

**TOURIST HUNTING
AND IT'S ROLE IN DEVELOPMENT OF
WILDLIFE MANAGEMENT AREAS
IN TANZANIA**



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FOREWORD

This document presents issues relating to the Tanzanian tourist hunting industry, many of which are not well understood outside of the world of hunting. The lack of understanding is largely a result of the reluctance on the part of industry to reveal the facts and also due to a lack of critical data. Some parts of this document are therefore not based upon empirical facts, but are necessary because few reliable facts are available. This document further presents some opinions, some of which may offend some players in the industry. Hunting by its very nature attracts criticism, as it is a sport that stirs emotions, not to mention that it is highly lucrative. Any opinions, both for and against the industry are thus naturally provoking. Based on the facts available, the authors of this document offer informed opinions in an attempt to reveal a rational and holistic picture of the Tanzanian tourist hunting industry as it stands today.

This study is motivated by three necessities:

1. Hunting will be one of the major income earners for many Wildlife Management Areas as soon as the benefit sharing is approved by the Treasury as has been proposed by the Wildlife Division. Revenues generated from hunting must therefore be optimised to ensure that as much as possible can be accrued by the communities through the benefit sharing schemes.
2. In its first Public Expenditure Review for the Environmental Sector the Vice President's Office demands the various sectors, including wildlife, to capture revenue potentials and real market value of environmental products and present more data.
3. The terms of reference for the Saadani Conservation and Development Project included, amongst others, to provide assistance in: (i) improving the administration of revenue in the Wildlife Division, in particular to critically analyse the flow of revenue and propose improvement; (ii) creating a database for wildlife utilisation. Much of this has already been achieved, and this study is the last output under this project, which has since come to an end.

It is intended that this document will be constructive towards promoting better practices and management of the tourist hunting industry thus making the industry better able to achieve the following objectives:

- To maintain biodiversity in the areas where tourist hunting is practised;
- To safeguard the sustainability of use and secure long-term revenues;
- Make an increased contribution to the Tanzanian Government, the industry itself and the economy;
- Provide increased revenue to local communities and thus make significant and tangible contributions to poverty reduction.

This document takes a clear stand on promoting the consumptive use of wildlife, as otherwise many areas would lose their wildlife.

This document has initially been based on an internal GTZ document prepared by Vernon Booth, and has further developed from an analysis and understanding of the tourist hunting industry, particularly within the Selous Game Reserve.

EXECUTIVE SUMMARY

Tourist hunting in Tanzania has developed over a long period and is now a well established industry and a principle source of income for vast areas of the country. The industry has demonstrated an impressive growth in recent years and is an important source of foreign exchange to Tanzania. However very little information is available on the industry and many aspects are shrouded in secrecy.

The Wildlife Division of the Ministry of Natural Resources and Tourism has developed a command system of control that favours a select group of hunting outfitters with reduced income generation and the exclusion of communities who are the legitimate holders of the land upon which hunting takes places. Concessions are leased at rates far below the true market value, which represents a massive loss of income to the Wildlife Division (possibly US\$7 million or more). Most of the concessions are leased to local companies that do not have the capacity to market their hunting opportunities. A system of subleasing mostly to foreigners without any residence status in Tanzania has thus developed. Hunting is subleased at low rates and as a result much of the income that is now generated by the industry never enters Tanzania and the Tanzania Revenue Authorities are unable to access much of the funds that should be due for taxation. Outfitters are billed for their hunting activities in a manner that they are shielded from financial risk by the Wildlife Division, and are able to accrue significant amounts of interest (estimated in excess of US\$ 1 million) that should be going to the Government.

