

PN-ABL-457
ISN 77542

COBRA PROJECT

FINANCIAL AND ECONOMIC ANALYSIS

by

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September 1991

Nairobi, Kenya

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1.0 INTRODUCTION AND BACKGROUND

Wildlife-based tourism is one of Kenya's major foreign exchange earners. Kenya's parks and reserves attracted over a million foreign and local tourists in 1990. Approximately 750,000 foreigners visited Kenya in 1990, compared with 430,000 in 1980, accounting for an estimated \$420 million in revenues. Tourism almost surpassed coffee and tea combined as Kenya's largest single foreign exchange earner in 1990. The sector directly employs over 120,000 Kenyans, and indirectly supports more than 300,000 Kenyan families in the agricultural, transport and services sectors. The tourism sector provides numerous backward linkages in the economy, particularly in the areas of specialty fruits, vegetables, other foods and handicrafts.

Non-coastal tourism (i.e., wildlife-based tourism) accounted for over 60% of the value-added in the tourism sector, although greater numbers of tourists visited Kenya's Coast than its interior destinations. While overall tourism has grown by an estimated 15% per annum since 1980, wildlife-based tourism has increased by over 18% per annum over the same period. The economic benefits from Kenya's tourism are indisputable. No other country in Africa earns as much as Kenya from all forms of wildlife utilization. Kenya has exploited a unique niche in the world market with its wide variety of biological ecosystems and human cultures, its wide range of topography and climate, and its cultural diversity.

Moreover, tourism is almost entirely dominated by the private sector. It has been amazingly resilient in the face of regional instability and the vagaries of the world's economy. Kenya's terms of trade from tourism have improved steadily over the past decade, more than any other foreign exchange earning sector.¹ Afro-Kenyans are represented in significant numbers, both in terms of ownership of tourist facilities as well as their representation in senior management positions within the industry, relative to other foreign exchange earning sectors of the economy.

¹. Kenya's terms of trade for both coffee and tea have declined by approximately 85% and 55% respectively since 1980.

Wildlife-based tourism, particularly game viewing in Kenya's semi-arid regions, earned Kenya over \$220 million in 1990. However, the distribution of those benefits has generally been so uneven that most landholders, and most of those who border Kenya's parks and reserves, received few, if any tangible benefits from tourism-based utilization. This has alienated many potential "partners" and has resulted in a rapid deterioration of resources. A considerable portion of Kenya's tourism success can be attributable to mining Kenya's wildlife capital resource base. While there has been considerable investment in actual tourist facilities, Kenya's natural resource base, the object of so many visits, has been over-utilized, with poor management and even poorer and inequitable distribution of benefits. Kenya's wildlife-based tourism infrastructure has deteriorated substantially since mid-1975.

There is growing evidence that these aspects of the growth of Kenya's wildlife-based tourism are having negative ecological impacts on the very areas so many tourists visit. Moreover, the absence of tangible benefits to people who neighbor Kenya's parks and reserves, and who often share their lands with wildlife, has led to severe pressures on these parks/reserves and a noticeable imbalance in many of these areas. While these have yet to lead to noticeable reductions in the tourism trade, there is growing evidence that, unless more is invested in Kenya's wildlife area infrastructure and human resources, Kenya's wildlife resource base, and associated ecosystems, will suffer significant declines.

The Kenya Wildlife Service was created, in large part, to address these issues, to improve Kenya's wildlife-based tourism infrastructure, and to tackle the thorny issues of improved distribution of benefits derived from tourism. It is the more equitable distribution of those benefits for sustainable resource management which forms the primary rationale for the COBRA Project.

1.1 Tourism and Kenya's Wildlife Economics

Tourism grew rapidly during the early 1980's and became Kenya's most important foreign exchange earner in 1987. The sector has continued to grow, though at a slower pace, in the past several years. In 1989, 66 percent of the visitors arrived from Europe, 24 percent from Africa and 14 percent from North America. Close to 82 percent of the visitors came to Kenya on holiday, with a majority (over 60%) staying at the Kenyan Coast.

Kenya's growing trade imbalance since the late 1970's has been financed mainly by tourism and foreign aid. Tourism revenues increased by over 60 percent between 1980 and 1990, with most of the growth occurring in the 1984-88 period. The depreciation of the Kenyan shilling has continued to make vacation packages price-competitive, although the rate of growth has slowed down over the past three years. The GOK is counting on tourism receipts to increase by an average of 9.4 percent a year over the next five years in SDR terms. These estimates may be overly optimistic given the recent slowdown and the substantial constraints that face the tourism industry over the next decade. The World Bank estimates Kenya's tourism will grow by an average of 3% per annum over the next several years, then level off after 1995. Even with the Gulf War in early 1991, tourism is expected to earn as much foreign exchange in 1991 as in the previous year.

TABLE 1

KEY ECONOMIC INDICATORS: 1986-1990

	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>Est.</u> <u>1990</u>
Real Growth Rates				
GDP at Market Prices	5.8	6.1	5.0	2.5
GDP/per capita	1.9	2.1	1.1	0.2
Consumption/per capita	3.1	4.0	-0.3	-0.8
Inflation Rate	6.6	10.4	10.1	18.7
Real Effective Exchange				
Rate Depreciation	-14.0	-2.2	-7.2	13.5
Broad Money	12.4	8.3	17.8	15.0
Debt Service/Exports	33.0	29.3	30.6	31.5
GOK Expenditure/GDP	28.0	29.7	30.5	32.4
Budget Deficit/GDP	4.2	4.6	4.2	4.0
Current Act./GDP	-6.3	-5.3	-5.9	-5.8
Gross Official Reserves (Months of non-gov. imports)	2.1	2.1	2.2	1.0

Source: "1990-92 Policy Framework Paper"

