995) and specific issues of wildlife utilization (Johnston and Dannenmaier, 1997).

Lessons Learned

- By supporting KWS' research and policy analysis work, the COBRA Project has been able to maintain a crucial involvement in environmental and wildlife policy development in Kenya and, thereby, has been able to ensure that a broad range of stakeholders has had an opportunity to contribute to the agenda. This contribution should not be underestimated. While efforts to strengthen Kenyan civil society have been fraught with difficulties and setbacks in recent years, the experience in wildlife policy has been more positive. The COBRA Project's work in strengthening capacity to promote and sustain community-based natural resource management through both policy initiatives and field activities provides a valuable lesson for future efforts in other sectors.
- During the course of the COBRA Project it has become clear that community participation in wildlife management and conservation of biodiversity is a complex and necessarily multi-sectoral undertaking. COBRA has focused its efforts on supporting what is today KWS' Partnership Department. Yet, it has been essential to forge strong linkages with the two other operational departments of KWS—Biodiversity and Tourism—as well as supporting senior management's efforts in policy development. The ties with the Biodiversity Department are especially critical since not only is that department responsible for identifying priority conservation areas and liaising with other government agencies such as the Forestry Department, it also now has responsibility for monitoring and evaluation across KWS. These are all critical areas for ensuring effective performance of the COBRA Project. Future efforts should build on the linkages that COBRA has forged within and beyond KWS and must continue to seek out opportunities to build new partnerships.

COBRA PROJECT COMPONENT V MONITORING AND EVALUATION (M&E)

A discrete COBRA Project M&E component was not envisaged in the Project Paper (USAID, 1991) though its importance was acknowledged at the very outset of the activity. It became evident early in the project that without efficient monitoring of project activities it would be extremely difficult to assess performance and to make necessary adjustments to the project design as the institutional landscape and policy environment evolved. Despite the attempts to develop an efficient M&E system for COBRA (Lambert, 1995, Little & de

Queiroz, 1997, see also Little, no date), this aspect of the project has seen little substantial progress and remains today a significant shortcoming. Having said this, the COBRA Project has been instrumental in helping the Partnership Department and KWS as a whole develop an M&E system that is not only functioning well but is based upon strong in-house capacity such that the potential for sustainability is very high.

To be useful, any M&E system must track both *performance* toward achieving results identified in work plans and the *impact* of these achievements on income generation, the sustainability of natural resource use, and foremost, the conservation of biological diversity. By establishing a monitoring system with efficient feedback to planners and stakeholders, it is possible to ensure that programs are adjusted periodically to maximize opportunities for achieving results, while simultaneously maintaining vigilance to identify quickly activities that do not meet their targets. This is a cornerstone of adaptive management. A rigorous and sustainable M&E system must be based on four pillars:

- A participatory approach to system design and indicator selection,
- A strong reliance on community-based monitoring of field activities,
- Reporting and feedback procedures that aid programmatic decision making and adaptive management, and
- Evaluations for thorough analysis of performance-related issues as required for decision making.

The COBRA Project should have established an efficient performance monitoring system around good indicators, cost-effective and reliable data collection, rigorous analysis, efficient reporting procedures, and measures to ensure information is readily available to decision makers and stakeholders. It was incumbent on COBRA to establish a fully functional monitoring system for an extended period of time, perhaps ten years or more, to ensure that the long-term impacts were measured in three key areas of results: institutional sustainability, work plan performance in community development, and socioeconomic and environmental impacts.

Measuring Institutional Sustainability

The purpose of this should be to monitor continued political and institutional support for wildlife management policies, legislation, and investments, and for community participation in conservation and development activities.

Measuring COBRA Work Plan Performance for Community-based Development

A customer-based approach to data collection could have helped achieve three objectives (i) to instill a sense of ownership over monitoring data among stakeholders that will encourage self-assessment of their achievements and necessary modifications to future work plans for adaptive management, (ii) to ensure data will be collected in a timely manner to expedite reporting, and (iii) to promote cost-effective data collection. Mechanisms for data collection may include, among other approaches, having communities and other stakeholders record economic and ecological information in logbooks.

Measuring Biophysical and Socioeconomic Impacts

Measuring the impact of COBRA and KWS activities on wildlife numbers and species diversity, household incomes, and other key parameters, is critical for determining the success of the overall program. While KWS has developed basic procedures and guidelines for environmental impact assessment (KWS, 1998), much more work will be needed before these can be made operational.

In addition to monitoring and assessing the impacts of these aspects of the project, the COBRA team should also have formally tracked the critical assumptions regarding Government of Kenya performance that were outlined in the Project Paper (USAID, 1991).

KWS Monitoring Systems

The collection of monitoring data must not become an end in itself. Rather, the data must be carefully interpreted and reported to partners and stakeholders for informed decision making and improved management. Such reporting and feedback mechanisms are still lacking in the KWS M&E system. The present system is based on sound indicators but data collection is neither efficient nor systematic. The follow-up work on the 1993 knowledge, attitude and practices surveys for Amboseli and Tsavo West were well executed but were not undertaken until 1997 (Ndung'u, 1998 a and b). Indeed, the results of the 1993 surveys were not distributed until January, 1996. Similarly, assessments of the progress and impact of Partnership Department projects in the four focal areas have not been conducted regularly though those that have been completed are extremely valuable (Ndung'u *et al* , 1996, 1997, Ndung'u and Kaaria, 1997 a and b).

The COBRA Project helped the Partnership Department develop and maintain several key databases: the WDF database, the mobilization and education workshops database, the conflict resolution occurrence register, and the knowledge, attitude and practices survey database (that is now maintained by the M&E specialist who is now within the Biodiversity Department) (COBRA Project, 1996, Fishbein, 1997). These databases have been institutionalized and, provided that basic training is available for new or replacement staff, the systems are sustainable.

Lessons Learned

- It is essential to design and implement a project monitoring system at the very outset of the program. This monitoring system should include indicators that gauge impact of the activities as well as indicators of performance toward achieving project outputs.
- A monitoring and evaluation system is a management tool and, as such, its users must be involved in its design and in the selection of indicators. This applies equally to a project monitoring system and a system for KWS and its various departments.
- While it can be efficient and cost effective to share data collection and analysis responsibilities among KWS departments (and with affiliated projects such as COBRA), it is essential that the information can be disaggregated to enable individual users to access relevant data. The merging of the COBRA Project M&E system with that of the Partnership Department and the rest of KWS has resulted in the inability to access crucial information on project performance.
- Many indicators for both the proposed COBRA M&E system and that of KWS are poorly conceived. Many reflect a lack of concern for the following: cost of data collection, availability of data, relevance to users, user-friendliness, and gender sensitivity.
- The difficulties experienced in implementing the respective M&E systems appear to reflect the following: a lack of understanding of the purpose of M&E, inappropriate indicators, and heavy involvement of outsiders rather than users. In addition, the following have been lacking: readily accessible data, inexpensive data, adequate collaboration and participation, and very limited community involvement.

For further information on the design and implementation of M&E systems, the reader is referred to USAID's Environmental Indicators Working Group study, *Performance monitoring of USAID environmental programs: an introduction to performance monitoring and a review of current best practices* (USAID, 1998 c).

OVERALL ACCOMPLISHMENTS OF THE COBRA PROJECT

Over the past six years, the COBRA project has helped the Kenya Wildlife Service undergo a fundamental cultural change. Formerly a uniformed, paramilitary agency with the primary expressed objective of combating poaching of key mammal species, KWS has reinvented itself and is now focused on conserving Kenyan biodiversity through building partnerships with rural communities and helping stakeholders realize the economic benefits from the sustainable use of wildlife. These are the fundamental principles that guided the design of the COBRA Project. The project has accomplished its expressed goals in all areas though some specific outputs have been less than originally expected (notably the amount of disbursements from the revenue sharing fund).

The COBRA Project has been successful in developing a model for involving local communities in the management of wildlife in areas without any formal conservation zones as well as near national parks and reserves. This model was developed through the efforts of COBRA and KWS field staff who have tested it repeatedly and modified it accordingly. Today, Kenya has a model for community-based wildlife management that is flexible enough to be applicable to the wide diversity of ecological, cultural, and economic conditions that are found throughout the country. The legacy of COBRA will be that this utilitarian model can be used by a well trained cadre of extension workers in virtually any setting in Kenya to achieve effective community participation in conservation and development projects.

Specific COBRA successes include

- The transformation of a concept of community-based conservation into a well-defined procedure
- The elevation of the Partnership Department as a core operating group within KWS
- The creation of landowner associations and other entities for the purpose of generating revenues from the sustainable use of wildlife resources
- The transfer of tangible benefits to rural communities
- The improved perception of KWS' role in the eyes of rural communities
- The expansion of the partnership program beyond the original four COBRA focal areas to a national scale
- The replication of community conservation programs throughout Kenya

Undoubtedly, there have been problems in implementation of the COBRA Project. One of the biggest of these stemmed from the requirement that KWS share 25 percent of its gate revenues with communities adjacent to the protected areas. In retrospect this was an impossible goal to achieve and at the same time maintain any semblance of financial sustainability for KWS. Indeed, the organization was crippled in 1993/1994 as a result of this requirement.

The performance of DAI subcontractors on the COBRA Project has been mixed. MSI played a more minor role than originally expected when a significant proportion of training funds were redirected to in-country training rather than overseas study tours. The performance of the African Wildlife Foundation (AWF) has been criticized. While AWF has acknowledged that the organization was ill prepared to deal with the administrative requirements incumbent on a USAID contractor (or subcontractor) (AWF, 1997), there are other fundamental issues that appear to have contributed to problems in certain areas. As a conservation NGO, AWF's strength lies in undertaking field research. While the organization's work in Tsavo West (and Tanzania) certainly focused on community involvement in conservation, AWF appears to have been ill equipped to carry this work to fruition in terms of implementing viable

programs. An academic (research-oriented) approach and a lack of entrepreneurial skills and commercial savvy seem to have hampered AWF efforts. AWF's work on developing the modular training programs in some ways exemplifies these shortcomings. Though extremely thorough, the training courses were found to be too long in duration for the members of the professional staff who were obliged to fulfill their operational duties. Moreover, the courses were often too comprehensive, incorporating more material than was useful for many individual participants.

The participation of development NGOs in KWS-sponsored community development programs remains far less than was originally anticipated or is currently warranted. In part this is because development NGOs have tended to steer away from conservation-based activities leaving these to those NGOs that have traditionally focused on wildlife-related activities. In addition, and perhaps as a result of this *de facto* division of responsibilities, many rural communities in Kenya have regarded these NGOs with suspicion. In many areas, KWS Partnership staff has won the trust of local communities and is in a strong position to facilitate in the identification and implementation of conservation-based development projects. However, the expertise required to accomplish these goals does not exist within KWS. Russell and Harshbarger (1998: p. 18) have remarked that

the next phase of conservation and development activity will focus on the general barriers to sustainable development—lack of savings opportunities, markets and infrastructure, access to information—rather than on specific types of enterprises. But to facilitate this work, partnerships with other groups outside of the conservation sphere will be essential.

In the future, KWS' Partnership Department must play a role in helping partner organizations work with rural communities to identify these barriers to development and then either circumvent, reduce or eliminate the constraints. It is unlikely that these partners can be found within the NGO community. Improved linkages with the private sector both within Kenya and beyond appear to hold the most promise.

Lessons Learned

- Thorough institutional integration of the original Community Wildlife Service into KWS as the Partnership Department was an essential step toward creating a fully functional service. The COBRA Project was the key to achieving this.
- Through the support of the COBRA Project, KWS' Partnership Department has become highly effective at mobilizing rural communities. Yet, mobilization is only the first step in developing a truly participatory approach to biodiversity conservation. Control will remain in the hands of outsiders if a community development strategy is not promoted (BSP, 1993). Since participatory development strategies share some level of control with local stakeholders, they are capable of generating significant levels of sustainability if the project output meets a strongly felt community need. KWS does not have the resources to undertake this effort alone. In order to accomplish these goals, KWS must rely on other

partners such as other government agencies, other donor-funded projects, NGOs and, most importantly, the private sector

- In order to ensure full participation in community-based natural resource management, stakeholders must be empowered to design as well as implement activities. By placing the highest levels of responsibility and control in the participants' hands, the highest levels of potential sustainability can be attained. However, if such an empowerment strategy is to be developed in Kenya, fundamental changes in land and natural resource tenure, and the potential for wildlife utilization will be essential. The COBRA Project has helped launch a series of analyses of possible policy changes and these have generated considerable discussion. The future direction of community-based natural resource management in Kenya hinges on changes in current policy.
- Future funding for Partnership activities will require fundamental changes in the way the current WDF operates. The private commercial sector, particularly tour operators and ranchers, will have to become much more involved in community planning if enterprise development projects are to succeed.

