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Windhoek Nature Reserve: Financing a Sustainable Conservation Model in Namibia

Just on the border of Windhoek, Namibia's capital, a 10,000-hectare¹ parcel of savannah called Ongos stretches to the North and West. On one of the few carefully placed roads in this unique landscape, Dr. Ulf Tubbesing races toward his veterinary clinic in the city. It is a Wednesday night in the summer of 2003 and a leopard in Namibia's Fish River Canyon has attacked a cheetah, classified as an endangered species. Ulf has just gotten word that the young cheetah is arriving from the South by small plane in order to be treated for his wounds. In his veterinary practice, Ulf sees not only Windhoek's dog and cat population at his clinic, but also volunteers hours of his time and expertise treating wild animals native to the Namibian landscape. His work developing a treatment for a leopard brain disorder has been covered in depth by National Geographic, earning him the designation of National Geographic's "Wild Vet." He is also "foster parent" to unwanted or injured animals, including: Batty, the Bat-eared Fox, Nana Ki, the small antelope, and Tate Kuru and Induna, two orphaned leopard cubs. In addition, Ulf has embarked on an ambitious wildlife conservation initiative. He is in the process of restoring Ongos, converting it from a commercial ranch to an ecologically and financially sustainable nature reserve. Just a few days later, he would undertake a dangerous and difficult giraffe capture and relocation, moving giraffe from an overgrazed landscape to Ongos. In the same week, Ulf captured, relocated, and released a herd of wildebeest at Ongos, using helicopters to herd the animals before carefully loading them onto vehicles. Having only purchased Ongos a few months before, he is beginning to see his dream take shape. However, he has a long way to go.

After several hours in the clinic, Ulf heads home. Unfortunately for Ulf, sleep is not on the agenda. He still has to go over some numbers for a big meeting the next day with two foreign investors. While Ulf is not your traditional capitalist, he knows that to ensure the success of this venture, he cannot rely on the generosity of donors and the goodwill of the government alone. He needs a financial plan—attractive enough to entice any shrewd investor. As he drives through the gates at the Ongos border, he reflects on how much he has to overcome in order to secure financing. First, most of his potential foreign investors are not familiar with the typical line items associated with nature reserves, such as animal acquisition and transfer costs. Furthermore, he knows that investors will have fresh images of the recent Zimbabwe land grabs by the government as they

¹ A hectare is equivalent to 2.471 acres; 10,000 hectares is roughly equivalent to 24,710 acres.

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review his venture. Therefore, does it make sense to purchase political risk insurance? Additionally, Ongos faces a difficult challenge common to nature reserves in developing countries: the reserve is an ecologically rich ecosystem embedded in a landscape housing a large population of impoverished people. What kinds of pressures would these historically disadvantaged populations place upon the ecological functioning of the reserve? For example, would poaching and firewood harvesting by this population challenge the ecological, and therefore, financial sustainability of the initiative? Is there a way for Ulf to share the wealth with his poorer neighbors through carefully managed social programs? Would these challenges scare potential investors? An additional concern at the forefront of Ulf's mind is how to scale-up his project. His hope is to expand the scale of this project such that neighboring commercial farms, as well as the neighboring National Park, would share a common vision of ecological and financial sustainability through joint land management and financial risk sharing. Thus, he is considering how to convince his neighbors to join his initiative. He believes that from both an ecological and financial perspective, the optimal scale of this initiative is not just Ongos' 10,000-hectares, but up to 50,000-hectares of the region's landscape. His vision is to create a sizeable ecological, social, and financial sustainability model for the region. However, before his meeting tomorrow, Ulf needs to make sure he has accounted for all the cash flow line items to understand the true financial value of the venture.