TABLE 2
KENYAN CURRENT ACCOUNT SUMMARY

	<u>1980</u>	<u>1985</u>	<u>1987</u>	<u>1989</u>	<u>Est.</u> <u>1990</u>
	(Millions of US\$)				
Exports	1,236	1,020	996	944	1,093
Imports	2,534	1,589	2,067	2,327	2,522
Trade Bal.	(1,300)	(571)	(1,071)	(1,382)	(1,370)
Tourism	235	253	363	401	609
C.A. Bal.	(870)	(98)	(549)	(619)	(398)
	(Percent of GDP)				
Exports	18	16	11	12	na
Imports	37	24	24	25	na
C.A. Bal.	-12.5	-1.5	-6.3	-7.3	-5.8

Source: "Economic Survey", various years

TABLE 3
KENYAN EXPORTS BY CATEGORY

	<u>1985</u>	<u>1987</u>	<u>1989</u>
	(Millions of US\$)		
1. Traditional	514	434	460
a. Coffee	281	236	197
b. Tea	233	198	263
2. Tourism	240	354	418
3. Oil Exports	155	124	110
4. Non-Traditional	318	401	416
a. Manufacturing	73	72	98
b. Horticulture	65	94	77
c. Other	180	235	241

Source: "Economic Survey", various years

As Tanzania, Rwanda and Uganda expand their tourism industries, Kenya will see increased regional competition. In addition, post-apartheid South Africa will bring new competition to Kenya's market position. A combination of South Africa, Namibia, Zimbabwe and Mozambique will provide major competition to Kenya.

The depreciation of the Kenyan Shilling vis-a-vis major international currencies continues to make Kenyan holidays price-competitive, with increasing numbers of tourists combining Coastal holidays with up-country safaris. The Gulf Crisis resulted in a marked drop in international tourists visiting Kenya. The tourist industry reduced real prices by over 25% during the first half of 1991 (in addition to the depreciation of the Kenya Shilling).

1.2 Wildlife, Communities and Tourism

The original COBRA PID envisaged a fairly straightforward relationship between the success of wildlife conservation and direct remuneration to individuals and groups from wildlife-related activities. Further analyses have shown that such a direct relationship is not as easy to develop as first thought. Moreover, in the Kenyan context, non-financial benefits, such as access to improved health, education and other social services, are often preferred by communities over direct cash transfers, particularly when the communities are large and the individual financial benefits from direct transfers are small.

Moreover, other benefits, such as reduced crop damage, improved physical security, more trade and business opportunities, and increased access to training and extension, should be viewed as positive externalities which derive from the conservation of wildlife. Kenya has fared very well with tourist-related wildlife over the past fifteen years, even though the resource base has been shrinking and utilized on a non-sustainable basis in many areas, particularly in the pastoral areas such as Amboseli and the Maasai Mara, which are two of the major high value tourist attractions in Kenya.

1.3 Other Forms of Wildlife Utilization

The Project design team examined many options for consumptive and non-tourist/non-consumptive utilization during the course of design. The greatest constraint on the development of these types of enterprises is the political and policy environment. While big game hunting could provide considerable landholder returns (in some cases), it is also the most politically contentious issue regarding utilization.

Other forms of utilization, including cropping, are far less politically sensitive, and are being considered carefully by KWS. The COBRA design team believe the greatest assistance the Project can render in these areas is to provide KWS with the research, policy analysis and other technical assistance tools to determine whether or not the enabling environment for any form of consumptive utilization should be changed. The financial aspects of such utilization are discussed at length, but COBRA's greatest contribution in this field will not be direct financing for such projects (as visualized in the original PID), but in providing the policy environment for encouraging such utilization if it is in Kenya's and KWS' best interests.

2.0 WILDLIFE-RELATED ENTERPRISES

2.1 Introduction

This section describes some of the wildlife related enterprises which were examined during the COBRA design. The purpose of this exercise was to identify enterprises which could be promoted in wildlife areas and assess their potential for adoption and income generation. The analysis identifies the options available on a case study basis. It describes the capital and financial inputs required, reviews environmental factors and considers the scope for replicability.

In general, the analysis indicates that the opportunities for developing high return wildlife-activities are more limited than was anticipated at the COBRA PID stage. The most lucrative opportunities have already been seized by the private sector. Additionally, where such opportunities exist the management requirements are usually considerable, generally beyond the means of communities (particularly in pastoral areas). However, with substantial assistance in the form of management, marketing, promotion and operations, communities can benefit through the adoption of some of these enterprises. There are also opportunities to obtain higher returns and to negotiate better deals for existing enterprises.

2.2 Review of Enterprises

The following enterprises, or possibilities for wildlife-related enterprises, were reviewed during COBRA Project design:

Consumptive

- o Hunting;
- o Bird Shooting (non-resident)
- o Resident Bird Shooting
- o Cropping

Accommodation

- o Wilderness Camping
- o Public Campsites
- o Exclusive Camping
- o Bandas
- o Small Lodge

Cultural Activities

- o Handicraft Production
- o Handicraft Retailing
- o Bomas
- o Dancing

Aquaculture

- o Intensive/Centralized
- o Outgrowers

2.2.1 Hunting: Hunting is defined as an operation where a client or small group of clients engage the services of a hunter to shoot for trophies (i.e., safari hunting). Hunting is currently prohibited in Kenya. Were it permitted, the operator capital required would be high, but the landowner capital requirements would be virtually nil. External management (both KWS and operator), would also be high. The level of environmental assessment would be high in order to assure KWS, other GOK agencies, conservationists and landowners that proper offtake and techniques were assured.