FUTURE DIRECTIONS OF THE KENYA WILDLIFE SERVICE AND THE COBRA PROJECT

As throughout its history, KWS finds itself in a politically charged arena. The organization's mandate—the conservation of wildlife and management of national parks—places KWS in a position of great economic importance to Kenya and imparts a high international profile. Furthermore, KWS' responsibility over large tracts of land and natural resources in Kenya continues to attract the often-unwelcome attentions of politicians and politically well connected private sector interests. Whether KWS' senior management like it or not, the organization will always be in the political spotlight and under the close scrutiny of the Government of Kenya and international donor organizations. KWS' future will be determined largely by people outside of the organization.

This notwithstanding, the Director and senior management play a preeminent role in shaping and promoting the vision of KWS and are responsible for maintaining the image of the organization both nationally and internationally. Present uncertainties about the tenure of the present Director, Dr. Western, threaten to undermine his authority and place KWS in an insecure position in terms of both its institutional status and its financial security. Over the past few weeks, Dr. Western was removed from the Directorship by the President of Kenya (on May 21st) and then reinstated a week later (May 28th). The turmoil that this caused within KWS was mirrored outside of the organization as the Government of Kenya and key bilateral and multilateral donors sought reassurances from each other that KWS would continue to receive adequate political and financial support to ensure that its ability to meet its immediate responsibilities would not be impaired. At this time (June 5th) it remains unclear whether

either the government or the donor community have sufficient faith in KWS to maintain the level of support that it has enjoyed over the past few years ¹¹

Against this backdrop of institutional instability, KWS must reassess its role and responsibilities with respect to its own mandate and those of other government agencies. The vision of wildlife conservation that the Director (see footnotes #7 and #11) brought to KWS requires that its efforts not only extend to broader ecological landscapes (*parks beyond parks*) but also that a far broader array of stakeholders are implicated in conservation efforts (local communities, NGOs, the private sector, and more) (KWS, 1997 c). This approach has blurred some of the lines of responsibility between various agencies. For example, while KWS has signed a Memorandum of Understanding with the Forestry Department, it remains unclear what the two agencies' precise roles are in protecting and managing the few remaining forest areas in Kenya. Similarly, KWS' heavy reliance on revenues from park gate receipts means that it has a major role to play in promoting tourism though clearly this sector is the mandate of another government agency. Many of these areas of potential conflict of interest will have to be addressed over the next few months as discussions on the proposed new Wildlife (Conservation and Management) Bill progress (Government of Kenya, 1998).

If KWS is severely weakened politically and financially as a result of the recent machinations, it will be obliged to reassess its current strategy and future goals. The possibility of dividing the institution into two or more separate agencies has been discussed. If KWS was to focus only on its core area of park management, it is likely that its financial condition would improve since it could hive off activities that do not generate income. However, such a strategy would run counter to all the reorganizational efforts that have been undertaken over the past few years and would require a major change in KWS' strategic approach to conservation. The question that must be asked is if KWS does opt to take a backseat in wildlife policy development and the broader aspects of its implementation, who will be capable of taking on these responsibilities?

Even if KWS' current structure is retained, the Partnership Department will have to reassess its precise role in promoting community-based management of wildlife resources. It has become evident that while KWS has been extremely good at mobilizing local communities, it has not always enjoyed the same degree of success when greater levels of stakeholder participation have been required. Partnership Officers do not have the entrepreneurial skills needed to help communities and fledgling associations develop business plans and market their products. Other partners will have to take on these roles.

¹¹ The institutional turmoil has continued since the completion of the COBRA institutional contract. Dr. Western was replaced as Director of KWS in late 1998 with the appointment of the former Director, Richard Leakey, for at least an interim period. The fundamental differences in management style, philosophy and approach between the two Directors will undoubtedly have a profound influence on the future direction that KWS will take. It is likely that tighter management within KWS and a more limited operational role will find favor with certain donors, notably the World Bank. In contrast, a possible move away from community-based wildlife management might encourage other donors to focus their support for conservation efforts in Kenya through implementing agencies other than KWS.

During the remaining 18 months of the COBRA Project (to December 1999), USAID will play an important role in determining the future of KWS. COBRA Project funding has been critical to maintaining many of the activities of the Partnership Department especially during the past year when KWS finances have been in severe difficulty. Moreover, it must be acknowledged that the tangible support that USAID has provided to KWS (in the form of both technical assistance and funding) lends a significant amount of prestige and political power to KWS. By diluting this level of support or its visibility, USAID will undoubtedly have a significant impact on KWS' ability to have a voice in determining its own future.

Future Challenges

Some of the most fundamental challenges facing KWS over the next few months have been discussed above. Here we will focus on some of the specific areas where it is possible to draw lessons from the accomplishments of the COBRA Project and the insights that the project has provided into the operations of KWS.

Financing of KWS

The most immediate challenge will be assuring financing of KWS' current operating costs and, in the longer term, making the organization financially sustainable. The present political and institutional wrangling has added to the uncertainty of continued donor support for KWS. Without this support from The World Bank, USAID, DfID, KfW, the EU, the Dutch Government and others, there is little hope that KWS will survive. The downturn in tourism has resulted in a 70 percent fall in gate receipts and this has created a heavy reliance on increased funding from the government and international donors. The present crisis presages the imminent collapse of KWS. It can be resolved only through an immediate infusion of funds.

In the longer term, the financial sustainability of KWS will require both continued restructuring of the organization to reduce recurrent operating costs and some new approaches to attracting funding or generating revenues. Retrenchment has been underway for some time and will undoubtedly continue (KWS, 1997 b). If donor funding is to continue, donors should explore the possibilities of using mechanisms that differ from those that have been employed to date. Considerable progress has been made in recent years in creating viable trust funds for financing environmental programs and institutions in developing countries (see Ellsworth, 1997, *The road to financial sustainability: how managers, government, and donors in Africa can create a legacy of viable public and non-profit organizations*). In addition, innovative approaches to leveraging financing through a new generation of debt-for-nature swaps, carbon sequestration credits and other economic instruments are showing considerable promise. Within Kenya, various fiscal measures could be adopted to provide support to KWS. These might include revision of the present park system to enable KWS to obtain revenues from the reserves currently controlled by county councils (such as the Maasai Mara), and new or additional taxes paid by tourists and tour

operators. At this time, it is uncertain whether there is the political will to implement any of these measures since they are sure to arouse the wrath of key interest groups.

Financing of the WDF and Partnership Department Activities

Undoubtedly, the present form and structure of the WDF requires major revision. As is discussed above, there has been heavy bias toward funding good-will projects that compensate rural communities for the direct or opportunity costs they bear as a result of being in close proximity to conservation areas. Because of this, there are very few WDF sponsored projects that are demonstrably sustainable. This notwithstanding, the good will that the WDF funds has generated can now be put to good effect.

Future funding should focus on enterprise development projects that can be shown to be both based on conservation of wildlife and economically viable. In order to achieve this, it will be necessary to develop better guidelines on procedures for designing such projects and having them approved for WDF funding. At present such procedures exist but they are weak and are often either circumvented or ignored. A best-practices manual should be developed (see DAI, 1997, *Microenterprise best practices grant planning and management document*).

The possibility of using either the WDF or a new fund to provide loans for enterprise development should be explored. The present confusion regarding the purpose of the WDF (owing to the mixing of revenue sharing funds with enterprise development funds) must be addressed. If a separate enterprise development fund is created (whether for disbursement of loans or grants), it will be essential to investigate innovative ways of managing the capital and of attracting a far broader variety of donors and contributors to the fund. The creation of a trust fund, perhaps independent of existing institutions, should be explored. Several successful models for such trusts are to be found in Africa (for example, Madagascar's *Tany Meva*) and Latin America (for example, Mexico's *Fondo Mexicano para la Conservación de la Naturaleza*) (also see Ellsworth, 1997). Once again, there are many opportunities to capitalize such funds using "non-traditional" economic instruments and involving institutions other than the major bilateral and multilateral donors. Experience in Madagascar has shown that since being formally established, the *Tany Meva* Foundation has been able to attract funds from conservation NGOs and private foundations in addition to traditional donors.

Other sources of funding for community enterprise development projects can also be accessed. New programs such as the joint EU/World Bank initiative, MELISSA (Managing the Environment Locally in Sub-Saharan Africa), and the Overseas Private Investment Corporation's support for US businesses looking to make foreign investments, provide genuine opportunities to promote development. In addition, organizations such as the International Finance Corporation and USAID have allocated funds to support small enterprise development programs. IFC's Small and Medium-scale Enterprise Program (funded jointly with the Global Environmental Facility) specifically targets enterprises that promote the sustainable use and conservation of biodiversity for long term, low interest rate loans (up to 10 years at 2.5 percent pa).

As has been discussed above, the key to accessing such funds is the preparation of thorough and realistic business plans. This is beyond the capacity of KWS' Partnership Department and will require that communities and associations enter into agreements with private enterprises. KWS' Partnership and Legal Departments should build on their experience to date (with Kimana for example) to help broker such deals.

Monitoring and Evaluation

If KWS is to strengthen its political and financial position, it is essential that the organization can demonstrate that its performance is strong and that its impact is positive. In order to accomplish this, the institution must have a rigorous M&E system that includes cost-effective data collection and analysis, and an efficient system for reporting results to decision-makers, managers, field staff and customers.

While KWS' M&E Specialist has been doing an excellent job, the unit's new place within the Biodiversity Department threatens to weaken the linkages with the Partnership Department. KWS management must ensure that the M&E unit continues to serve the needs of all of its departments and there must be a renewed commitment to providing M&E support to all activities. It will be especially critical to establish procedures for monitoring the impact that changes in wildlife policy have on biodiversity and the socioeconomic wellbeing of rural communities.

Environmental Impact Assessment (EIA)

With the support of the COBRA Project, KWS has developed rigorous EIA guidelines (KWS, 1998). There are several good examples of how EIA procedures have been implemented to evaluate fencing projects that have been supported by KWS. However, the existing guidelines are bureaucratically cumbersome and will require the continual training of staff.

An essential component of an EIA is the design and implementation of a plan to monitor the impact of mitigation measures (as well as compliance with the proposed measures). This requirement presents an excellent opportunity to develop synergy between the M&E unit and KWS staff responsible for EIAs.

RECOMMENDATIONS FOR USAID SUPPORT TO KWS AND COMMUNITY-BASED WILDLIFE MANAGEMENT

Whether KWS survives the current political and financial crisis or not, or whether or not USAID continues to provide direct assistance to KWS following the completion of the current COBRA Project Grant Agreement (in December 1999), USAID should build upon the successes of COBRA to provide further support for community-based wildlife management in Kenya. The unique ecological characteristics of Kenya and the international

importance of the country's wildlife resources provide a compelling reason to assist Kenyans conserve this natural heritage and derive tangible benefits from it. Under the present systems of land tenure and natural resource utilization rights, there is a real danger that population growth and economic decline will continue to lead to loss of natural habitat and, in turn, compromise the ecological viability of the protected area system and other wildlands. Community participation in the management of wildlife and other natural resources is the most promising approach to achieving sustainability in attempts to conserve biodiversity. The COBRA Project has demonstrated that this approach can work well in Kenya.