Socioeconomic Overview of Namibia

Namibia is a country of 318,580 square miles bordering Angola, Botswana, Zambia and South Africa on the Atlantic Ocean (Figure A contains a map of Namibia.) The capital, Windhoek, is located in the center of the country and has a population of 251,545.² The estimated population in 2003 was 1,927,447 with a growth rate of 1.49% (Exhibit 1 contains population demographics for various African countries.) Blacks comprise 87.5% of the population (predominantly from the Ovambo, Nama, Kavango, and Herero tribes) whites 6% (German, English and Dutch descendents) and mixed comprise 6.5%. Fifty percent of the Namibian population lives below the poverty line (2/3 of black Namibians live in "abject poverty")³ and the GDP per capita (PPP) is estimated at US\$7,200 for 2004.⁴ Average life expectancy is 43 years. The population density is relatively low (5.6 people per square mile) and 60% of the population lives in rural areas.⁵

During the nineteenth century, Namibia passed from being a British to a German colony. German annexation of Namibia (then called South West Africa) was completed in 1884. German farmers began to settle in South West Africa in 1892, displacing the indigenous Africans from the majority of good farmland. German control of the colony was not peaceful: rebellions by indigenous groups occurred in 1903 and 1904, resulting in the near complete annihilation of the Herero tribe by the German colonizers. South Africa (then a colony of European powers itself) wrested control of South West Africa from Germany during World War I. The Apartheid system of South Africa (a governance system of racial hierarchy and segregation in which black Africans were dispossessed of most of their rights, land, and property) was instituted in South West Africa as well. During the 1960s, SWAPO (the South West Africa People's Organization) initiated a guerilla war to gain independence from South Africa. With support from the international community, Namibia won

² Government of Namibia Web site, www.grnnet.gov.na.

³ Encyclopedia Britannica Online, <http://80-www.search.eb.com.ezp1.harvard.edu/eb/article?query=namibia&ct=&eu=117916>.

⁴ CIA World Factbook, <http://www.cia.gov/cia/publications/factbook/geos/wa.html#Econ>.

⁵ Encyclopedia Britannica Online.

independence from South Africa in 1990 after nearly two centuries of colonial rule by a variety of outside powers. Colonization had not been without lasting costs to the black population: at the dawn of independence, wages of black Namibians were much lower than those of whites, and many black Namibians were not employed in the formal sector.

Figure A Map of Namibia



Source: CIA World Factbook, © 2003 Central Intelligence Agency.

Today, Namibia is a multiparty democracy with universal adult suffrage. There is one legislative body—the National Assembly—with seventy-two members elected every five years by the adult voting population. There is also an executive branch led by a president (currently Sam Nujoma of the SWAPO party) and prime minister (currently Theo-Ben Gurirab) and a cabinet that reports to the National Assembly. The third branch of government is an independent judiciary. Namibia's constitution enshrines a number of human rights for the population, including affirmative action, and provides for a separation of power among the legislative, executive, and judicial branches.

Roughly 47% of the population works in agriculture, 20% in industry, and 33% in services (estimate from 1999). Cattle and sheep herding comprise the largest section of the agricultural sector. Agricultural exports, especially beef, are the country's second-largest foreign currency earner. Commercial farming is predominantly done by white Namibians. Within industry, mining contributes 30% to the GDP. Namibia exports diamonds, copper, gold, zinc, uranium, lead, cattle and fish primarily to the European Union (79%, 2001) with a small fraction going to the United States (4%, 2001). The country's external debt is \$517 million (2002 estimate). Despite Namibia's active economy, the unemployment rate is 35% (1998 estimate). In addition, although agriculture captures a

large segment of the labor force, only 0.99% of Namibia's land is arable and the country suffers from periodic droughts.⁶

However, Namibia is well poised to be a leader in safari tourism. In addition to abundant natural resources and wildlife, the country has a stable political system, developed infrastructure, and a number of existing national parks, such as the Namib-Naukluft Park, the largest national park in Africa. Tourism is a growing sector in Namibia: 210,000 visited the country in 1991; this number grew by 175% to 550,000 in 1998 and was comprised mainly of Europeans and South Africans. Market research has shown that lodges close to the Windhoek area have occupancy rates of 55%-100% regardless of accommodation cost. Exhibits 2, 3, 4, and 5 contain tourism and hotel occupancy-related information.