Proponents of high cost safari, and less exclusive local, hunting believe the market potential for hunting to be high. Others believe the reintroduction of hunting would affect Kenya's image, and reduce its current level of tourism. Hunting would have to be tightly controlled outside park areas in order to have a minimal effect on current tourism. The potential return to landowners in many isolated, marginal, and arid areas (eg, Samburu), with few prospects for traditional tourism, appears quite high.

2.2.2 Non-resident bird shooting: This is typically an operation where a small group of clients engage the services of an up-market safari operator who provides his own exclusive luxury tented accommodation. There are currently several such operators in Kenya. The external management requirements are high, and the management requirements for landowners is virtually nil. KWS issues licenses, and revenues to landowners are fairly high (Ksh 100,000 per group ranch in Kajiado, Ksh 50,000 per annum per Division in Nyandarua). Individual benefits from non-resident bird shooting are low. Traditionally, in non-pastoralist areas, these revenues have been invested in public works, including schools, clinics and water projects. The history of non-resident bird shooting has been good.

The degree of environmental review for bird-shooting, both resident and non-resident, is relatively low. Birds are considered by most landowners in more intensively farmed areas as pests, and the external benefits from bird control in these areas is considered high by landowners. The market potential for non-resident bird shooting is uncertain, and very dependent upon the exclusive arrangements made by operators and sought by clients.

2.2.3 Resident shooting: This activity concerns Kenya residents who shoot typically in areas near Nairobi at weekends and provide their own accommodation. There are currently three "syndicates" of local hunters (approximately 200 individuals total). They reach annual agreements with local individuals, groups and Government authorities to shoot on alternate weekends. They pay individuals and communities fees ranging from several thousand Kenya Shillings per annum, to Ksh 100,000 per annum. There are good relations between local bird hunters and landholders.

Resident bird shooting in pastoral areas (namely Kajiado District) is handled primarily through KWS. KWS issues licenses and collects fees deposited by the bird hunters from concessions on group ranches. Group ranch members do not participate in the exercise, and it is unclear how revenues derived from these activities accrue to communities. The environmental impact is relatively low, and, as with non-resident bird shooting, the activity is generally welcomed by landholders as a means for controlling birds as "pests." The market for non-resident bird shooting, as with resident bird-shooting, is limited.

2.2.4 Cropping: Cropping entails taking a regular sustainable offtake of game to provide an income to landholders and croppers. It is usually combined with conventional cattle ranching. Cropping currently takes place only in southern Machakos District on one ranch. A group of ten ranchers (both individual and cooperative ranches) have formed a Wildlife Management Unit in this area and have applied to KWS for permission to crop animals on their ranches. The ranchers are mixed Euro-Kenyan and Afro-Kenyan, and there will be approximately 2,000 potential beneficiaries if KWS allows this activity (an expansion of one current cropping operation).

Operator capital requirements for start-up cropping are high (Table 4), but are marginal for expansion. Landowner capital requirements are low. The degree of internal and KWS management, to ensure sustainable offtake, proper cropping techniques, and sales of animal products are relatively high. Landowner revenues on a 1,000 hectare mixed ranch (half cattle, half wildlife is on the order of Ksh 500,000 per annum (with a mix of 1,000 head of cattle, and as many game). This can be a significant supplementary source of income for a rancher, and can improve the cashflow for a cooperative ranch.

Local employment effects are limited. Initial market prospects are good, particularly if game meat is allowed to be sold to local residents through local butchers (at two thirds or less the price of beef). However, both veterinary controls, and KWS cropping controls will have to be ensured. Additionally, market prospects will diminish if the number of croppers is uncontrolled. Future domestic market potential is unknown, but, current markets could be expanded. Prospects for game meat exports are limited, but exports of hides and skins could be very good.

2.2.5 Wilderness Camping: Wilderness camping consists of an arrangement by which a landowner collects camp fees from visitors who select their own camping spot which would have no facilities. The lure of wilderness camping also limits its potential. The primary market is international. That is, the more people camping, the less the appeal to wilderness seekers. Operator capital is nil, while landholder capital is small. Management requirements are also low as wilderness campers expect little or no service. Management primarily comprises ensuring physical security.

Local employment prospects are also relatively low, while landholder revenues are moderately high (for investment and labor). Environmental requirements primarily center on protecting the wilderness aspect of the area. The market potential is good, both internationally and in Kenya, but needs promotion.

2.2.6 Public Campsites: Public campsites are places available for use by anyone who wishes to camp. Facilities are limited and would normally consist of a pit latrine and a water supply. The primary clientele are low budget tourists and local expatriates. Landowner capital requirements are low, and tied directly with the degree of services provided to campers. As with wilderness camping, management primarily consists of ensuring campers' physical security.

Returns to public campsites are higher than with wilderness areas, as are management requirements. Employment generation is relatively low (see Table 4), and market prospects are decidedly uncertain. That is, the market for public campsites currently appears to be near saturation. Public campsites serve as good supplementary income sources for some areas, particularly those easily accessible to Nairobi.

2.2.7 Exclusive Campsite: Exclusive campsites are booked for exclusive use by safari operators to position their luxury tents. The arrangement would normally preclude or limit the number of other camps in the same area. The degree of operator capital is high, with landholder capital requirements low. External management requirements are quite high, as the client market demands exclusive attention. Internal management requirements are low.

Landholder revenues can be considerable from such arrangements, but the number of sites in Kenya available to attract the types of tourists who stay at exclusive campsites is limited. Local employment prospects are low, but the market potential is fairly good. Again, as with wilderness campsites, care needs to be taken to avoid saturation.

2.2.8 Bandas: Bandas are simple self service accommodation with kitchen facilities and bedding provided. The potential for expansion in this field is poor, and several banda sites have deteriorated markedly in Kenya over the past decade due to lack of demand. The greatest market for bandas is the local expatriate base. Landholder capital requirements are very high, while returns are decidedly low, the appeal of bandas being their inexpensiveness, and their "self-catering" quality.