Several specific areas that should be considered for continued USAID support for such initiatives should be signaled out:

- KWS' Partnership Department has demonstrated that it has the skilled staff, established procedures, and good reputation needed to mobilize rural communities—an essential first step in developing participatory approaches to resource management. USAID should assist KWS in building on this competitive advantage by providing technical and financial support.
- Monitoring and Evaluation continues to be an area in need of technical support. Data collection and analysis procedures require strengthening. Monitoring of biodiversity is critical for assessing the impact of conservation initiatives; typically it is a complex and costly undertaking and will probably require the financial support of donors.
- USAID has a strong technical advantage in providing training and technical support for designing and implementing rigorous EIA procedures. USAID/Kenya and REDSO should consider providing additional support to Kenyan environmental institutions in this area.
- Whether the WDF survives in its present form or not, it is likely that KWS will continue to share revenues with communities that bear the economic burden of living with wildlife in areas adjacent to protected areas. Improved management of WDF capital and disbursement procedures will require additional technical support. This is another area where USAID has acknowledged expertise and a demonstrable competitive advantage.
- Funding for enterprise development initiatives should become distinct from the KWS revenue sharing program (as was originally anticipated in the COBRA Project Paper). USAID should consider creating an enterprise development fund that is unfettered by KWS' bureaucratic problems and the constraints that the highly politicized WDF has experienced. USAID might also consider providing technical assistance in leveraging additional funding from other sources (other donors, commercial institutions, other programs, and so on).
- In addition to a pressing need for funding for enterprise development projects (whether through grants or soft loans), technical support is required to promote and encourage higher levels of community participation in such schemes. KWS' Partnership Department does not have the relevant expertise to provide this type of assistance. USAID should

consider helping establish a program that leverages support from the private sector to build viable enterprises. In Kenya, the NGO community has yet to demonstrate that it can provide such assistance to communities; indeed, many NGOs are in need of capacity building in this area. This notwithstanding, the possibility of creating linkages between NGO strengthening programs and participatory community development initiatives should be explored.

- If USAID declines to continue supporting KWS, or if KWS' mandate is significant altered, there is a distinct danger far less competent agencies organizations will be accorded the responsibility of dealing with issues relating to wildlife policy. Many of these are emotive, politically charged issues that are best addressed by a neutral body. If USAID does not maintain a role in this area of policy, there is a danger that past and future efforts to promote community-based management of natural resources will be undermined.

Overall, the COBRA Project has performed well, meeting most of its original performance objectives and outputs. At this time, USAID should develop a strategy to reinforce the positive impact that the project has had on Kenyan institutions and on community-based wildlife management. There are many lessons that have been learned and the accumulated knowledge should be disseminated to other programs and institutions in Sub-Saharan Africa. USAID should promote opportunities for sharing information with similar programs that the agency sponsors elsewhere in Africa—notable through support to the Southern African Development Community's (SADC) Community-based Natural Resource Management Network and country-specific initiatives in Namibia (LIFE), Botswana (NRM), Zimbabwe (CAMPFIRE), Zambia (ADMADE), and Malawi (COMPASS).

REFERENCES

- African Wildlife Foundation (1997) Conservation of Biodiverse Resource Areas (COBRA) AWF sub-contract report—summary of issues, activities, and lessons learned USAID/DAI-COBRA, Nairobi 43 pp
- Barrett, C B & Arcese, P (1995) Are Integrated Conservation-Development Projects (ICDPs) sustainable? On the conservation of large mammals in Sub-Saharan Africa *World Development*, 23 1073-1084
- Benirschke, K , Berger, J , Janzen, D H , Hallwachs, W , Meffe, G K , Myers, N , Newmark, W D , Woodruff, D S and Bradbury, J (1998) *Science*, **280** p 1510
- Bennun, L A , Simiyu, A & Matiku, P (1998) Community management of gamebird hunting USAID/DAI-COBRA 9 pp
- Biodiversity Support Program (1993) *African biodiversity foundation for the future* USAID/BSP 149 pp
- Bonner, R (1993) Crying wolf how the international wildlife community got stamped into banning ivory *The New York Times Magazine*, February 7th, 1993
- Borrini-Feyerabend, G (1997) *Beyond fences seeking social sustainability in conservation* Vol 1—A process companion, Vol 2—A resource book IUCN, Gland 129 pp and 283 pp
- Brown, M & McGann, J (1996) *A guide to strengthening Non-Governmental Organization effectiveness in natural resources management* USAID/The PVO-NGO/NRMS Project 218 pp
- Byers, B A (1996a) Understanding and influencing behaviors in conservation and natural resources management USAID-Biodiversity Support Program—African Biodiversity Series, 4 125 pp
- Byers, B A (1996 b) Environmental threats and opportunities in Namibia a comprehensive assessment for USAID/Namibia—synthesis report USAID/Namibia – EPAT Project 673-0002 under 936-5555 106 pp
- Child, B (1990) Assessment of wildlife utilization as a land use option in the semi-arid rangelands of southern Africa In Kiss, A , *Living with wildlife wildlife resource management with local participation in Africa* World Bank Technical Paper 130—Africa Technical Department Series 155-176
- Child, B (1996) Zimbabwe In Lutz, E & Caldecott, J Decentralization and biodiversity conservation The World Bank, Washington, DC 123-138

COBRA Project (1996) Half-year report on data management activities for the period January-June 1996 USAID/DAI-COBRA 7 pp

Curry, J J (1994) Framework for applied social research, monitoring, and evaluation of wildlife and natural resource management for the Department of Wildlife and National Parks, Botswana Botswana Natural Resources Management Project 30 pp

Department of Resource Survey and Remote Sensing & Mpala Research Centre (1997) Numbers and distributions of wild herbivores in Laikipia District February 6-10, 1997 Laikipia Wildlife Forum 5 pp + annexes

DAI (1997) Microenterprise best practices (MBP) grant planning and management document USAID/DAI 109 pp

Dobson, A & Georgiadis, N (1997) A harvest model for the Laikipia zebra population preliminary report to the Chairman of the Laikipia Wildlife Forum USAID/DAI-COBRA 2 pp + annexes

Ellsworth, L (1997) *The road to financial sustainability how managers, government, and donors in Africa can create a legacy of viable public and non-profit organizations* USAID—Sustainable Finance Initiative, The World Bank—SPAAR 101 pp

Fishbein, L (1997) Final report on COBRA Project information system issues USAID/DAI-COBRA 5 pp + annexes

Frank, L (1998) Living with lions carnivore conservation and livestock in Laikipia District, Kenya USAID/DAI-COBRA/Mpala Research Centre 63 pp

Goodman, P S (1996) West Caprivi community game guard and MET ranger patrol data collection and analysis Ministry of Environment and Tourism, Windhoek, Namibia 7 pp

Government of Kenya (1998) The Wildlife (Conservation and Management) Bill (draft) Government of Kenya 127 pp

Hagen, R , Wyckoff-Baird, B , Johnson, S Resch, T & Oyier, D (1998) Living in a Finite Environment (LIFE) evaluation USAID 36 pp

Hall, R E , Little, P D & de Queiroz, J S (1996) Mid-term evaluation of the Conservation of Biodiverse Resource Areas Project (COBRA) USAID/DAI-COBRA 22 pp + annexes

Heath, B (1995) Wildlife utilization study Technical Report #3 USAID/DAI-COBRA/KWS 41 pp + annexes

IUCN (1980) *World conservation strategy living resource conservation for sustainable development* International Union for the Conservation of Nature/UNEP/WWF, Gland, Switzerland

Johnston, L & Dannemaier, E (1997) Kenya's wildlife easements a review of wildlife-based sustainable use agreements in Kenya's Samburu District USAID-Environmental Law Program/KWS 16 pp

Katerere, Y (1997) Partnerships, profit and power *Resource Africa* (Newsletter of the SADC Natural Resource Management Programme), 1 p 9

Kenya Wildlife Service (1997a) Annual report for 1996 "Parks beyond parks"—celebrating fifty years of National Parks in Kenya 1946-1996 KWS, Nairobi 32 pp

Kenya Wildlife Service (1997b) Corporate plan 1997-1999 KWS Corporate Planning Unit 93 pp

Kenya Wildlife Service (1997c) Maintaining biodiversity into the 21st Century a concept paper on the vision and goals of Kenya Wildlife Service for the period 1997-2002 KWS, Nairobi 20 pp

Kenya Wildlife Service (1998) Environmental Impact Assessment (EIA) guidelines and administrative procedures SPARVS Agency, Limuru 89 pp

Kibwana, K & Wanjala, S (1995) Wildlife law reform in Kenya towards a comprehensive law on wildlife conservation, management, utilization and related issues First Interim Report 46 pp

Kiss, A (1990) *Living with wildlife wildlife resource management with local participation in Africa* World Bank Technical Paper 130—Africa Technical Department Series 217 pp

Kiss, A (1997) Possible framework for next phase of support for wildlife/tourism sector in Kenya The World Bank 8 pp

Kiss, A & Kaguamba, R (1997) Kenya Protected Areas and Wildlife Service (PAWS) Project supervision mission aide memoire The World Bank 20 pp

Lambert, V (1995) Monitoring and evaluation plan Conservation of Biodiverse Resource Areas Project (COBRA) USAID/DAI-COBRA draft

Lawson, D & Mafela, P (1990) Botswana development of the Wildlife Management Area concept In Kiss, A, *Living with wildlife wildlife resource management with local participation in Africa* World Bank Technical Paper 130—Africa Technical Department Series 151-154

Little, P D (no date) Socioeconomic indicators for monitoring natural resources management programs a case study of the Conservation of Biodiverse Resource Areas (COBRA) Project, Kenya Draft 10 pp

- Little, P D & de Queiroz, J S (1997) A plan of action for monitoring and evaluation (analysis) at the Kenya Wildlife Service USAID/DAI-COBRA draft
- Lutz, E & Caldecott, J (1996) *Decentralization and biodiversity conservation* The World Bank, Washington, DC 176 pp
- McRae, M (1998) Survival test for Kenya's wildlife *Science*, **280** 510-512
- Makilya, J (1996a) Wildlife for Development Fund and enterprise development technical report for July to November 1996 USAID/DAI-COBRA 10 pp
- Makilya, J (1996b) Wildlife for Development Fund and enterprise development two-year report—December 1994 to November 1996 USAID/DAI-COBRA 41 pp
- Murindagomo, F (1990) Zimbabwe Windfall and CAMPFIRE In Kiss, A , *Living with wildlife wildlife resource management with local participation in Africa* World Bank Technical Paper 130—Africa Technical Department Series 123-139
- Murphree, M (1993) Community as resource management institutions IIED, London Sustainable Agriculture Program, Gatekeeper Series, **36**
- Mwangi, W (1996) The law does not speak the Samburu language In Brown, M & McGann, J , *A guide to strengthening Non-Governmental Organization effectiveness in natural resources management* USAID/The PVO-NGO/NRMS Project 71-72
- Ndung'u, M (1998 a) Amboseli (1993) knowledge, attitude, practices survey—follow up report (1997) KWS, Nairobi 18 pp + annex
- Ndung'u, M (1998 b) Tsavo West (1993) knowledge, attitude, practices survey—follow up report (1997) KWS, Nairobi
- Ndung'u, M & Kaaria, B (1997 a) Assessment of WDF-funded projects/activities in Laikipia District KWS, Nairobi 39 pp
- Ndung'u, M & Kaaria, B (1997 b) Assessment of WDF-funded projects/activities in Samburu District KWS, Nairobi
- Ndung'u, M , Kaaria, B & Awich, G (1997) Assessment of WDF-funded projects/activities in Coast Region KWS, Nairobi 35 pp
- Ndung'u, M , Kariuki, A & Sumba, D (1996) Review of the progress and impact of CWS Projects in the six group ranches that neighbour Amboseli National Park in Kajiado District KWS, Nairobi 47 pp + plates

Painter, M (1995) A framework for monitoring and evaluation in support of community-based natural resource management by the Department of Wildlife and National Parks Draft Report, Natural Resource Management Project 29 pp

Pearce, D & Moran, D (1994) *The economic value of biodiversity* IUCN/Earthscan, London 172 pp

Poole, J H & Leakey, R E (1996) Kenya In Lutz, E & Caldecott, J , Decentralization and biodiversity conservation The World Bank, Washington, DC 55-63

Raven, P (1998) *Science*, **280** 1510-1511

Russell, D & Harshbarger, C (1998) *Studying the social dimension of community-based conservation* Biodiversity Conservation Network, Suva, Fiji 123 pp