An Introduction to Game Ranching

Economically, game ranching is an extremely capital-intensive venture. Typically, for every R1 of revenue, R6 of capital investments are required.^{7,8} The main upfront costs (capital investments) of game ranching include the cost of land and the cost of infrastructure improvements. Typical infrastructure improvements include game fencing; game-handling facilities, water provision and roads; staff quarters; vehicles and equipment; and game. The main operating income of game ranches includes game harvesting and eco-tourism. Typical expenditures include staff expenses, maintenance expenses, catering expenses, advertising expenses, census of game population numbers, and veterinary bills.

The cost of land is especially troublesome to game ranchers due to the fluctuating nature of land values. Depending on the size of the property, the absolute cost of fencing can be quite high, especially if electric fencing is required for large game. In terms of vehicles, most game ranches require at least one 4x4 pickup truck and game-viewing vehicles adequate to service the projected flow of tourists into the ranch. A tractor might be necessary for road repair and other maintenance work. The game ranch also needs to purchase game if a full stock is not readily available on the land acquired. Costs associated with game purchases will vary according to the species, age, sex, availability, location, health, and transport required, as well as the financing available for game purchases and the season in which the game is purchased.⁹ Ranches can start with a "minimum breeding herd of ten (or more) animals" and wait for that herd to reach a size where "consumptive" utilization of the animals can take place. Eco-tourism is non-consumptive and can begin the moment animals are released. However, "consumptive" utilization (e.g., hunting and live capture/sale) can only begin once the herd has reached a size such that the annual (or every 2-3 year) reproduction rate allows for a feasible culling from both an economic and population ecology perspective. Obviously, the bigger the originally introduced herd, the faster one can begin consumptive utilization. Game ranchers must also be cognizant of and sensitive to the ecological carrying capacity of their lands, i.e., the number of animals the landscape can accommodate before ecological degradation occurs, and animals begin to perish as a result of inadequate ecosystem-level resources to sustain life. Many game ranchers attempt to harvest animals at the maximum sustainable yield, which is equal to

⁶ All figures above from *CIA World Factbook*, Namibia.

⁷ Absa Group Economic Research, "Game Ranch Profitability in Southern Africa" March 2003 at <http://www.absa.co.za>.

⁸ "R" represents the South African Rand, which is the South African currency. The exchange rate between the Namibian Dollar and South African Rand is one for one. The exchange rate between the South African Rand and the American Dollar is 5.895 ZAR/USD.

⁹ Absa Group Economic Research, pp. 11-12.

approximately half of the population's intrinsic growth rate.¹⁰ If the game ranch does not contain large predators, the game population grows at approximately 23% annually.¹¹ Notably, game ranching can be more ecologically sustainable than cattle ranching. Cattle ranching generally uses 100% of the ecological carrying capacity of the land while game ranching generally uses between 50% and 70% of the ecological carrying capacity.¹² When the economic and ecological carrying capacity of game is reached in the landscape, investments in buildings and facilities make economic sense.¹³ In this case, carrying capacity refers to the overall stocking rate of all species in the landscape and does not refer to a particular species. In terms of overall cost distribution, expenditure on buildings, infrastructure and vehicles is typically 15% of the total capital outlay. Large investments in game and land, in addition to real depreciation costs, contribute to this relatively low percentage.¹⁴

The Windhoek Nature Reserve: Description of the Venture

The Windhoek Nature Reserve is envisaged as an “eco-friendly” (i.e., ecologically sustainable) 10,000-hectare area 15 kilometers northwest of Windhoek. It is the largest contiguous section of land dedicated to wildlife and nature within a short distance from the capital. The Reserve will offer a variety of activities, including game drives, hikes, and horseback safaris, and will have a lodge and restaurant onsite. Due to its relative stability and natural wildlife resources, Namibia has experienced a growth rate of 1.6% in visitors to the country, leading Ulf to estimate a total rate of return over a four-year period to the Reserve of 54%. The Reserve will start as a 10,000-hectare private nature reserve, with plans to expand by 10,000 to 17,000-hectares within the first two years of operation.