Employment opportunities for banda operations are relatively high, but management requirements are also high. Hence, returns on investment are low. Considerable effort needs to be paid to environmental issues (eg, pollution, waste disposal, setting), and, again, the market potential is poor.

2.2.9 Small Lodge: A small lodge consists of relatively high fee paying clients who are entertained by a safari operator. The general attraction of a small lodge is usually a combination of the operator and the physical setting. Operator capital requirements are the highest of all enterprises studied herein, and the landholder revenues are comparatively low. Management requirements are high, with a high degree of risk associated with staff management and security.

Employment prospects from small lodges are relatively high, but, again, management costs are also high. The market for small lodges is both local and international. Market potential is good, but it needs promotion and more development.

2.2.10 Handicraft Production: Production of handicrafts traditional to a particular area has been an integral feature of Kenya's tourism development for twenty years. Production has tended to be very decentralized, and poorly organized. Capital requirements are low, as entry into and exit from production is easy. Management requirements are generally low, while returns per unit are also low.

Handicraft production generates considerable casual employment. It serves as a supplementary income source for numerous people, ranging from Maasai women to Kisii and Kamba carvers. Successful, larger-scale production requires considerable attention to quality, hence higher management costs. The local tourist market appears near saturation for most handicrafts, while the international market is highly competitive. South, Southeast, and East Asian, and Caribbean handicraft producers are extremely well-

placed, with lower labor costs, a higher degree of organization than that found in Kenya, and the ability to capitalize on success elsewhere.

2.2.11 Handicraft Retailing: This consists of the sale of handicrafts to visiting tourists. Most outlets offer handicrafts produced throughout Kenya, as well as elsewhere in Central and East Africa, not just from the local vicinity. Capital costs are fairly low (unless transport is owned and dedicated to handicraft marketing). As with handicraft production, entry and exit are easy. Therefore, margins are also low. External management, as with any retail activity, is high, as the possibilities for pilfering are high. Returns on investment are low, and, by all observations, the domestic handicraft retailing market is saturated. It will only grow with tourism. The possibilities for expanding the retail sale of exclusive handicrafts are also limited.

2.2.12 Boma: A "boma" is a traditional African homestead, where visitors pay an admission fee in return for being allowed to watch people in their "traditional" activities, and to photograph them in traditional costume. Bomas generally sell locally produced handicrafts and may incorporate dancing. The degree of capital required is low to nil, and consists of the value of labor and local materials to build traditional structures. Historically, bomas in Kenya's pastoral areas have been poorly managed. Numbers have proliferated, entry and exit have been swift.

There is a growing taste internationally for this type of cultural tourism. Properly managed, bomas offer perhaps the best prospects for income generation and employment in Kenya's pastoral areas. The key to management is to make the visiting tourists comfortable and at ease (which in the past has generally not been the case). Means for ensuring proper distribution of revenues within group or cooperative bomas would permit this level of comfort, and would encourage more tourists to visit. Opportunities for bomas are good, but are limited by insufficient local management skills and poor promotion (historically consisting of commissions to minibus drivers). However, bomas remain one of the best prospects among non-consumptive wildlife utilization options.

2.2.13 Dancing: Traditional dancing is performed for visitors either at a lodge or at a boma. Capital requirements are low (generally tied with "bomas"), and, therefore, entry and exit are easy. Returns are low, while employment prospects can be fairly good. Management requirements are moderate, comprising skill development, organization and presentation. The market potential for dancing is tied directly to the growth in international interest in traditional, ethnic culture, and to Kenya's tourism.

2.2.14 Aquaculture (Marine Aquaculture): There are several possible coastal aquaculture activities including fish (tilapia and mullet), prawns/shrimp, and lobster. Fish aquaculture (tilapia) is practiced successfully by one enterprise in Mombasa. Prawn/shrimp aquaculture has been tried, unsuccessfully, in several places since the turn of the century along Kenya's Coast. Fish and crustacea prices have risen an average of 15% per annum since 1980, so returns from aquaculture could be high.

However, capital requirements are considerable. Management requirements are intensive. Technical issues are of primary concern. Production needs to be centralized (at this stage of Kenya's development), although the prospects for a successful outgrower program, with important employment spinoffs, are good. This is a relatively sophisticated activity, in the first instance, and one which will require a lead investor or agency to ensure success.

2.3 Return on Investment

The revenues generated by many of the activities cited herein are not particularly large. Hence, the attraction for local or international investors is low. In most cases, the amount of local employment generated is also low. The "Technical Annex" (Annex D) compares revenues from different enterprises with traditional land use in greater detail. The implications of this are primarily that enterprise development will not be a sufficient agent, in and of itself, to promote conservation of biodiversity in most of Kenya's key wildlife areas. However, it will serve as a useful supplement to other KWS extension, education and social benefit programs (including revenue sharing).

Second, the analyses emphasize the need for extension work to ensure full community participation in making the decision to support the enterprise, and to ensure that the benefits are seen to be received in such a way as to benefit the community as a whole. Most of KWS' current priority areas are populated by pastoral peoples. Past experience has shown that successful enterprises in these areas are generally rare. Historically, activities operated and managed by outsiders have the best record of success. This financial success, however, has often not translated into social or economic benefits sufficient to involve local people in the conservation of the wildlife and natural resources which support these activities.

This poor record is due primarily to pastoral people's historically limited level of entrepreneurship and economic organization, as well as highly decentralized set of community relationships. This implies that, in order to interest outside investors or operators, and to ensure sound development which meets

KWS' objectives of community partnership with wildlife (ie, ensuring a direct link between wildlife and the enterprises), considerable preparatory effort on needs identification, organization, promotion, management and marketing need to be undertaken in many instances as a complement to any enterprise development assistance.