SARDC (1994) *State of the environment in Southern Africa* Southern African Research & Documentation Centre/IUCN/SADC, Harare 332 pp

Snelson, D & Lembuya, P (1990) Protected areas neighbors as partners program—Tanzania and Kenya In Kiss, A , *Living with wildlife wildlife resource management with local participation in Africa* World Bank Technical Paper 130—Africa Technical Department Series 103-110

Talbot, L & Olindo, P (1990) Amboseli and Maasai Mara In Kiss, A , *Living with wildlife wildlife resource management with local participation in Africa* World Bank Technical Paper 130—Africa Technical Department Series 67-74

USAID (1991) Conservation of Biodiverse Resource Areas (COBRA) Project Paper (615-0247) USAID/Kenya 105 pp + annexes

USAID (1998a) An evaluation of the ADMADE Programme with special reference to the “strengthening phase” 1995-1997 Mano Consulting Services Ltd , Lusaka draft

USAID (1998b) COBRA Assessment discussion draft USAID 44 pp

USAID (1998c) *Performance monitoring of USAID environmental programs an introduction to performance monitoring and a review of current best practices* USAID—Environmental Indicators Working Group 75 pp

Western D (1998) *Science*, **280** 1507-1510

ANNEX I
PEOPLE INTERVIEWED

Albert H Barclay—President, Development Alternatives Inc

Paul DeLucco—COBRA Project Chief of Party

Laurence G Frank—COBRA Consultant (Laikipia carnivore study), Field Station for Behavioral Research, University of California at Berkeley

Gideon Gathaara—Forest Conservation Program Coordinator, Kenya Wildlife Service

Joakim W Kagira—Human Wildlife Conflict Resolution Coordinator, Kenya Wildlife Service

Joseph Kioko—Deputy Director, Wildlife Services, Kenya Wildlife Service

Peter Lembuya—Senior Projects Officer, Community Conservation Program, African Wildlife Foundation

David Lovat-Smith—retired Chief Warden, Amboseli National Park

Simon ole Makallah - Deputy Director, Partnership Department, Kenya Wildlife Service

Stephen M Manengene—Regional Biodiversity Coordinator, Mountain Region, Kenya Wildlife Service

Dennis B McCarthy—Chief, Agriculture and Natural Resources, USAID, REDSO—East and Southern Africa

James W Munyugi—Mobilization and Education Coordinator, Kenya Wildlife Service

James Ndirangu—COBRA Project COTR, USAID/Kenya

Margaret Ndung'u—Monitoring and Evaluation Specialist, Kenya Wildlife Service

Joao S de Queiroz—Regional Natural Resources Advisor, USAID, REDSO—East and Southern Africa

Lee Ann Ross—Assistant Director, USAID/Kenya

Mark R Stanley Price—Director of African Operations, African Wildlife Foundation

Philip O Wandera—Wildlife Utilization Coordinator, Kenya Wildlife Service

Dennis Weller—Chief, Agriculture, Business and Environment Office, USAID/Kenya

David Western—Director, Kenya Wildlife Service

ANNEX II
OVERVIEW OF COMMUNITY-BASED WILDLIFE
MANAGEMENT IN AFRICA

1—WHY ATTEMPT COMMUNITY-BASED WILDLIFE MANAGEMENT?

Community-based management of wildlife populations is nothing new in Sub-Saharan Africa. Many rural communities have practiced the sustainable use of wild animals and other natural resources since prehistoric time. During the course of the 20th Century, however, increases in human population have placed increasing demand on these resources and, in many regions, over-exploitation has led to severe depletion and, in some cases, extirpation of certain species of wildlife. It has been estimated that about 65% of Africa's natural habitats have been lost as a result of agricultural expansion and deforestation (Kiss, 1990). While many countries have set aside significant areas of land for national parks and other conservation units, it is clear that often these are inadequately maintained. Moreover, the migratory habits of many large herbivores in Africa require geographically broader approaches to conservation. The dual threats of poaching and loss of critical habitat have threatened the ecological viability of many protected area systems in Africa.

From the economic viewpoint of rural communities, wildlife conservation has a different connotation. With the widespread banning of hunting for meat, skins, ivory and rhino horn, and severe penalties for poaching wild animals, wildlife has lost virtually all of its economic value to these people. Moreover, the creation of many protected areas represented a significant opportunity cost as the surrounding communities were also barred from harvesting wood and other products (grass for thatching, wild food, and traditional medicines). When the cost of crop damage caused by wild animals, the higher incidence of disease and depredation on stock, and the threat of attack on humans, are taken into account, many communities have regarded wild animals as a hindrance to economic development and a threat to their families.

In the 1980s it became clear to many conservation groups and international donor organizations that successful conservation strategies in Africa (and elsewhere) would require active participation of communities neighboring key protected areas. Moreover, for community participation to succeed, the groups would have to realize tangible economic benefits in order to convince them of the benefits accruing from conservation. The basic tenets of community-based natural resource management were spelled out in the International Union for the Conservation of Nature *World Conservation Strategy* (IUCN, 1980). Since then international donors and conservation groups, and many government institutions and NGOs have built up a wealth of information and knowledge about different approaches that have been tested through numerous initiatives around the world. Many case studies, tool kits, guidelines and lessons learned have been published over the past few years. See, for example, Kiss (1990), Biodiversity Support Program (1993), Brown and McGann (1996), Byers (1996a), Lutz and Caldecott (1996), Borri-Feyerabend (1997), Russell and Harshbarger (1998).

Here, we will review some of the community-based wildlife management initiatives that have been implemented over the past ten years or so in Sub-Saharan Africa. Many of these efforts are now coordinated through the Southern African Development Community's Coordinating Unit for natural resource management based in Lilongwe, Malawi. However, there has also been much of great relevance that has been accomplished beyond the 14-

member SADC region—notably in Kenya. This is not presently part of the knowledge base that has been compiled for southern Africa. The purpose of this overview is to examine the main characteristics of the different community-based wildlife management programs that have been initiated in Africa. The goal is to identify broad similarities and differences in the hope that the lessons learned from specific success and failures may be extrapolated to other countries where either the approach is less advanced or where difficulties have been encountered that threaten to derail the process. The following table provides general information on the relationship of population density to protected areas and animal populations in the countries discussed here.

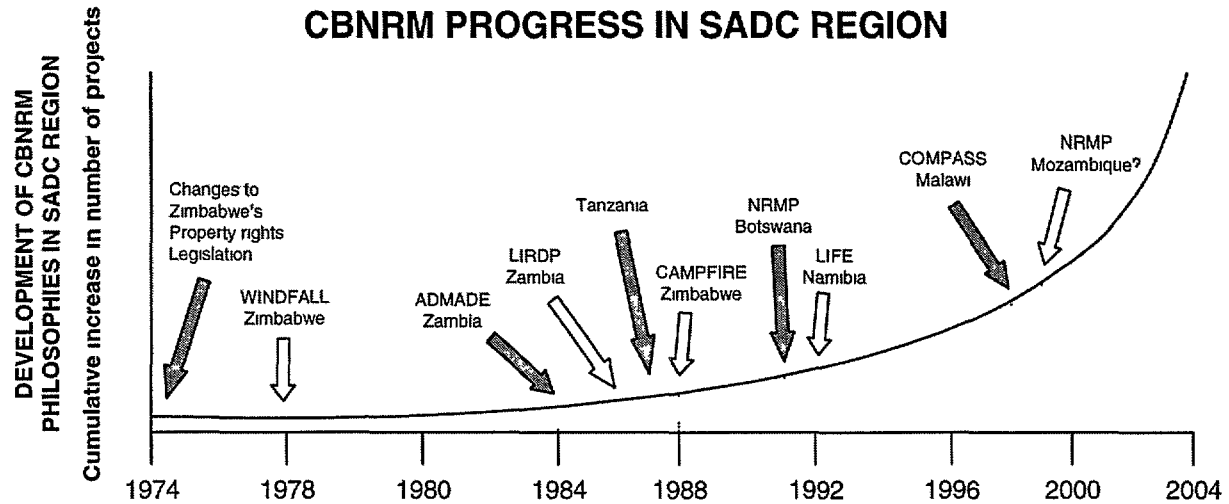
Parameter	Botswana	Kenya	Malawi	Namibia	South Africa	Zambia	Zimbabwe
Land area (km ²)	600,000	582,640	90,000	825,000	1,222,000	752,000	390,000
Population density	2.2	40	122	1.9	33	1.1	29
People/Cow	< 1	N/A	11	0.8	3.5	2.8	1.7
People/ Elephant	19	911	5,000	250	5,000	200	142
Protected areas km ²	225,000	44,359	20,000	110,000	72,000	219,000	50,000
People/ protected area km ²	6	534	550	14	555	36	220

The intention here is not to undertake an evaluation of the individual programs or, indeed, to assess whether the principles of community-based wildlife management are appropriate or viable for conservation of biodiversity in Sub-Saharan Africa. Evaluations of most of the programs have been completed or are in progress and the broader issues are beyond the scope of this brief review.

2—CBNRM PROGRAMS IN EAST AND SOUTHERN AFRICA

Community-based natural resource management has been institutionalized in at least ten countries in Sub-Saharan Africa including Botswana, Kenya, Madagascar, Malawi, Namibia, South Africa, Tanzania, Uganda, Zambia and Zimbabwe. Other countries are in the process of developing the legislative, institutional and procedural frameworks required to formalize these types of approaches. As SADC's efforts in this area increase through the support of bilateral and multilateral donors, Mozambique, Angola, Congo and others are likely to expand their current initiatives. The following figure summarizes the evolution of community-based natural resource management initiatives in the countries of the Southern African Development Community.

Progress of CBNRM in Sub-Saharan Africa



Here we will briefly describe the main characteristics of the largest programs

Zimbabwe Community Area Management Program for Indigenous Resources (CAMPFIRE)

The CAMPFIRE project has been widely regarded as one of the most successful models for community-based wildlife management in Africa. It is certain one of the earliest examples of institutionalization of the approach in the region. It has also attracted considerable attention internationally. This high profile has at times helped in gaining support for the program, at other times it has been a hindrance.

CAMPFIRE was officially launched in 1989 though it is founded on legislation dating from 1975 that allows private property holders to claim ownership of wildlife on their land and to benefit from its use. A precursor, the Windfall Project, differed significantly in that it provided revenues and meat from the culling of animals on state land and reserves to neighboring communities (Murindagomo, 1990). In contrast, CAMPFIRE was not intended to support the creation and maintenance buffer zones around such protected areas. Rather, its purpose was to encourage rural development through empowerment of rural communities. However, the inhabitants of rural communities, unlike private landowners, have only very weak property rights and the smaller villages and wards have only limited authority over their resources (Child, 1996). In this respect, the situation resembles that in Madagascar (GELOSE) where efforts are underway to implement legislation enabling community-based natural resource management.

Through the CAMPFIRE process a rural community's elected representative body (the Rural District Council) requests that the government's wildlife department grants them legal authority to manage local wildlife resources. In doing this, the community must demonstrate that it has the capacity to undertake this management. Rural communities have developed a wide range of projects. Most commonly, the communities sell hunting concessions to tour operators having established quotas and other rules in consultation with the wildlife department. Other projects are based on selling photography concessions or on the villager's own use of wildlife and other natural resources. In a recent case, a community sold the timber from a eucalyptus plantation that had been managed by the village for more than 20 years.

Revenue from the CAMPFIRE projects go directly to the rural households though the rural councils have the right to impose a levy. Profits can be used to fund other communal projects. Since 1992, there has been an increasing fear that the success of CAMPFIRE will be compromised if the rural councils are not adequately financed to fulfill their expanded mandate (Child, 1996). By 1996, ten of the rural councils where at a point were about 75% of the wildlife revenues reached the producer communities.

Implementation of the CAMPFIRE program is facilitated by a collaborative group of institutions that is comprised of the CAMPFIRE Association representing the Rural District Councils (coordination), the Ministry of Local Government, Rural and Urban Development (administration), the Department of National Parks and Wildlife Management (technical support), Zimbabwe Trust (training and capacity building), WWF (advisory support), the Africa Resources Trust (policy monitoring), the Centre for Applied Social Sciences (socioeconomic monitoring) and Action (environmental education).