The Reserve will contain diverse habitats and wildlife, including large mammals such as elephants, rhinos, buffalos, and hippos. Lions are not permitted without government approval and lion-proof game fencing. The land within the Reserve has not been overgrazed and is ecologically healthy. The Reserve also has the necessary infrastructure, including 30 ground dams, 20 boreholes and 300 kilometers of roads, allowing water for animals and transportation for visitors.¹⁵ Once financing for the Reserve is secure, a rhino and elephant secure fence will be constructed around the perimeter, while all internal fences will be removed.

The main components of the Windhoek Nature Reserve will be:

Restaurant The restaurant will be designed as typically African and will offer African cuisine in order to attract the international tourist. Seating capacity will be 200.

Lodge The lodge will consist of cottages and luxury tents, together containing 20 beds distributed equally between the two. When an occupancy rate of 70% is obtained, the lodge will be expanded.

¹⁰ Absa Group Economic Research, p. 6.

¹¹ Absa Group Economic Research, p. 18.

¹² Absa Group Economic Research, p. 6.

¹³ Absa Group Economic Research, p. 10.

¹⁴ Absa Group Economic Research, p. 12.

¹⁵ A borehole is a hole drilled into the earth, commonly for water supply.

Activities Activities will be available to day and overnight visitors, and will include game drives, horseback riding, stargazing, and safari tours.

Cultural village When tourist numbers grow to substantial levels at the lodge, a cultural village will be constructed to educate visitors about the cultures and traditions of indigenous Namibians such as the San Bushmen. Profits from the village will be held in a trust account and paid out to historically disadvantaged populations for land acquisition.

Village development After one year of operation, the Reserve will commence construction of fifty 0.5-1 hectare residential units on an area of 2,500 ha for sale to foreigners.

Although Namibia is home to a number of game ranches and conservancies, Ulf believes the Windhoek Nature Reserve will be uniquely positioned among potential visitors and residential unit buyers due to the authentic African experience it will provide. Specifically, every residential unit owner/occupier will have the opportunity to experience a feeling of being in the bush, with no skylines broken by other buildings.

The projected income statement incorporating these features is provided in **Exhibit 6**. In addition to the income statement, capital expenditures are expected to be N\$5.9 million immediately, N\$66,000 in two years, and N\$439,000 in three years. The annual depreciation schedule starting today and forecasted out an additional seven years is expected to be (in chronological order) N\$3.9 million, N\$290,000, N\$357,000, N\$247,000, N\$207,000, N\$207,000, N\$74,000, and N\$74,000. The tax rate for this type of venture is 35%. The current interest rate is 17%. The risk premium for this type of venture is unknown, but Ulf thinks 7% is reasonable.

Risks Faced by the Windhoek Nature Reserve

Economic risk Namibia is already home to a large number of wildlife sanctuaries and game ranches. One such game ranch near Windhoek is Okapuka. Okapuka Ranch is a large (14,000 ha) wildlife ranch 30 kilometers from Windhoek. Okapuka has been in operation since the late 1980s/early 1990s and currently contains 20 rooms (16 thatched roof rooms and 4 lodge rooms with balconies), a restaurant and bar, and a wine cellar. The Ranch offers game drives, lion feeding tours (Okapuka has a number of lions), hiking and helicopter rides. Rates run from N\$900 for a double or family room to N\$625 for a single room.¹⁶ However, it may be important to note that ecologically, this landscape is less healthy than Ongos. Not only is much of the landscape overgrazed, land management strategies include bulldozing of bush to increase line of sight for game viewing. This causes significant ecological disturbance.

Conservancies are also becoming increasingly popular; these are groups of privately owned farms or areas of communal land whose owners work together to conserve wildlife and biodiversity, oftentimes in order to bring tourists onto the farms. As of the end of 2003, there were 29 registered conservancies, comprising of 38,063 members and 74,052 square kilometers.¹⁷ Members of conservancies practice farming with a view to protect local wildlife simultaneously. Members of conservancies should ideally remove fencing between their farms in order to allow wildlife to roam

¹⁶ Okapuka information from <http://www.natron.net/okapuka/main.html>.