The major conclusion drawn from the analyses for this Project design is that considerable assistance (extension, training, technical) will be needed to ensure the successful operation of enterprises promoted or developed through this Project. In most instances, KWS will need to take a long-term perspective to enterprise development (as well as community development) in these areas. This implies that most ventures in KWS target areas will be relatively risky (in a financial sense) and will not attract, in the first instance, outside investment or support unless good local foundations have been laid. One of the COBRA Project's best forms of assistance will be to help KWS to lay this groundwork, and to put communities and groups in stronger positions to bargain and negotiate with outsiders.

Most of the enterprises described require strong management of an entrepreneurial nature to make the venture a success. The size of the management base for the enterprises is not large, but it must be strong to succeed. This is particularly important in the tourism industry where good performance, from the inception of any enterprise, is essential if the activity is not to receive a bad reputation. Bad impressions take a very long time to dispel in this customer oriented industry.

The underlying premise of successful rural enterprise development is that an individual, group or community must first be able to manage the most simple affairs, such as a bank account, a receipt book, a means for billing their own members, means for operating committees, prior to any major investment of their own resources. Transparency, representativeness and consensus are all critical elements to successful community-based enterprise development. The absence of such mechanisms and elements has meant the demise of most enterprises in rural areas, particularly in pastoral societies.

This implies that the Project and KWS must be willing to finance considerable "up front" technical assistance, ranging from extension to management to marketing. There are numerous examples of the successful use of such assistance in rural Kenya, and there are numerous individuals and agencies (both non-profit and for-profit) who provide such assistance. To provide revenues and other forms of finance to communities for enterprise activities, without the necessary preparation, will result in disappointment and failure.

TABLE 4

COMPARISON OF WILDLIFE RELATED ENTERPRISES

	Operator Capital	Land-owner Capital	External Management	Internal Management	Land-owner Revenue	Inbuilt Extension	Local Employment	Environmental Strngncy	Market Potential
Consumptive									
Hunting	KShs 2.5m	none	high	low	KShs 800k pa	no	0	low to medium	high
Bird Shooting	KShs 1m?	none	high	low	KShs 20-100k pa	no	0	medium	uncertain
Bd Shtng Res	n/a	none	low	low	KShs 20-100k pa	no	0	low	limited
Cropping	KShs 2.5m	none (but fence KShs 5m)	high	medium	KShs 500k pa	no	2	medium	initially good
Accommodation									
Wilderness Camping	n/a	KShs 500 - 40,000	none	low	KShs 50-250k pa	no	3	medium	good but needs developing
Public Campsites	n/a	KShs 50,000	none	medium	KShs 50-500k pa	no	3	medium	uncertain
Exclusive Campsite	KShs 1m	KShs 0-50k	high	low	KShs 50-750k pa	no	3	medium/high	good
Bandas	n/a	KShs 2m	none	high		no	10	high	poor
Small Lodge	KShs 5m	none	high	medium	KShs 50k	yes	5	high	good: needs developing
Cultural Activities									
Handicraft Production	low	n/a	low	high		no	lots	low	
Handicraft Retail	high	n/a	high	low		no	0	medium	saturated
Boma	in kind only	n/a	none	medium	KShs 1.5m	no	100	medium	good opportunities limited
Dancing	low	n/a	medium	medium		no	12	medium	

3.0 FINANCIAL ANALYSIS

3.1 Introduction

It is assumed that AID's COBRA Project will form the core of KWS' Community Wildlife Program (with other donor and GOK support). The Project will assist KWS establish mechanisms for revenue sharing, for income generation and for other economic and social development activities. Additionally, the Project will provide training assistance for KWS staff, target groups, NGOs and others.

Several approaches were considered to measure the costs and benefits which are expected to accrue from the Project. These included a least cost approach (called for in the Terms of Reference), a cost effectiveness approach, and finally, a standard cost-benefit methodology.

The most useful mechanism for analyzing the Project's anticipated benefits is the standard cost-benefit analysis. This derives from the fact that Kenya's wildlife economy is already highly monetized and developed. It is therefore easy to translate that framework into a cost and benefit stream for the Project. The major purpose of the COBRA Project is to ensure that benefits which accrue from wildlife are passed on to those who carry the costs and burdens of wildlife conservation the most, but who, historically, have realized the fewest benefits. The Community Wildlife Program approach will ensure this transfer of benefits.

While, total Community Wildlife Program costs and benefits are difficult to disaggregate from KWS' other conservation activities (eg, park maintenance), the following analyses provide a conservative estimate of probable net benefits from the Project. The financial analysis examines the costs and benefits of the Community Wildlife Program (CWP) in COBRA Project impact areas only. These impact areas include regions in and around Amboseli National Park, Tsavo West National Park and Nairobi National Park, as well as group ranches in Machakos and Laikipia.

3.2 Costs

The analysis incorporates costs of the COBRA project and costs to the KWS/GOK in addition to NGO cost sharing and contributions of other donors as they apply to the CWP in the COBRA impact areas. It also includes "revenue shared" from the KWS revenue sharing program as costs since, in financial terms, they represent revenue to be invested in various community development and enterprise projects. The estimates of KWS/GOK costs and revenue sharing are based on KWS's best estimates for the five year period. Revenue sharing by project impact area is shown in Table 5.

Table 5

Revenue Sharing: COBRA Project Impact Areas

	(US\$ '000)			
	<u>Amboseli</u>	<u>Tsavu West</u>	<u>Nairobi</u>	<u>Total</u>
Year 1	147.0	68.6	63.7	279.3
Year 2	375.0	175.0	162.5	712.5
Year 3	582.0	271.6	252.2	1105.8
Year 4	675.0	315.0	292.5	1282.5
Year 5	717.0	334.6	310.7	1362.3
TOTAL	2496.0	1164.8	1081.6	4742.4

Source: KWS, World Bank estimates.