The Wildlife Policy formulated in 1998 describes the development of Wildlife Management Areas (WMAs) that are managed by the local communities. Tourist hunting is the landuse option that will provide the major source of funds for WMAs. However the development of WMAs is seriously delayed and there is still no effective schedule for sharing of benefits from tourist hunting with the local communities on whose land hunting takes place. Outfitters are required to contribute towards protection and support local communities, but these requirements are vaguely set in a manner that they cannot be effectively evaluated. As a result most companies do mere window dressing. There is a general hesitation among outfitters to accept the WMA concept and effectively empower local communities. It is possible that much of the delay in development of WMAs is the result of negative high-level influence by some hunting outfitters.

There is a general lack of will to improve the tourist hunting industry, and one can only speculate on the reasons why. The lack of will is demonstrated in the following:

- There is a poor level of control. Hunting concession boundaries are not respected and hunting takes place in areas specifically designated for non-hunting purposes, and hunting is frequently listed as taking place in areas other than where it actually happens, despite direct supervision by Wildlife Division staff.
- Some concessions show extremely high levels of utilisation that are not sustainable, but offtakes are within quota set by the Wildlife Division.
- Initiatives to effectively computerise the control of hunting and bring greater transparency have twice been disregarded and a cumbersome manual system of issuing and checking permits is continued. The number and variety of animals hunted annually is far greater than can be manually evaluated. As a

result, hunting quota utilisation is not clear and effective management of quota is not possible with the current system.

- Ecosystem monitoring has fallen into disarray, and once reliable trends in wildlife populations are no longer available, yet the Wildlife Division has requested an increased leopard quota from CITES and announced that it intends to increase the elephant quota. Distrust from the international community is bound to increase without effective supporting ecological data.
- There is a lack of standards in the private sector. Ethics are not maintained and there is no internal control or training of professional hunters. Many young inexperienced hunters are nevertheless authorised as professionals to guide foreign clients.
- A policy and management plan for tourist hunting was developed by the Wildlife Division in 1995. This was signed and accepted by the Director of Wildlife but has never been implemented, possibly because it shows the way for comprehensive reform of the tourist hunting industry which includes introducing competition and incorporating communities as decision-makers with access to significant funds generated from hunting.

The current system of controlling tourist hunting cannot continue much longer. International pressures will grow and will force change where it is needed. Pressures from within Tanzania will also demand change. Pressures from above are already coming from the Vice President's Office, while widespread demands among the numerous grassroots communities are building. To retain control, the Wildlife Division needs to be proactive through implementing effective reform of the tourist hunting industry, but this is only possible if:

1. Effective market-based competition between outfitters is introduced, i.e. outfitters bid competitively against each other for concessions;
2. Control of subleasing is implemented, which may come naturally through effective market-based competition;
3. Local communities are the principal decision makers for allocation of concessions and quota setting for hunting on their land, and they receive and manage the funds generated on their land.

All this will be achieved by implementing the Policy and Management Plan for Tourist Hunting.

This paper introduces a new concept of certification of the tourist hunting industry as a means of setting standards, in a similar manner to international certification concepts developed for the management of natural forests.

TERMINOLOGY

Big game - Lion, leopard, buffalo and elephant

CITES - Convention on International Trade in Endangered Species of fauna and flora:
An international treaty to control the trade of species, including the transfer of hunting trophies considered to be threatened by international trade

Client - A person paying a hunting outfitter for the for the organisation and conduct of a hunting safari

Concession - An area of land that the Wildlife Division leases together with a hunting quota to companies authorized to guide foreign hunting clients on a hunting safari, frequently referred to as a Block.

Daily fees - The daily rate paid by a hunting client to an outfitter for the right to hunt and services provided.

Game controlled area (GCA) - An area of land that was previously gazetted to prohibit all forms of hunting. The law however makes no restrictions on other forms of land use and local communities are allowed to permanently reside within a game controlled area.

Game reserve - An area of land gazetted as game reserve and under the full jurisdiction of the Wildlife Division. No human habitation is permitted within a game reserve. Game reserves are utilised for various forms of tourism, which includes tourist hunting.