¹⁷ Namibian Ministry of Environment and Tourism.

freely in a larger habitat.¹⁸ However, most commercial conservancies have not lived up to their expectations of effective joint ecological planning as overgrazing, and its associated ecological problems, occur in some Namibian conservancies. Furthermore, farmers of the vast majority of conservancies continue with stock farming, and fences between properties and even within properties are rarely removed. Even those conservancies truly devoting their land to wildlife ranching generally do not take out internal fences because farmers are concerned about having “their animals” cross over into neighboring property. Thus, members of a conservancy are essentially in competition with one another, seriously interfering with the conservancy idea of joint land management.

Legal risk It is illegal for a foreigner to own commercial farmland in Namibia. According to the Agricultural Land Reform Amendment Bill, a group or individual who sells land to a foreigner faces up to five years in jail as punishment. Any possible foreign financing would have to be consistent with these laws. At Ongos, residential units are located on rezoned land, and are therefore not considered to be commercial farmland. Thus, the planned village development is not in conflict with current legislation.

Government/political risk During the colonial era in Namibia, white settlers dispossessed indigenous black Africans of the majority of quality agricultural land in the country. At independence, private property rights were enshrined in the constitution with a “willing buyer, willing seller” clause and white Namibians maintained their ownership over land acquired during the colonial period. As a result, today approximately 4,000 white Namibian farmers own half of Namibia’s farmland. Since independence, black unrest over land inequalities in Namibia and other formerly colonized African countries has increased political pressure on the government to “right” past injustices in some manner. At the same time, foreign governments and organizations encourage an approach that honors private property rights. To meet both domestic and international needs, land reform programs have been introduced in a number of countries, but the process is often slow and the small transfers of land that result tend to increase social unrest among the black populations. African leaders, therefore, have been known to “speed up” the process based on political calculations. Land expropriations and occupations and the consequent civil unrest in Zimbabwe have caused international outrage at President Mugabe’s efforts to transfer large segments of white-owned land to the black population with little regard for private property rights or the legal process. World opinion suggests he is doing so to combat his opposition and secure his political position for years to come.

Namibia is not free from these political and economic problems. In November 2003 the Namibia Farm Workers Union, complaining that the government’s land reform program was not showing results, claimed it would occupy fifteen white-owned farms peacefully. The occupation was prevented by an agreement regarding better working conditions for agricultural laborers between the Farm Workers Union and the Namibia Agriculture Union, a group representing white farmer interests, but the threat remains. Additionally, behind the scenes, the government put pressure on the Farm Workers Union to back down. President Nujoma has repeatedly demonstrated support for Mr. Mugabe and has plans to expropriate 192 white-owned farms, though following the “willing buyer, willing seller” stipulation.

Neighbor risk Ulf has a number of cattle-grazing neighbors that occupy lands he would like to see added to the Reserve. Importantly, the Reserve’s business plan calls for the dismantling of all fences within the property in order to allow wildlife to roam freely.

¹⁸ Conservancies information from Directorate of Environmental Affairs, Ministry of Environment and Tourism, Namibia at http://www.dea.met.gov.na/programmes/cbnrm/cons_guide.htm.

Cattle grazing is a relatively lucrative livelihood for many indigenous Namibians, and carries with it a great deal of pride. However, cattle-grazing leads to quick and vast ecological degradation of land and, thus, cattle pose a threat to long-term ecological sustainability of the area. The challenge for Ulf is to negotiate a solution with his neighbors to solve the twin problems of ending cattle-ranching on the land and providing a secure alternate livelihood for his neighbors.

The Decision

As Ulf turned into the drive at Ongos and switched off the engine, he wondered whether he could create a synergy among social, political, ecological, and economic conditions to achieve his dream at the Windhoek Nature Reserve. How much would the foreign investors be willing to pay for an equity stake, if anything at all? What type of financial package should he offer to his neighbors? How could he insure that everything else would fall into place, such as cooperation from the government and other local community players? Finally, considering the unorthodox nature of his sustainable conservation model, Ulf wondered what the appropriate measures of success would be for the newly established Windhoek Nature Reserve.