NGO cost sharing is estimated to be 25 percent of project funding allocated to NGO activities. This is based on the project requirement that NGO's contribute at least 25 percent of their costs from their own funding sources. Total costs needed to support a 25 year benefit stream is estimated to be around US\$ 18.6 million (Table 6).

The costs of the COBRA project, other donors and revenue sharing cover the project life only (5 years). It is assumed that by the end of the project the basic community work which will be needed to support the projected benefit stream will be completed. However, the analysis requires that the KWS/GOK costs cover the full 25 year period which implies that there needs to be some continuing support to achieve the benefits included in this analysis.

TABLE 6

FINANCIAL ANALYSIS OF THE COMMUNITY WILDLIFE PROGRAM IN COBRA IMPACT AREAS

25 YEAR BENEFIT STREAM

('000 US\$)

ITEM / YEAR	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	YR 12	YR 13	YR 14	YR 15	YR 16	YR 17	YR 18	YR 19	YR 20	YR 21	YR 22	YR 23	YR 24	YR 25	25 YR TOTAL		
COBRA COSTS																												
1. Technical assistance	(532)	(808)	(748)	(635)	(592)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$3,315)	
2. Training	(204)	(267)	(225)	(303)	(228)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$1,247)	
3. Equipment & Supplies	(241)	(130)	(87)	(80)	(80)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$578)	
4. Other Direct Costs	(75)	(80)	(80)	(83)	(83)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$400)	
5. Evaluation & Audit	0	(100)	0	0	(150)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$250)	
6. Overhead	(126)	(126)	(126)	(126)	(126)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$631)	
7. Contingency	(125)	(141)	(114)	(108)	(111)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$579)	
Sub-Total COBRA Costs	(1,283)	(1,672)	(1,380)	(1,315)	(1,350)	0	(\$7,000)																					
GOK/KWS COSTS																												
1. Long Term TA	0	(27)	(54)	(81)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(\$2,430)
2. Other GOK Officials	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(\$88)
3. Office Space	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(\$250)
4. Contingency	(30)	(77)	(118)	(139)	(150)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(\$1,514)
Sub-Total GOK/KWS Costs	(43)	(117)	(185)	(233)	(270)	(171)	(171)	(\$4,261)																				
NGO COST SHARING																												
	(6)	(19)	(6)	(19)	(13)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$63)
REVENUE SHARED																												
	(279)	(713)	(1,108)	(1,283)	(1,382)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$4,742)
OTHER DONORS																												
	(500)	(500)	(500)	(500)	(500)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$2,500)
TOTAL CWP/COBRA IMPACT AREA COSTS	(2,111)	(3,020)	(3,177)	(3,349)	(3,495)	(171)	(\$18,567)																					
TOTAL CWP/COBRA IMPACT AREA BENEFITS																												
1. Community Development Project (8)	12	23	29	29	25	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	\$704
2. Enterprise Development (Illustrative)																												
Cropping (2 in Year 2)	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	\$873
Cropping (2 in Year 3)	0	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	\$836
Cropping (2 in Year 4)	0	0	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	\$800
Cropping (1 in Year 5)	0	0	0	0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	\$362
Bird-Shooting & Camping (Year 3)	0	0	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	\$711
Bird-Shooting & Camping (Year 3)	0	0	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	\$711
Wilderness Camping (Year 2)	0	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	\$216
Public Campsite # 1 (Year 4)	0	0	0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	\$400
Public Campsite # 2 (Year 4)	0	0	0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	\$400
Exclusive Camping (Year 2)	0	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	\$555
Exclusive Camping (Year 3)	0	0	0	0	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	\$573
Bows # 1/handicrafts (Year 4)	0	0	0	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	\$1,200
Sub-Total CED Benefits	12	96	200	327	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	\$8,492	
3. Financial Benefits From Improved Park/Reserve Management (3%/Yr)	0	62	126	192	260	320	403	477	554	632	714	797	883	972	1,064	1,158	1,255	1,355	1,458	1,564	1,673	1,785	1,901	2,020	2,143	2,271	\$23,778	
4. Benefits From "Without Project" Scenario (2%/Yr)	0	42	84	127	171	218	262	309	356	405	454	505	557	609	663	718	774	831	889	948	1,008	1,070	1,133	1,197	1,263	1,331	\$14,588	
5. Tourist Sector Financial Benefits from Community Wildlife Program	0	125	253	385	521	661	805	954	1,107	1,265	1,427	1,595	1,767	1,944	2,127	2,316	2,510	2,709	2,915	3,127	3,345	3,570	3,802	4,040	4,286	4,539	\$47,556	
TOTAL FINANCIAL BENEFITS	12	324	663	1,032	1,325	1,580	1,842	2,112	2,390	2,675	2,968	3,270	3,580	3,899	4,227	4,564	4,911	5,267	5,634	6,011	6,399	6,798	7,208	7,630	8,064	\$94,334		
NET FINANCIAL BENEFITS/COSTS	(2,100)	(2,696)	(2,514)	(2,317)	(2,170)	1,409	1,672	1,942	2,219	2,504	2,797	3,099	3,409	3,729	4,056	4,393	4,740	5,097	5,463	5,840	6,228	6,627	7,036	7,460	7,894	\$75,817		
TOTAL CWP/COBRA PROJECT IRR	17%	TOTAL CWP/COBRA PROJECT NPV (15%)																								\$1,443		

3.3 Benefits

The benefits include a 25 year benefit stream from an illustrative sampling of eight community development projects and fifteen enterprise projects. These were based on field research which examined the potential for enterprise development in the target areas and analysis of representative community development projects (see Annex D for more details). It is assumed that better management of wildlife in areas bordering parks and reserves will lead to the parks being able to handle tourists more efficiently allowing them to accommodate greater numbers in addition to charging higher prices. Hence, it is assumed that park gate receipts of 3 percent per year will result from improved park management.