Zambia Administrative Management Design (ADMAGE)

Zambia's Department of National Parks and Wildlife Services (NPWS) operates the ADMAGE program. An act of Parliament established ADMAGE as the official instrument for promoting and enforcing wildlife conservation outside the national parks. In effect, the program is far more closely linked with an individual institution than CAMPFIRE in Zimbabwe. Its purpose is to promote community-based conservation of wildlife in Zambia's 40 or so Game Management Areas (GMAs). These cover more than 100,000 km² (about 20% of the total area of the country).

The program was originally conceived in the early 1980s when the merits of two different approaches to wildlife conservation in Zambia were being publicly discussed. One approach involved the creation of a new management entity outside the prevailing government structure, the other involved modifying and strengthening existing institutions. Both approaches were adopted: the former through the Luangwa Integrated Rural Development Project (LIRDP) that operates in the South Luangwa National Park and two GMAs with funding provided by Norwegian Aid (NORAD), and the latter through ADMAGE, which receives minimal donor funding mainly from USAID. ADMAGE has gone through a development phase that lasted from 1989 to 1994 and a subsequent strengthening phase from 1995 to 1998.

Revenues comprise fees from hunting licenses (that are shared equally between the government and the Wildlife Conservation Revolving Fund) and concession fees paid by safari operators that are all credited to the WCRF. WCRF revenues are intended to be used for ADMADE administration (25%), field operations of Wildlife Management Units (40%), and community development (35%). In practice, regional administrative costs of the WMUs reduce the amount available for field units to about 25% of the total WCRF revenues.

ADMADE is headquartered at NPWS and extends to 12 regional commands. The headquarters unit also houses the WCRF. Since ADMADÉ is a program rather than an institution, most NPWS staff plays a role in its implementation. At the field level, each GMA (or each chief's area within a GMA) is under the responsibility of an ADMADÉ Unit comprising NPWS scouts and village scouts. Paralleling each Unit there is a Sub-Authority comprising an elected body chaired by the traditional chief made up of a Financial Management Committee, a Community Development Committee, and a Resource Management Committee. Up to 12 members of each of these committees are representatives of Village Area Groups, each of which has a committee made up of representatives of stakeholder groups or other elected members. A senior village headman, who is also an appointed member of each Sub-Authority's Community Development Committee, leads each VAG.

A key component of the ADMADÉ Program is the Nyamaluma Training Institute that provides training to all local players and monitors all activities.

Namibia Living in a Finite Environment (LIFE) and other CBNRM initiatives

Unlike CAMPFIRE and ADMADÉ that were originally conceived and launched in the 1980s, USAID's LIFE program and other CBNRM initiatives in Namibia are founded on the 1996 enactment of legislation that empowered rural communities to manage and derive benefits from their natural resources (the Nature Conservation Amendment Act). Being a new initiative, it is difficult to assess the impact of the activities that have been promoted through the enactment of the Nature Conservation Ordinance (though this dates from 1975). In November 1997, the Nyae Nyae conservancy (900,000 ha) became the first to receive full government approval and by September 1998 another three had been added: Torra (Kunene) (352,000 ha), Khoadi Hoas (335,000 ha) and Salambala (Caprivi) (92,000 ha).

Through donor support, community members have been trained in participatory techniques and improved natural resource management strategies. Community institutions such as conservancy committees have been created, and the communities have fielded game guards and resource monitors. An immediate impact has been an apparent decline in poaching of all animal species including elephant.

Unlike in Zimbabwe and Zambia, revenues generated through the LIFE program do not come from hunting—though some consumptive use of natural resources is promoted. The draft Conservation of Biodiversity and Habitat Protection Policy (1994) and Parks and People

Policy (1997) will allow communities located in protected areas to benefit from the sustainable use of wildlife. In addition to crafts production and tourism-based enterprises, USAID assisted programs in Namibia have also involved harvesting and sale of thatching grass and reeds by local communities.

Though overall successes to date have been modest, the LIFE program has attracted considerable interest in Sub-Saharan Africa through its approach to addressing gender issues and performance monitoring. The program has a rigorous M&E system that uses six tools to measure overall progress and impact. At this time CBNRM is not being implemented through a national, institutionalized program in Namibia though it does have a solid legal foundation.¹ This contrasts sharply with CAMPFIRE, which is well established institutionally but is not thoroughly grounded in Zimbabwean law since the authority to use wildlife resources is delegated to District Councils purely at the government's discretion (Katerere, 1997). Another marked contrast between Namibia's CBNRM efforts and those of Zimbabwe and Zambia is the degree of involvement of NGOs. At present, both CAMPFIRE and ADMARE are being implemented largely by government agencies through existing organizational structures. While NGOs are involved at various levels, their involvement in community level activities is less significant than with the LIFE program in Namibia.

Kenya Conservation of Biodiverse Resources Areas (COBRA)

The COBRA Project was initiated in 1992 as part of USAID/Kenya's support for the multi-donor PAWS Program. It has focused on building support and institutional capacity for community-based wildlife management initiatives implemented under the auspices of the Kenya Wildlife Services (KWS). In this respect, it has certain similarities with ADMARE in Zambia but Kenyan law precludes the possibility of consumptive use of wildlife. In effect, benefits are generated mainly through tourism and not from hunting.

Kenya's Wildlife (Conservation and Management) Act of 1975 and its 1989 amendment provide the legal foundation for community-based wildlife management in the country. Current discussions on revising this legislation have centered on broadening the possibility of consumptive use of wildlife—particularly through hunting. Despite the severe limitations on consumptive use, Kenya has developed an effective CBNRM program. With the support of COBRA, KWS's Partnership Department has developed a systematic process for identifying priority conservation areas lying beyond the protected area system and mobilizing local communities to develop wildlife management strategies. Communities can apply for grants from a Wildlife and Development Fund (WDF) that is capitalized using a portion of national park gate receipts as well as additional funds from USAID, the World Bank, and the Government of Kenya. This fund provides tangible benefits to those communities participating in wildlife conservation and supports efforts to develop enterprises such as tourist camps, cultural centers, and other natural resource-based business ventures. The

¹ It is recognized that the institutional capacity of Namibia's Wildlife Department will require strengthening. The agency currently highly centralized in its operations and cannot provide the necessary field support that will be essential if the LIFE program is to be expanded (Hagen, *et al.* 1998).

COBRA project has been instrumental in helping several community groups and conservation associations achieve legal recognition—a step that has proven essential in developing formal agreements with business partners

Wildlife management in Kenya rest squarely on the shoulders of KWS, an organization that has enjoyed considerable donor support since it was created in 1989. Decentralization of CBNRM activities has been accomplished largely through this parastatal institution—neither local authorities nor other government organizations have been significantly involved in this process (as they have in Zimbabwe). Nor has there been a major involvement of NGOs in CBNRM activities in Kenya though conservation organizations did play an important role in promoting community-based programs in the late 1980s. Some of the most successful examples of community-based wildlife management have involved collaboration community or conservation associations and the private sector

Botswana Natural Resources Management Program (NRMP)

Initiated in the early 1990's, the USAID funded Botswana Natural Resource Management Project is closely affiliated with the Department of Wildlife and National Parks (DWNP). Unlike in Zambia, however, institutionalization of Botswana's CBNRM program is still in its early days. USAID is working with the DWNP to demonstrate the feasibility of creating economic incentives to manage wildlife sustainably, by decentralizing the authority to manage natural resources, and ensuring that the economic benefits accrue to local people (Curry, 1994, Painter, 1995)

The importance of livestock in the economy of Botswana has given rise to increasing conflict between ranchers and conservationists as the desire to fence rangeland has increased. It is estimated that the construction of the Kuke fence resulted in the death of about 80,000 wildebeest in 1964 and another 50,000 in 1983 when the animals' migration routes to food and water were cut off (SARDC, 1994). To date, wildlife management in Botswana has focused largely on consumptive use of resources mainly through hunting. In addition to other off-take quotas, Special Game Licenses (SGLs) for subsistence hunting are issued to people living in remote areas. In 1995 there were about 800 to 1000 active licenses. The resulting off-take has not been tracked and there is poor monitoring of the impact on biological sustainability of hunting. Overall, there has been sharp decline in the numbers of most wildlife species. The DWNP is mandated to promote commercialization of the wildlife utilization sector but a host of related issues must also be addressed. These include establishing hunting quotas, community access to natural resources in Wildlife Management Areas (WMAs) and national parks, land use planning for conservation, ranching and agriculture, problem animal control and conflict resolution, and the role of CBNRM in income generation for rural communities (Lawson and Mafela, 1990). Recent efforts have focussed on a broader approach to managing natural resources that includes harvesting of grass and wild fruit, forestry, fishing and tourism. In 1994, for example, three villages created a community-based organization (CBO) that in 1996 harvested 50 tonnes of wild marula fruit (*Sclerocarya birrea*) that is used for making fruit juices and a variety of other products.

NRMP has assisted in the creation of CBOs and trusts and a fund has been created to help support the development of constitutions and to provide training and enterprise development grants. The Chobe Enclave Conservation Trust was created in 1993 and represents five villages. All adults in each village are eligible to vote to elect a 10-member Village Trust Committee that then selects two members to sit on the Trust's board. The model is not dissimilar to that being promoted through ADMADE though in Zambia the links to the traditional village hierarchy are markedly stronger.

Madagascar (GELOSE), Malawi (COMPASS) and Tanzania

Several other countries in Sub-Saharan Africa have experimented with CBNRM and others have developed policies and legislation that will enable rural communities to take charge of the management and use of their natural resources.

In Madagascar, legislation has been prepared that will enable communities to enter into agreements with government to implement management plans (GELOSE—Gestion Locale Sécurisé). Communities and associations will be able to obtain financial and technical support through programs that have been established as part of the second five-year phase of the country's Environmental Action Plan. Several community forestry projects have been launched in Madagascar through initiatives funded by bilateral donor organizations and supported by conservation NGOs. USAID has designed a program that will provide technical and financial support for the creation of conservation-based enterprises in four different ecological regions of the island.

In Malawi, USAID has designed a CBNRM program called COMPASS (Community Partnerships for Sustainable Resource Management) that will support both community-based initiatives and strengthening of NGOs. The policy framework for such programs is still evolving in Malawi and changes in land and natural resource tenure still require clarification. While Malawi's natural resource base differs markedly from that of neighboring countries (see table), future approaches to CBNRM will undoubtedly draw heavily from experiences throughout the region.

Tanzania started experimenting with CBNRM in the late 1980s when the African Wildlife Foundation (an international conservation NGO) collaborated with Tanzania National Parks to help establish a community conservation service. A pilot project in the Loliondo Game Controlled Area adjacent to the Serengeti National Park explored the possibilities presented by different revenue generating opportunities based on hunting as well as tourism. Other CBNRM initiatives have followed including the Selous Conservation Program that is estimated to reach over 80,000 local people. People living near hunting areas in Tanzania receive a percentage of the license fees. Nevertheless, though the legal framework that will allow communities to take full responsibility for management of the resources has been elaborated, implementation has lagged (SARDC, 1994).

3—WHAT ARE THE SIMILARITIES AND DIFFERENCES?

Legal Framework

The legal underpinnings for CBNRM differ greatly in the various countries described above. In Kenya, for example, consumptive use of wildlife is rarely allowed and only with the special permission of KWS. In Zambia and Botswana, the authorities responsible for wildlife management grant hunting licenses. In Zimbabwe, the central authority must approve community-based wildlife management plans. In Namibia, tenure over natural resources is being devolved to local communities through the creation of community conservancies that have considerable rights to manage wildlife. In many countries in southern Africa, tenure over natural resources is closely tied to systems of land tenure. In many countries in the region, village land is either communally owned or state-owned and, hence, the authority to use natural resources rests with national, local or traditional authorities. In many cases, this has constrained efforts to develop community-based approaches to resource management.

CAMPFIRE has demonstrated that grass-roots initiatives can be implemented successfully without full legislative support. In Zimbabwe, the authority to use natural resources can be devolved only to the rural councils and not to the local communities (Child, 1996, Katerere, 1997). Moreover, the groundswell of support has encouraged the revision of national policies and laws. Child (1996, p. 133) noted that

The key to this model is proprietary self-interest, with ownership being exerted at the community level, represented by the village development committee. For this to work, however, agrarian laws must be changed toward private community resource ownership, and to achieve this a political process is unavoidable.