Exhibit 1 Population Demographics in the Most Important African Countries Competing for Tourism

Country	Capital	Area (in sq. km)	Population	People/KM ²
Namibia	Windhoek	825,418	1,797,677	2.2
Botswana	Gaborone	600,370	1,586,119	2.6
Angola	Luanda	1,246,700	10,366,031	8.3
Zambia	Lusaka	752,614	9,770,199	13.0
Mozambique	Maputo	801,590	19,371,057	24.2
Zimbabwe	Harare	390,580	11,365,366	29.1
South Africa	Pretoria	1,219,912	43,586,097	35.7
Tanzania	Dar es Salaam	945,087	36,232,074	38.4
Kenya	Nairobi	582,650	30,765,916	52.8
Uganda	Kampala	236,040	23,985,712	101.6

Source: U. S. Census Bureau, International Database and *The World Fact Book*, 2000.

Exhibit 2 Tourism in Southern Africa

Country	Visitors in 1997	Visitors in 1998	% Growth
Namibia	502,012	510,000	1.6%
South Africa	5,437,000	5,981,000	10.0%
Botswana	734,000	740,000	0.8%

Source: Windhoek Nature Reserve.

Exhibit 3 “Visitors” to Namibia Booking Beds in Namibian Hotels, Lodges, Pensions and B&Bs

Nationality	% of Total	Nationality	% of Total
Germans	34.2%	Benelux	1.8%
Namibians ^a	19.5	SADC excluding SA	1.8
South Africans ^a	12.5	Scandinavia	0.9
France	2.4	Rest of Europe	13.0
UK	3.6	North and South Americas	1.7
Italy	1.8	Rest of the World	6.8

Source: Adapted from Hospitality Association of Namibia.

^aIn the local holiday season (Dec/Jan.) these countries' contribution to bed occupancy rates increases by about 50%.

Exhibit 4 The Main Destinations for German Tourists Traveling to Africa in the Year 2000

Country	Number of Tourists	Duration of Stay	Number of Bed Nights
Namibia	54,500	12.0 nights	654,000
South Africa	216,000	19.0 nights	4,104,000
Kenya	216,000	20.0 nights	4,320,000
Egypt	786,000	7.2 nights	5,659,200

Source: Adapted from Hospitality Association of Namibia.

Exhibit 5 Summary of the Average National Occupancy Rate Statistics as Supplied by HAN for the Time Period July 2001 to January 2002

Accommodation Category	% Room Occupancy	% Bed Occupancy
Bed & Breakfast	58.5%	49.0%
Hotel-Pensions	57.0	47.8
Hotel Over 30 Rooms	46.5	33.5
Hotel Under 30 Rooms	36.8	27.0
Lodges	38.0	32.0
Guest Farms	25.0	22.5
Rest Camps	53.8	35.0

Source: Adapted from Hospitality Association of Namibia.