Park gate receipts for the three parks included in the COBRA Project impact area are shown below in Table 7. The benefit stream from these revenues is calculated at 3 percent per year and is cumulative. Thus, these benefits amount to US\$ 62,000 in year 2 and increase to US \$ 2.1 million in year 25 (Table 6).

TABLE 7

KENYA PARKS AND RESERVES GATE FEES:
COBRA PROJECT IMPACT AREAS
1990

<u>PARK/RESERVE</u>	<u>REVENUES</u> <u>(Ksh millions)</u>
Amboseli National Park	32.0
Tsavo West National Park	14.7
Nairobi National Park	12.1
	====
TOTAL	58.8

=====
Source: KWS, Ministry of Planning and National Development.

Additional benefits were included based upon a "Without Project" scenario. The assumption is made that without COBRA project support for the CWP and other KWS initiatives, including those supported by other donors, Kenya's wildlife and natural resource base will decline through over-utilization and other forms of non-sustainable use. It is assumed that such a decline, while

difficult to quantify, will result in a drop in tourist-related revenues on the order of 2% per annum after the next few years, and would continue indefinitely. This crude assumption is born out by evidence that such deterioration is already apparent in Amboseli and Maasai Mara. Therefore, the analyses includes as a benefit 2 percent of the park revenue base of the three parks in the COBRA impact area (Table 7) calculated on an annual, cumulative basis. This ranges from US\$ 42,000 in year 2 to US\$ 1.3 million by year 25 (Table 6).

A benefit stream is also expected to be realized due to the multiplier impact of increased wildlife tourism. It is assumed that for each additional dollar which is generated through the parks there is at least 2 dollars generated in other tourist related activities. Hence the tourist sector financial benefits in Table 6 are calculated as twice the increase in financial benefits received through improved park and reserve management.

3.4 Results from the Financial Cost/Benefit Analysis

The results of the financial cost/benefit analysis reveal a cumulative net benefit from the CWP activities in the COBRA project impact areas of US\$ 75.8 million over twenty-five years. The IRR is 17 percent which is favorable for a project such as this.

Sensitivity analysis indicates that a 20 percent increase in costs or a 20 percent decrease in benefits would cause the IRR to drop to 14 percent. If the benefits resulting from better park and reserve management were reduced from 3 percent per year to 2 percent the IRR would drop to 13 percent, still making the project acceptable from a financial perspective. Likewise, if the benefits from the without case scenario were assumed to be 1 percent per year instead of 2 percent the IRR would drop to 16 percent. If the benefits resulting from the multiplier impact of increased tourism were only 1.5 times the increase in financial benefits (instead of 2 times) the IRR would drop to 15 percent.

4.0 ECONOMIC ANALYSIS

4.1 Introduction

Wildlife utilization, primarily game viewing and coastal tourism, is an important feature of Kenya's economy, accounting for fully one third of Kenya's foreign exchange revenues and perhaps 10% of Kenya's gross domestic product (GDP). However, the base for this economic activity is being rapidly eroded by over-exploitation of wildlife resources and by encroachment into, and destruction of, the protected areas that are the core of these activities.

The COBRA Project seeks to assist KWS to combat this erosion of its wildlife resource base by enlisting neighbors and landholders as partners where wildlife areas border, or where wildlife is dependent for its existence. The alienation of these people from the benefits which derive from utilization has led to a rapid deterioration in the balance of resources. The COBRA Project operates on the basic premise that people must make a direct link, preferably economic (in its broadest sense), between the returns to wildlife and its existence on or near their (people's) land. Education, extension, community development, and direct financial gain are all methods by which to make this link. The COBRA Project will support KWS in each of these areas to reinforce the message that "wildlife pays" and to ensure that the benefits derived from wildlife utilization are more broadly and equitably distributed than has been the case in the past.

4.2 Economic Analysis

Originally it was envisioned that the economic analysis would be a least cost approach since it was considered that many of the benefits would be non-quantifiable. However, further analysis indicated that enough of the costs and benefits were quantifiable to do a cost/benefit analysis. The economic analysis uses the same basic cost/benefit structure which was used in the financial analysis except for one change. It is assumed that the revenue shared through the revenue sharing program has a net social impact of zero since it basically represents a transfer of funds from one economic entity to another. In this case it represents a transfer from GOK to communities neighboring selected parks and reserves. Hence these costs were deducted from the economic analysis.

Since Kenya has a fairly open labor market and, increasingly, a foreign exchange regime that prices foreign exchange at or near its true market rate, shadow prices were not employed for these factors in this analysis. The World Bank and the African Development Bank, the largest donors in Kenya, currently utilize no shadow foreign exchange rate in their project appraisal analyses. Likewise, no shadow prices are used by these agencies to price commodities. Since the project is expected to primarily impact residents in rural communities neighboring Kenya's parks and reserves where the opportunity cost for labor is considered to be low, it was also not necessary to make adjustments to account for the opportunity cost of labor. This implies that financial costs and benefits are fairly close to quantifiable economic costs and benefits.

The results from the economic analysis (Table 8) show an IRR of 22 percent which is well above the real cost of capital in Kenya. The official inflation rate is presently 17 percent which is the same as the regulated commercial lending rate. However, interest rates have recently been decontrolled and are expected to rise considerably in the near future while recent estimates would put the "actual" inflation rate at 20 to 25 percent. Hence, over the short to medium term it should be expected that real interest rates in Kenya will move from being slightly negative to being slightly positive.