Resource Base and Socioeconomics

While some tribal groups in southern Africa are traditionally dependent on wildlife (notably in parts of Namibia and Botswana), in most countries the hunting of wild animals is restricted. Under such conditions, wildlife represents a cost rather than a benefit to rural communities. This contrasts sharply with the reliance on other natural resources notably agricultural land, water, wood for fuel, and other plant materials for building, food and medicines. In effect, wildlife is regarded in a different light than other natural resources and strategies for its management must take this into consideration. Sustainable use of a natural resource often relies on providing economically viable alternatives to a resource that is being unsustainably exploited. The depletion of a resource that is perceived to be a free good by rural populations cannot be prevented if behavioral change comes with an added cost to the resource users. Communities must derive tangible benefits from changes in their practices if these changes are to be sustained. If greater benefits can be derived from activities that conserve natural resources than from those practices that deplete the same resources, individuals will be inclined to move away from the destructive practices. Similarly, if living in close proximity to wildlife incurs a cost to rural communities it must be offset in some

way by providing an economic or social benefit. Such benefits may be in the form of direct monetary compensation (for example, sharing a percentage of park entrance fees with those neighboring communities that incur an opportunity cost through loss of access to natural resources). Alternatively, support can be provided for natural resource based enterprise development that can be based on either consumptive or non-consumptive use of the resources.

What Generates Revenues and Income?

Sustainable ecotourism and nature tourism are the most widely practiced types of non-consumptive natural resource use. In Kenya, community associations have been moderately successful in establishing business agreements with tour operators and entrepreneurs who pay the associations for the right to have access to community conservation areas and camps. Communities in Zimbabwe, Zambia, Namibia and Botswana have made similar arrangements. Despite providing alternative sources of income from various types of employment, ecotourism in Africa has rarely generated significant benefits for rural communities. Even in Kenya, which has traditionally been a preferred destination for European and North American ecotourists, many enterprises have realized only limited success.

In Zimbabwe, over 90% of all CAMPFIRE revenues in 1993 were from sport hunting fees, the remainder coming from tourism and ancillary activities. Two-thirds of the revenues from hunting came from elephant trophies, with another quarter from buffalo, leopard and sable antelope. By 1996, about 35 tonnes of elephant ivory, worth about US\$5 million, was stored in Zimbabwe as a result of the 1989 ban on international trade (Child, 1996). The high reliance on elephant hunting to generate income for the program has attracted considerable debate, not least because of the African elephant's status as an endangered species. The animal was listed in Appendix A of the Convention on International Trade in Endangered Species (CITES) until 1998 when the elephant's status was relaxed for Zimbabwe, Botswana and Namibia.

In Zambia, most of the revenues generated by the ADMADE program come from hunting of lion and leopard. Again, this has attracted criticism on ecological as well as ethical grounds. In order to assess the ecological impact of these programs, a rigorous monitoring system is essential. In Zimbabwe, about 22% of CAMPFIRE revenues are reinvested in wildlife management and in Zambia about 40% of ADMADE revenues go toward meeting the operational costs of Wildlife Management Units (though over one-third of this is allocated to regional commands rather than field operations).

The ethical issues raised by the reliance on hunting of wildlife to fund these community-based natural resource management programs have prompted rancorous debate. USAID's support for CAMPFIRE and to a lesser extent ADMADE has sparked public criticism from the Humane Society and other organizations. Though opinions on the ethics and morality of the hunting of wildlife should not be discounted, they are often far removed from the realities of wildlife management, community development and conservation in East and Southern

Africa Relaxation of the CITES regulations governing the African elephant reflect a fundamental change in the attitudes of many conservation groups and governments in southern Africa It was only in the early 1990's that many of these same groups were instrumental in imposing the worldwide ban on the trade in ivory The potential for allowing greater consumptive use of wildlife is currently under discussion in Kenya, which currently has the most restrictive regulations of the countries considered here Similarly, with the recent changes in CITES, the pressure to expand wildlife management programs in Botswana and Namibia to include more community-sanctioned sport hunting will undoubtedly increase

Who Is Providing Support?

Ostensibly the community-based wildlife programs of East and Southern Africa are intended to be financially self-sufficient, generating revenues for administration and wildlife management as well as for community development In some cases, notably in Zambia, the potential for achieving such sustainability appears to be good In contrast, in Kenya, the heavy reliance on tourism to generate revenues has resulted in severe financial woes in recent years as park gate receipts have fallen up to 70% The international donor community has provided significant financial support in Kenya, the PAWS program receiving over \$140 million up to 1998 USAID has been a key donor and provider of technical assistance to the wildlife management programs in Zimbabwe, Zambia, Botswana, and Botswana Without this and the support of other bilateral donors and many conservation groups it is unlikely that most of these programs could be sustained

Governance and Tenure Systems

The extent to which communities have the legal authority to use the natural resources on their communal lands differs greatly from country to country in the region In Kenya, wildlife management is the responsibility of the state through the Kenya Wildlife Service In contrast, individual and community tenure over land is strong The situation in other countries is often the reverse Namibia's new laws on natural resource tenure provide some of the strongest legislative mechanisms for empowering local communities to take charge of the management of their resource base However, several tribal groups in the country do not have any traditional systems of land tenure since they do not comprise sedentary communities (Byers, 1996b) Elsewhere, state ownership of conservation land and areas where natural resource use is controlled presents a challenge for developing systems of co-management that are beneficial to both the state and local stakeholders In Malawi, changes in legislation are currently being considered that may allow communities greater access to state-managed woodlands but, in return, the state may require a greater say in how communities manage the resources on their own land

Systems of governance also differ widely from country to country and, indeed, from regional to region and among tribal groups As a result, adherence to traditional land use practices and authorities can vary markedly In Zambia, the success of the ADMADE program in some areas has been attributed to the support provided by traditional leaders This has also

55

attracted criticism since revenues accruing to communities have sometimes been used to construct palaces for local chiefs. Though this has been cited as evidence of the inequitable use of revenues, similar to the use of the WDF in Kenya to fund "good-will projects", such investments do often build confidence and support. Experience throughout the region has shown that there is no set formula for designing the administrative structure of community-based resource management programs. If traditional leadership is strong, it must be included in the organizational structure. If it is weak, mechanisms must be created that compensate for this through a process that is consensual. Western concepts of democracy and governance are not necessarily the best approach. In parts of Madagascar traditional systems of tenure hold sway over national laws, and in Zambia attempts to by-pass the involvement of traditional leaders in ADMADE has proven problematic.

What's Working and What's Not?

If donor funding is not available to support the bureaucratic infrastructure (or if revenues fall) is there a danger that natural resources will be overexploited to compensate?

The goals of the various community based wildlife and natural resource management projects that are currently operational in southern Africa are often very different. While all the programs are intended to help conserve natural resources through improved stewardship by rural communities and other stakeholders, some have also been charged with covering associated support costs. In Zambia, for example, the ADMADE is expected to contribute to financing of game rangers and regional administration of the program. This contrasts sharply with CBNRM initiatives in Kenya, which are funded primarily by international donors and the central government. Here, only about one-third of funding available to the Wildlife and Development Facility that supports community programs came from revenues generated from wildlife management (in this case gate receipts from parks). In Zimbabwe, Botswana and Namibia many of the costs associated with the administration and management of the community-based programs are borne by donors and central government. In the case of CAMPFIRE, the goal has been to retain just 20% of revenues for management (15%) and administration (5%). In reality, between 1989 and 1993, the rural district councils have been obliged to retain more of the revenues for reinvestment in wildlife management.

There will always be competing demands for funds for supporting community initiatives, for administration, and for improved wildlife management to ensure that the programs are ecologically sustainable. In the case of both CAMPFIRE and ADMADE, revenues have been channeled to meet these needs and the potential for financial sustainability exists. In the case of ADMADE, this potential has been demonstrated on a local scale but many wildlife management areas have been all but neglected. In Zambia, and to a lesser extent Zimbabwe, there remains a pressing need for information on the ecological sustainability of the initiatives. In Kenya, Botswana and Namibia, where there is less potential for revenue generation directly from wildlife, financial sustainability is less certain. Though there are concerns about the environmental sustainability of wildlife management programs in each of these countries, they relate more to competition for land than to exploitation of wildlife.

Who Is Benefiting?

The fundamental goal of most of the community-based natural resource management programs in that USAID has supported in East and Southern Africa is to demonstrate that it is possible to create economic incentives for the conservation of resources and management of wildlife. In order to accomplish this, it is acknowledged that local people must have the authority to make decisions regarding the use of the resources and they must realize the benefits. Many of the programs described here have demonstrated that the distribution of benefits is infrequently equitable. Often the people whose access to resources is reduced as a result of stricter management and those who are charged with direct management of the resources (often one and the same), are not the principal beneficiaries. In Kenya, Zambia and Botswana, revenues from tourism and hunting licenses help support the government departments responsible for wildlife and protected area management. In several countries, regional or local authorities impose a levy that covers the cost incurred administering the programs. In all cases, the distribution of revenues at the local and community level is in the hands of traditional leaders or committees that appear rarely to represent the interests of those stakeholders that are ultimately responsible for management of the natural resources. Hence, in Namibia and Botswana, groups that are traditionally reliant on hunting are not well integrated into the LIFE and NRMP programs. Notably in Kenya but elsewhere too, the participation of women in decision making on the use of resources and distribution of benefits is all but insignificant.

Ultimately, the resolution of these shortcomings will require major changes in local governance and many fundamental societal attitudes. Such changes will not come quickly or easily, so it is incumbent on those that support efforts at improving the management of natural resources to work within the constraints of existing policies, legislation and practices while striving to encourage their reevaluation and revision.

Painter (1995) and Child (1996) stressed that successful CBNRM requires enabling local populations to take informed decisions in managing wildlife and other resources through a full and active exchange of information at the local level. In order to achieve this, community institutions must represent all stakeholders and procedures for fair resolution of conflicts must be in place. In addition, it is essential that national policies and legislation support such devolution of resource tenure and governance that provides the authority to make decisions on resource use at the local level. All this must be supported by extension services that provide the knowledge and skills to manage resources sustainably to communities where literacy levels are low.

Monitoring and Evaluation

Monitoring of the performance and impact of CBNRM program is essential in order to assess what is working and what is not. While an activity is being implemented, it is important to track whether performance targets are being met. At a broader level, however, it is critical to evaluate periodically whether the fundamental precepts of the program are being borne out. In other words, is the approach that is being implemented generating the social and economic

benefits that were anticipated and, even more importantly, is the impact on the natural resource base both positive and sustainable

Monitoring systems are management tools. All too often the social and environmental monitoring systems that have been implemented for CBNRM programs have been poorly constructed since they do not address the fundamental issues of performance and impact. Many are reliant on costly, time consuming data collection and have little regard for the needs of the end-users, which are typically program managers and local practitioners. Data collection must not become an end in itself. The data must be collected economically, analyzed promptly, and the results disseminated widely in a form that is readily understood by the target audience. Community-based monitoring can provide a means to achieving these objectives. If community groups are involved in the identification of both indicators and performance targets, their willingness to contribute information and participate in data collection is more likely. It is essential, however, that the results of the monitoring are reported back to these same stakeholders in a way that is readily understandable and useful to them.

Community-based monitoring can be effective for collecting both socioeconomic data and ecological information. It is important that all the communities within a single program area use the same or very similar indicators in order to facilitate comparison (Goodman, 1996). In addition, the quality of the data must be periodically assessed by independent means. In Kenya, the COBRA project has supported aerial game counts that provide an essential regional baseline against which regular, local counts can be compared. It is also essential that the analysis and interpretation of monitoring information draws on local expertise and knowledge. In Zambia, for example, the number of snares found in different districts has been used as an indicator of the prevalence of poaching. When the numbers increased significantly in one area, it was assumed that the ADMARE program there was failing. In reality, there were more snares because poachers were obtaining wire from recently installed telephone lines (USAID, 1998 a).