Exhibit 6 Windhoek Nature Reserve Projected Income Statement

	2003 Year 0	2004 Year 1	2005 Year 2	2006 Year 3	2007 Year 4	2008 Year 5	2009 Year 6	2010 Year 7
Revenue								
Restaurant	0	1,445,400	3,179,880	4,372,335	5,290,525	6,401,536	7,745,858	9,372,488
Lodge	0	1,204,500	2,649,900	4,372,335	6,412,758	7,759,437	9,388,919	11,360,592
Game drives	0	216,810	476,982	787,020	1,154,296	1,269,726	1,745,873	1,920,461
Predator tours	0	513,920	847,968	1,243,686	1,710,069	1,881,076	2,069,183	2,731,322
4x4 driving courses	0	120,450	264,990	582,978	705,403	853,538	1,032,781	1,249,665
Entrance fee	0	160,600	353,320	485,815	587,836	711,282	860,651	1,041,388
Restaurant rent	0	396,000	435,600	479,160	527,076	579,784	637,762	701,538
Lodge rent	0	396,000	435,600	479,160	527,076	579,784	637,762	701,538
Property development	0	13,750,000	28,523,000	29,236,020	32,303,370	395,307	434,838	478,321
Total Revenue	0	18,203,680	37,167,240	42,038,510	49,218,410	20,431,469	24,553,627	29,557,313
Operating Costs								
Restaurant	0	1,593,030	2,713,326	3,513,205	4,155,226	4,922,496	5,840,360	6,939,389
Lodge	0	1,219,425	1,622,280	2,212,958	2,763,688	3,393,052	3,919,788	4,538,559
Game drives	0	91,458	189,053	283,673	378,106	415,954	457,437	503,255
Predator tours	0	142,575	208,451	270,590	333,782	367,160	403,876	444,263
4x4 driving courses	0	16,141	35,281	77,163	92,865	111,814	134,688	162,305
Property development-cost	0	7,150,000	17,903,600	21,917,214	24,209,559	276,715	304,386	334,825
Total Costs	0	10,212,629	22,671,991	28,274,802	31,933,225	9,487,190	11,060,535	12,922,596
Other Operating Costs								
<i>Maintenance</i>								
Dams/boreholes	0	20,000	22,000	24,200	26,620	29,282	32,210	35,431
Roads	0	40,000	40,000	40,000	40,000	40,000	40,000	40,000
Vehicles	0	10,000	11,000	12,100	13,310	14,641	16,105	17,716
Fencing	0	60,000	66,000	72,600	79,860	87,846	96,631	106,294
Buildings-other	0	27,500	30,250	33,275	36,603	40,263	44,289	48,718
Fuel	24,000	19,856	23,827	28,593	34,311	41,173	49,408	59,290
<i>Salaries</i>								
General manager-overall	150,000	165,000	181,500	199,650	219,615	241,577	265,734	292,308
General manager-farm	72,000	79,200	87,120	95,832	105,415	115,957	127,552	140,308
Marketing and IT	50,000	84,000	92,400	101,640	111,804	122,984	135,283	148,811
Accounting and administration	50,000	84,000	92,400	101,640	111,804	122,984	135,283	148,811
Wardens	150,000	396,000	435,600	479,160	527,076	579,784	637,762	701,538
Gardeners	0	52,800	58,080	63,888	70,277	77,304	85,035	93,538
Guards	72,000	184,800	203,280	223,608	245,969	270,566	297,622	327,384
Reception (3)	0	105,600	116,160	127,776	140,554	154,609	170,070	187,077
Curio shop	0	39,600	43,560	47,916	52,708	57,978	63,776	70,154
General labour (5)	120,000	82,500	90,750	99,825	109,808	120,788	132,867	146,154
Transportation of game	50,900	0	6,000	0	0	0	0	0
Vet expenses	40,000	100,000	100,000	50,000	55,000	60,500	66,550	73,205
Insurance	60,000	250,000	275,000	302,500	332,750	366,025	402,628	442,890
Consultancy fees, legal, and other	100,000	50,000	226,720	282,748	319,332	94,872	110,605	129,226
Auditing fees	0	40,000	44,000	48,400	53,240	58,564	64,420	70,862
Marketing and administrative	60,000	350,000	680,160	848,244	957,997	284,616	331,816	387,678
Electricity	10,000	24,000	26,400	29,040	31,944	35,138	38,652	42,517
Water	0	24,000	26,400	29,040	31,944	35,138	38,652	42,517
Telephone	10,000	24,000	26,400	29,040	31,944	35,138	38,652	42,517
Land levy	37,100	37,100	37,100	37,100	37,100	37,100	37,100	37,100
Total Other Operating Costs	1,056,000	2,349,956	3,042,107	3,407,815	3,776,983	3,124,828	3,458,703	3,832,045
Profit Before Tax	(1,056,000)	5,641,095	11,453,142	10,355,893	13,508,202	7,819,450	10,034,389	12,802,673

Source: Windhoek Nature Reserve.