An increase in costs by 20 percent reduces the IRR to 19 percent while a 20 percent decrease in benefits causes the IRR to drop to 18 percent. Additional sensitivity analysis was conducted to account for the possibility of foreign exchange being priced incorrectly. A foreign exchange premium of 1.14 was used as a shadow price for foreign exchange. The results, over a twenty-five year period, still produced an IRR of around 22 percent since the premium effected prices of both costs and benefits.

It is expected that the COBRA project will contribute to the preservation of wildlife for all mankind and, in addition, will have many direct and indirect benefits for residents living in areas inhabited by wildlife. In addition to the direct economic benefits resulting from tourism and wildlife utilization which have been captured in the cost/benefit analysis there are a number of indirect benefits such as; improved water sources, health care, education facilities, as well as increased soil and water conservation, which are expected to ensue from the project. When combined with these non-quantifiable benefits, the economic returns captured in the cost/benefit analysis yield a positive justification for COBRA.

TABLE 8

ECONOMIC ANALYSIS OF THE COMMUNITY WILDLIFE PROGRAM IN COBRA IMPACT AREAS

25 YEAR BENEFIT STREAM

(\$'000 US\$)

ITEM \ YEAR	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	YR 12	YR 13	YR 14	YR 15	YR 16	YR 17	YR 18	YR 19	YR 20	YR 21	YR 22	YR 23	YR 24	YR 25	25 YR TOTAL		
COBRA COSTS																												
1. Technical Assistance	(532)	(808)	(748)	(635)	(592)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$3,315)	
2. Training	(204)	(287)	(225)	(303)	(228)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$1,247)	
3. Equipment & Supplies	(241)	(130)	(87)	(60)	(60)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$579)	
4. Other Direct Costs	(75)	(80)	(80)	(83)	(83)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$400)	
5. Evaluation & Audit	0	(100)	0	0	(150)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$250)	
6. Overhead	(126)	(126)	(126)	(126)	(126)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$631)	
7. Contingency	(105)	(141)	(114)	(108)	(111)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$573)	
Sub-Total COBRA Costs	(1,293)	(1,672)	(1,380)	(1,315)	(1,350)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$7,000)	
GOV/NGO COSTS																												
1. Long Term TA	0	(27)	(54)	(81)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(\$2,430)
2. Other GOV Officials	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(\$66)
3. Office Space	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(\$250)
4. Contingency	(30)	(77)	(118)	(139)	(150)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(\$1,514)
Sub-Total GOV/NGO Costs	(43)	(117)	(185)	(233)	(270)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(171)	(\$4,261)
NGO COST SHARING	(6)	(19)	(6)	(19)	(13)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$53)
OTHER DONORS	(500)	(500)	(500)	(500)	(500)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(\$2,500)
TOTAL CWP/COBRA IMPACT AREA COSTS	(1,832)	(2,308)	(2,071)	(2,066)	(2,133)	(171)	(\$13,824)																					
TOTAL CWP/COBRA IMPACT AREA BENEFITS																												
1. Community Development Project (8)	12	23	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	\$704
2. Enterprise Development (Illustrative)																												
Cropping (2 in Year 2)	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	\$873
Cropping (2 in Year 3)	0	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	\$836
Cropping (2 in Year 4)	0	0	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	\$800
Cropping (1 in Year 5)	0	0	0	0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	\$362
Bird-Shooting & Camping (Year 3)	0	0	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	\$711
Bird-Shooting & Camping (Year 3)	0	0	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	\$711
Wilderness Camping (Year 2)	0	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	\$216
Public Campsite # 1 (Year 4)	0	0	0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	\$400
Public Campsite # 2 (Year 4)	0	0	0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	\$400
Exclusive Camping (Year 2)	0	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	\$655
Exclusive Camping (Year 5)	0	0	0	0	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	\$573
Boma # 1/handicrafts (Year 4)	0	0	0	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	\$1,200
Sub-Total CED Benefits	12	96	200	327	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	373	\$8,462
3. Economic Benefits From Improved Park/Reserve Management (3%/Yr)	0	62	126	192	260	330	403	477	554	632	714	797	883	972	1,064	1,158	1,255	1,355	1,458	1,564	1,673	1,785	1,901	2,020	2,143	2,272	\$23,778	
4. Benefits From "Without Project" Scenario (2%/Yr)	0	42	84	127	171	216	262	309	356	405	454	505	557	609	663	718	774	831	889	948	1,008	1,070	1,133	1,197	1,263	1,331	\$14,538	
5. Tourist Sector Economic Benefits from Community Wildlife Program	0	125	253	385	521	661	805	954	1,107	1,265	1,427	1,595	1,767	1,944	2,127	2,316	2,510	2,709	2,915	3,127	3,345	3,570	3,802	4,040	4,286	4,539	\$47,556	
TOTAL ECONOMIC BENEFITS	12	324	663	1,032	1,325	1,580	1,842	2,112	2,390	2,675	2,968	3,270	3,580	3,899	4,227	4,564	4,911	5,267	5,634	6,011	6,399	6,798	7,209	7,630	8,064	8,514	\$34,384	
NET ECONOMIC BENEFITS/COSTS	(1,820)	(1,984)	(1,408)	(1,035)	(808)	1,409	1,672	1,942	2,219	2,504	2,797	3,099	3,409	3,729	4,056	4,393	4,740	5,097	5,463	5,840	6,229	6,627	7,038	7,460	7,894	\$80,560		
TOTAL CWP/COBRA PROJECT IRR	22%	TOTAL CWP/COBRA PROJECT NPV (15%)																								\$4,363		