4—TOWARDS A CBNRM PARADIGM

The protracted search for a southern African CBNRM paradigm highlights one of the greatest constraints to achieving sustainable natural resource management) inappropriate legal and institutional arrangements. At one extreme, some insist that governments should devolve responsibility for NRM to rural communities and traditional structures that have a better understanding of local conditions. Others argue that devolution is not the panacea to current environmental, economic and social problems (Katerere, 1997).

Undoubtedly, national policies and legislation must be conducive to encouraging and enabling local resource users to manage those resources sustainably. In addition, however, the knowledge and skills to implement durable CBNRM activities must be available along with the ability of local institutions to resolve conflicts and administer access to resources and distribution of benefits. Most importantly, however, the incentives for sustainable

resource management must be tangible and the benefits must be realized equitable with those that bear the highest cost also reaping the greatest rewards

To date, in East and Southern Africa and elsewhere, CBNRM initiatives have focused on alleviating policy constraints, building institutional capacity, establishing baseline socioeconomic and ecological conditions, and promoting community enterprises that help generate revenue through the sustainable use of natural resources. We are now at a point where it is clear that the further progress is largely constrained by limited capacity to create benefits that tangibly offset the lost opportunities and other costs implicit in limiting free access to resources (see, for example, Barrett and Arcese, 1995)

Russell and Harshbarger (1998) argued that future support for conservation-based enterprise development must focus on providing wider access to credit and savings opportunities, to markets, and to market information. Without these, businesses cannot succeed and their failure will be seen as an indictment of CBNRM efforts. The lessons learned through the COBRA project over the past six years demonstrate that government agencies and conservation groups can help mobilize local communities but they are poor providers of business expertise. These skills must come from private sector entrepreneurs who are willing to provide their expertise and other services in exchange for commercial considerations such as business franchises or easements that provide access to community lands or other resources

5—WHAT DO THE AFRICAN MODELS LOOK LIKE? WHERE DO THEY FIT IN THE PARADIGM?

Several of the CBNRM programs that USAID has supported in Africa have promoted partnerships between the private sector and community enterprises. The ADMADE and CAMPFIRE programs rely heavily on forging commercial agreements between tour and safari operators and local communities. In Kenya, where conservation-based enterprises are largely reliant on tourism, linkages with European tour companies has proven lucrative for several community enterprises despite the catastrophic decline in tourism in the country over the past two years. Similarly, NRMP in Botswana has supported tourist development efforts in a few areas - notably Chobe. In all these countries, however, the benefits from such undertakings have been limited to relatively few communities or districts. Elsewhere, viable commercial enterprises are rare. The creation of cultural centers and curio ventures are often of a small-scale and rarely generate significant income. When business management skills are lacking, the distribution of profits can be contentious and the reinvestment of income to promote growth is often a low priority. This notwithstanding, the LIFE program in Namibia has helped community cooperatives establish such enterprises and they are generating both profits and broader interest in neighboring communities.

The revenues that are provided by small-scale community-based enterprises need not be great to generate interest and encourage similar ventures. Nevertheless, they must provide tangible benefits that more than compensate for the direct and opportunity costs. If women are

involved in making curios or staffing a stand, another member of the household must be available to undertake other duties such as collecting water and fuel wood, cooking, gardening, and so on

Even more importantly from an environmental standpoint, the commercial enterprises must be demonstrably linked to improved resource management. The manufacture and sale of crafts should be environmentally sustainable in themselves (not based on exploitation of rare tree species, for example) but must also rely on a robust tourist industry that is based on wildlife conservation and environmental protection.

6—WHAT'S NEEDED AND WHAT WORKS?

Murphree (1993) listed five optimal conditions under which community-based management of natural resources is likely to be successful. They are as follows:

- 1 - the resource(s) must have a measurable value to the community,
- 2 - differential contributions must result in differential benefits,
- 3 - higher quality management of the resource must be rewarded with greater benefits,
- 4 - the unit within the community or group that makes decisions on resource use must undertake the management activities and reap the rewards, and
- 5 - the unit of proprietorship should be as small as possible.

Based on the experiences to date in East and Southern Africa, the opportunities for successful implementation of CBNRM initiatives are limited to those countries and communities where the following policy and governance conditions are met:

- 1 - there is legal authority for the community to make decisions on how to use the resources,
- 2 - there is local authority to decide who can use the resources, and
- 3 - there are mechanisms in place to ensure equitable distribution of benefits and resolve any conflicts that arise.

In addition, however, there are other prerequisites including that:

- 1 - natural resources are available for sustainable use (other than subsistence),
- 2 - markets exist or can be developed for those resources, and
- 3 - information is available on how to manage the resources to ensure that economic incentives and ecological benefits are sustained.

Though there will always be a need to reassess and revise natural resource policies as social, economic and environmental conditions change, perhaps the greatest shortcoming in current approaches to CBNRM is the need for developing durable, market-based incentives for conservation of resources by rural communities

7—WHAT DOES THE FUTURE HOLD?

Future directions in community-based management of natural resources must focus on greater private sector involvement in the design and implementation of conservation-based enterprises. The private sector can provide the business management skills and marketing knowledge required to develop viable commercial enterprises. These skills cannot be supplied by government agencies or by most NGOs. In return, community groups will have to negotiate agreements with businesses in order to compensate them for providing knowledge and services. Experience in Kenya has shown that community groups must have access to legal services if they are to negotiate binding agreements that spread the business risks evenly and distribute potential benefits in an equitable fashion.

On a broader scale, the current trend toward supporting community involvement in natural resource management must be encouraged. Undoubtedly, there are instances where conservation of natural resources is neither feasible nor practical owing to the social or economic climate. Just as individual conservation enterprises may succeed or fail, so too will CBNRM programs in different parts of the world. CBNRM will not provide the solution to environmental degradation and resource depletion in developing countries. Nevertheless, experience to date in Africa and elsewhere has demonstrated that policies that support CBNRM and local initiatives that encourage it, can provide powerful incentives for the conservation of natural resources. In the medium to long-term this will make these developing economies more robust.

One of the biggest threats to the future success of CBNRM in Africa is opposition to the commercialized hunting of wild animals. Such opposition comes largely from conservation groups in North America and Europe. In the late 1980s and early 1990s the focus of these groups was largely on a perceived threat to endangered species. This resulted in the international ban on the trade in elephant ivory. In 1998, the relaxation of the status of the African elephant (in Zimbabwe, Botswana and Namibia) within the terms of the Convention on the International Trade in Endangered Species (CITES), represented a swing in opinion away from strict non-consumptive use of wildlife. Yet, in the United States the lobbying of the Congress and pressure being exerted on USAID to discontinue support for programs such as CAMPFIRE (and others) threatens to undermine the progress that has been made in CBNRM. In Kenya and elsewhere it has been demonstrated that unless local communities realize tangible benefits from conserving wildlife, they are unwilling to accept the responsibilities of being its stewards. The Kenyan experience also shows that viable wildlife populations cannot be confined to discrete protected areas that can be fenced and patrolled. In Africa, wildlife populations are highly dynamic and their mobility must be assured if they are to remain ecologically viable. To accomplish this, the international community (including

donors and NGOs) must work with national governments to implement policies and strengthen institutions that encourage and support local participation in wildlife management

As a result of COBRA, CAMPFIRE and other community-based wildlife management programs, the perceptions of rural communities toward wildlife are changing. Increasingly, the cost of living in close proximity to wildlife is being supplanted by an appreciation of the economic values and environmental benefits. Through the empowerment of local communities to derive benefits from the sustainable use of these resources, the communities themselves have developed a greater sense of independence and are encouraged to build a collective vision for the future.

ANNEX III
COBRA REPORTS

COMPONENT I MANAGEMENT AND OPERATIONAL SUPPORT

African Wildlife Foundation *AWF Sub-Contract Report - Summary of Issues, Activities, and Lessons Learned* August, 1997

Basharat, Sherali *COBRA Accounting System (CAS)*, November 1995, rev May 1996

COBRA *Work Plan and Budget* 1 July 1995 - 30 June 1996, September 1995

DeLucco, P *COBRA Technical Report on Project Implementation* 1 January - 30 June 1995, October 1995

DeLucco, P *COBRA Technical Report on Project Implementation* 1 July - 31 December 1995, June 1996

DeLucco, P *COBRA Technical Report on Project Implementation* 1 January - 30 June 1996, December 1996

DeLucco, P *COBRA Technical Report on Project Implementation* 1 July - 31 December 1996, February, 1997

DeLucco, P *COBRA Technical Report on Project Implementation* 1 January - 30 June, 1997, August 1997

Goldensohn, M *Trip Report Monitoring and Planning Consultancy to the COBRA Project*, April 1995

Minutes of AWF/DAI Contract meeting, February 1994

Smith, Richard *Conservation of Biodiverse Resource Areas (COBRA), Interim Contract Report* May 1994

Smith, Richard *COBRA Technical Report on Project Implementation* 1 July - 31 December 1994, January 1995

COMPONENT II HUMAN RESOURCES DEVELOPMENT

Abdouch, C D *Report of Modular Training Course Curriculum Development for the Community Wildlife Service Department of the Kenya Wildlife Service in 1993*

Bess, M and Sommerlatte, M Proposal for Community Wildlife Service Modular Training Course for Wildlife in Community Development Concept Paper for Discussion by the CWP/COBRA Training Sub-Group First Year Nairobi, 1993

Community Wildlife Service (CWS), *A report on the U S A Study Tour Undertaken by CWS's Community Mobilisation Specialist and the Field program Co-ordinators between 28 August and 18 September 1993*

Community Wildlife Service (CWS) *Report On Strategic Planning Workshop for CWS Senior Staff Members Held at Fairview Hotel, Nairobi January 1996*

Keli, E *Minutes of Training Committee meetings January 1994, February 1994, March 1994, April 1994, and June 1994, June 1994*

Keli, E *Monthly Training Reports January 1994, February 1994, March 1994, April 1994, and May 1994, June 1994*

Keli, E *Community Wildlife Management Modular Course Outline, May 1995*

Keli, E *Game Scout Training for Laikipia and Samburu Districts, June 1995*

Kenya Wildlife Service *A Report of the Amboseli-Tsavo Ecosystem Management Workshop Held at Kimana Lodge, November 22 - 25, 1995, November 1995*

Lelo, F K , Ayieko, J O *A Report of the Workshop to Review PRA Training for Kenya Wildlife Service Staff, November 1995*

M'Ruiga, K D M , Nyagah, J , Lokaale, J L *Leadership, Administrative, and Business Skills Course for Mokogodo Division, Laikipia District, Language and Cultural Services, November 1995*

MAJU Consulting Services *A Training Held for Kenya Wildlife Service Community Committee Leaders of Laikipia District February 1996*

Murphree, M W *Report of the Training Planning Consultancy, 19 - 29 April 1993*

Murphree, M W *COBRA Training Planning Consultancy II, 6 - 11 September 1993*

Sommerlatte, *Wildlife Utilisation and Community Development - A Study Tour of Zimbabwe, AWF 1993*

Sommerlatte, M *Zimbabwe Wildlife Utilization, Community Development Short Course, June 1994*

Sommerlatte, M And Sinnary, A M *Community Wildlife Management Course Module Three Wildlife Utilization Course Report, July 1995*

TACK International *Project Planning and Control* Written for CWS Training February 1994

65

Thiongo, J And Getambu, A *Module One Introduction to Community Wildlife Management Processes and Practices*, August 1995

Wishitemi, B E L , *COBRA Training Planning Consultancy*, 6 - 11 September 1993

COMPONENT III WILDLIFE FOR DEVELOPMENT AND REVENUE SHARING

AGRECHS Development Consultants *Annotated Bibliography of Socio-Economic Aspects of Natural Resources Management in Pastoral Areas* October, 1997

Barrow, E G C *Draft TOR/SOW for KWS-COBRA Utilization Study* November, 1993

Barrow, E G C *Discussion document COBRA Tracking M/E Indicators* December 1993

Barrow, E G C *KWS-CWS Information, Tracking, Monitoring and Dissemination report and recommendations from a one day workshop held on 1/3/93 at KWS headquarters* March, 1993

Bennun, L A , Simiyu, A , and Matiku, P *Community Management of Gamebird Hunting - August to December 1997* December 1997

Bess, M *Articles of Association and Bye-Laws Mombasa Boat Operators Association (MBOA)*, revised January 1994

Bess, M *Draft Constitution for the Association of Mount Kenya Operators (AMKO)*, December 1993 (revised and submitted to Naro Moru and Chogoria Interim Committees in January and February 1994)

Bess, M *Executive Summary for Revenue-Sharing and the Wildlife for Development Fund (WDF)*, January 1994

Bess, M *Field Visit Report Narok Focal Area*, 17th - 19th February 1994, 27 February 1994

Bess, M *Field Visit Report Samburu Focal Area*, 28th February - 3rd March 1994, 6 March 1994

Bess, M *Memorandum of Association of the Mwaluganje-Golini Community Wildlife Reserve Limited* (first, second and third drafts, January - March 1994), with draft Management, Membership and Constitutional Sub-Committee Bye-Laws

Bess, M *Minutes of a Meeting of the Mwaluganje-Golini Community Wildlife Reserve Committee Held at Kwale County Council Chambers*, Tuesday, 15th February 1994

Bess, M *Minutes of the First AMKO Joint Meeting Between Chogoria and Naro Moru Interim Committees*, Embu, Izaak Walton Inn, 10th March 1994

Bess, M Minutes of the Second Chogoria Porters and Guides Meeting, Meru County Hotel, 25th February 1994

Bess, M Notes on Kenya Ostrich Producers Association (KOPA) and Possible WDF Assistance, 4th March 1994

Bess, M Operational Summary for Revenue-Sharing and the Wildlife for Development Fund (WDF), January 1994

Bess, M Proceedings of the Chogoria Porters and Guides Workshop (Mt Kenya National Park) at Greenlands Holiday Resort, 11th - 14th January 1994

Bess, M Wildlife for Development Fund (WDF) - Enterprise Development Specialist Implementation Plan 1 April 1994 - 31 March 1995, 12th March 1994

Bess, M Wildlife for Development Fund (WDF) - Monthly Reports for Enterprise Development Specialist (EDS)", October 1993 - March 1994

Cocheba, D *Technical Considerations for an Amboseli/Tsavo Area Group Ranch Combined Tourist Lodge and Education Center* 14 May 1997

Kenya Wildlife Service and Kenya Ostrich Producers Association *Guidelines On Management of Ostrich Farming In Kenya* February 1996

Kipuri, N and Munei, K *Socio/Cultural and Land Tenure Issues Affecting Resource Management in Kenya's Semi-Arid Lands* October, 1997

Koech, M *Summary of the Policy Paper on Environment and Development* November, 1997

Leitoroh, E *A Report on the Review of Partnership Enterprise Workshop for Nairobi Area* 23 - 25 th June 1997 June 1997

Makilya, John *Technical Report Wildlife for Development Fund and Enterprise Development* December 1996

Masinde, P *Wildlife Utilization Seminar for Leroghi - Kiirisa Conservancy, 7th - 9th May 1997, Jamaru Hotel, Maralal* May 1997

Mwadzaya, H *From Revenue Sharing to Benefit Sharing and to Enterprise Development - Creating Incentives for Sustainable Conservation In Kenya* August, 1997

Njuguna, S *Towards the Development of the Kenya Wildlife Service (KWS) Environmental Impact Assessment (EIA) and Administrative Guidelines* November, 1997

Njuguna, S *Emerging Issues for Kenya's Resource Ecology* November, 1997

Stanley Price, M R *Kenya Wildlife Service Community Wildlife Service An Approach to a utilization Study from the African Wildlife Foundation* September, 1993

Wafula, Benson M , *Feasibility Study on Establishment of a Wildlife Conservancy at Nagum Olmoran Location, Ngaria Division, Laikipia District - Kenya* African Centre for Climatic Change and Environmental Strategies (ACCESS), 7 May, 1997

Wafula, Benson M , *Feasibility Study on Establishment of a Wildlife Conservancy in Salama Location, Rumuruti Division, Laikipia District - Kenya* African Centre for Climatic Change and Environmental Strategies (ACCESS), 15 May, 1997

Wandera, P , Njuguna, W , Wekesa, C , *et al* *A Report on the Wildlife Use Rights*, December 1995

Community Mobilization

Amulavu, T and Wafula, J *Participatory Rural Appraisal (PRA) - Mt Kenya Forest Line Thaita, Kariko, Kubari, Githuthuma, Sublocations Kamwet and Kangaita Locations, Ndia and Gicucu Divisions, and Kirinyaga District* May, 1997

Bennun, L , and Simiyu, A *Report on the Field Training Course - An Introduction to Gamebird Biology, 25 May to 1 June 1997* June 1997

Community Wildlife Service (CWS) *Proceedings of the Energy Conservation Seminar at Hotel de Lemu, Kitengela* March 1996

Lembuya, P and Wafula, J O K *Participatory Rural Appraisal (PRA) Report - Ilngwest Group Ranch (Laikipia)*, February 1995

Munyugi, J W M *Nyambene County Council Seminar (Bomen Hotel Isiolo) 14 - 17 July 1996* December 1996

Munyugi, J W M *Mwingi County Council/KWS MOU Seminar, 16 December to 19 December 1996* December 1996

Munyugi, J W M *COBRA Success Story Samburu Focal Area Till 1996* December 1996

Munyugi, J W M *KWS Sponsored Participatory Rural Appraisal (PRA) Report - Ngutuk Ongiron and Girgu Group Ranches (Samburu)*, June 1995

Munyugi, J W M *Participatory Rural Appraisal (PRA) Report - Oldonyio (Samburu)*, March 1995

- Munyugi, J W M *Participatory Rural Appraisal (PRA) Report - Sarara-Sapashe (Samburu)*, May 1995
- Munyugi, J W M and Wafula, J O K *Tour Operators' Meeting with CWS - Samburu and Laikipia*, May 1995
- Ntiati, P , Masinde, G *Participatory Rural Appraisal (PRA) Report - Kimana Group Ranch (Kajiado)*, March 1995
- Ntiati, P , Masinde, G , *et al Participatory Rural Appraisal (PRA) Report - Olgulului/Olalarash Group Ranch*, July 1995
- Ntiati, P , Masinde, G , *et al Participatory Rural Appraisal (PRA) Report -Eselenkei Group Ranch*, August 1995
- Ogle, H *Participatory Rural Appraisal (PRA) Report - Kitengela/Embakasi Area (Kajiado/Machakos)*, April 1995
- Ogle, H *Participatory Rural Appraisal (PRA) Report - Shompole Group Ranch (Kajiado)*, June 1995
- Partnership Dept *PARTNERSHIP News* November, 1997
- Wafula, J O K *Report on Partnership Seminar Held on 25 July 1996 at Veterinary Complex KWS Headquarters Nairobi* August, 1996
- Wafula, J O K *Mountain Region Partnership Stakeholders Seminar 4th - 6th June Outspan Hotel Nyeri* July, 1997
- Wafula, J O K *Participatory Rural Appraisal (PRA) Report - Kuri-Kuri Group Ranch/Mukogodo (Laikipia)*, April 1995
- Wafula, J O K *KWS/CWS Community Seminar Report - Nyahururu*, February 1995
- Wafula, J O K , *et al , Participatory Rural Appraisal (PRA) Report -Siruma/Tigithi*, September 1995
- Wafula, J O K *Report On a Participatory Rural Appraisal (P R A) Exercise for Makima Location* June 1996
- Wanjau, M *Participatory Rural Appraisal (PRA) - Upper Chogoria and Murugi Sub-Locations (Sublocations Neighboring Mt Kenya Forest Reserve), Mwimbi Division, Tharaka Nithi District* May, 1997

Wanjau, M *Participatory Rural Appraisal (PRA) - Upper Kimahuri & Kirima Sub-Locations - Kabaru Location (Sub-locations bordering S W Mt Kenya (Kabaru) Forest Reserve, Kienu East Division, Nyeri District April, 1997*

COMPONENT IV STUDIES, RESEARCH, AND POLICY

African Wildlife Foundation *Wildlife Utilisation Study*, 7 vol s, January 1996
 Tack International (Kenya), Ltd *Report No 1 Marketing*
 African Development and Economic Consultants *Report No 2 Economic Analysis*
 Stockwatch, Ltd *Report No 3 Technical*
 Grootenhuis, J G *Report No 4 Veterinary*
 Gichere, S *Report No 5 Policy & Institutional*
 Gichere, S *Report No 6 Workshop on Wildlife Utilisation Policy*
 Stockwatch, Ltd *Report No 7 Implementation Strategy*

Frank, L *Living With Carnivores in Laikipia District, Kenya - Interim Report 30 June 1997*

Frank, L *Living With Lions Carnivore Conservation and Livestock in Laikipia District, Kenya February, 1998*

Kibwana, K and Wanjala, S *Wildlife Law Reform In Kenya - Interim Report, January 1995*

Kibwana, K and Wanjala, S *Wildlife Law Reform In Kenya - Second Interim Report, September 1995*

Kibwana, K and Wanjala, S *Background Paper to the Wildlife (Conservation and Management) Bill, August 1996*

Kibwana, K and Wanjala, S *Wildlife Law Reform In Kenya - Draft Final Report, September 1996*

Kabwana, K , Wanjala, S *The Wildlife (Conservation and Management) Bill, 1998 January 1998*

Stanley Price, M R Kenya Wildlife Service Utilization Study - Scope of Work Draft by the African Wildlife Foundation January 1994

COMPONENT V MONITORING AND EVALUATION

de Queiroz, J and Little, P *A Plan of Action for Monitoring and Evaluation (Analysis) at the Kenya Wildlife Service - Interim Report June 1997*

Barrow, E G C (compiled) *Guidelines and notes for KWS-CWS field staff for literature reference information gathering, and dialogue tracking Report from a half day training event held at the Director's house KWS on 3/2/1994, March, 1994*

Barrow, E *Monthly M&E Reports January 1994, February 1994, March 1994, April 1994, and May 1994, May, 1994*

Barrow, E , Lembuya, P , Ntiati, P , and Sumba, D *Knowledge, Attitudes, and Practices Concerning Community Conservation in the Group Ranches Around Amboseli, November 1995*

Department of Resource Surveys and Remote Sensing (DRSRS), Mpala Research Centre *Numbers and Distributions of Wild Herbivores in Laikipia District February 6-10, 1997 June, 1997*

Fishbein, L *Interim Report on COBRA Project Information System Issues May 1997*

Irigia, Bernard K *Environmental Impact Assessment of the Proposed Kimana Wildlife Sanctuary, June 1995*

Ivarsdotter, K , et al *Position Paper No 1B for the 1996 Mid-Term Review of the Protected Areas and Wildlife Services Project, 24 November 1995*

KPMG Peat Marwick *USAID Funded COBRA Project No 615-0247 Audit for the 51 month period ended 30 June 1996 10 September, 1997*

Laikipia Wildlife Forum, Mpala Research Centre *A Total Count of Herbivores in Laikipia District September 4 - 6, 1996 - Preliminary Results November, 1996*

Lambert, V *Monitoring and Evaluation Plan Conservation of Biodiverse Resource Areas Project, June, 1995*

Little, Peter *Socioeconomic Indicators for Monitoring Natural Resources Management Programs A Case Study of the Conservation of Biodiverse Resource Areas (COBRA) Project, Kenya Summary of Preliminary Findings, July 1995*

Mwadzaya, H , Ndung'u, M , Sumba, D , *Knowledge, Attitudes, and Practises Assessment Concerning Community Conservation in the Areas that Neighbour the Kisite Mpunguti Marine Park and Reserve, August 1995*

Ndung'u, M , Kaaria, B *Assessment of WDF Funded Projects/Activities in Samburu District August, 1997*

Ndung'u, M , Kaaria, B *Assessment of WDF Funded Projects/Activities in Laikipia District October, 1997*

Ndung'u, M , Kaaria, B , Awich, G *Assessment of WDF Funded Projects/Activities in Coast Region* October, 1997

Ndungu, Margaret *Kajiado Project Survey*, May, 1995

Ruhii, J , Mwathe, K , Masinde, P , *et al* *Wildlife Count in Samburu District* 1997
September, 1997