Government revenue - Used in this document to reflect the income accrued by the Wildlife Division from hunting. Does not necessarily reflect income accrued by the Government through various forms of taxation

Gross hunting revenue - The total revenue generated from tourist hunting that includes the income accrued by the Wildlife Division, Government taxation, and revenue to the private sector.

Hunting safari - A hunting trip taken by a foreign client to hunt in Tanzania

Open area (OA) - An area of land without any form of conservation status and no restrictions on human habitation or other forms of land use. Such areas may be leased by the Wildlife Division as a hunting concession.

Outfitter - A person / company responsible for offering a hunting safari to a hunting client. The outfitter provides a camp, 4x4 vehicle, employs a professional hunter, trackers and camp attendants to serve the needs of hunting clients and is responsible for general organisation.

Plains game - Larger mammals on the schedule of game (see Appendix 1) that can be hunted but not including big game

Trophy fees - Fees paid for the right to hunt a specific animal. Government trophy fees are according to the schedule of trophy fees (Appendix 1)

Wildlife Division - A Department of the Ministry of Natural Resources and Tourism (MNRT) with the mandate to manage wildlife outside of the national parks and Ngorongoro Conservation Area.

Wildlife management area (WMA) - An area of village land where the wildlife resources are managed by the local community which has the status of an Authorised Association conferred by the MNRT

1. INTRODUCTION

Tanzania has over 130 hunting concessions covering an area in excess of 200,000 km² that are leased to hunting outfitters licensed to conduct tourist hunting. More than 60 species can be hunted on a tourist-hunting license. Tourist hunting plays an important role in the majority of these areas, as many of them are unsuitable for other forms of eco-tourism. They are either too remote or do not support highly visible wildlife populations. In addition, these areas are unable to compete with prime game viewing areas such as the Serengeti National Park. Tourist hunting therefore is the most economically viable form of wildlife utilisation and plays an important role in the economic development of many remote areas. Without the income generated from tourist hunting, many important wildlife areas would cease to be viable.

Annual income to the Wildlife Division from its concessions is approximately US\$ 10 million. The Tanzanian hunting industry compares favourably with other hunting industries in Africa. However, the country should be able to take the lead in the industry with the available resources and the amount of big game hunting opportunities. Income generation for the Wildlife Division by the Tanzanian Hunting Industry is largely dependant on trophy fees, i.e. on the number of animals hunted. Previous attempts to improve income generation have been focussed on increasing quotas and thus increasing hunting pressure. Although on the whole hunting is sustainable, there are many concerns being raised that selected key species, such as lion may be over-hunted and that quotas in some areas may not be sustainable.

This study assesses the performance of the tourist hunting industry to identify its strengths and weaknesses, and investigates where changes are required for the industry to move forward and fit new trends in the development of wildlife management areas.

1.1 Development of the Tanzanian Tourist Hunting Industry

The regulations for hunting in Tanzania have evolved over the last 115 years. In the 1920s when wildlife was widespread and plentiful, the sport hunter was given a generous quota on his annual license, comprising 268 animals of 39 species (including 2 rhino), which he/she could shoot in any area except in the game reserves, as so well portrayed by Hemingway (1935). Tourist hunting was established as a viable industry and much was achieved by the elite East African Professional Hunter's Association in the 1930s and 1940s in improving the standards of training and codes of conduct for professional hunters.

Hunting declined during the Second World War, but in the late 1940s, as economies recovered and travel became easier, the number of hunting parties to East Africa increased rapidly. With a staff of just the game warden, four game rangers and 33 game scouts in 1951, the Tanganyika Game Department was hard pressed to cope, and two important measures were introduced to control hunting. The first was to make hunting more expensive by attaching a fee to each animal shot. The second was to increase the number of game controlled areas (GCAs), where the hunting was either totally prohibited, or allowed only on a special request basis. During the 1950s some 90 GCAs were declared, some to preserve important wildlife areas, like the vast

Inyonga GCA of 9,000 km² in Western Tanzania, others consisting merely of a no-hunting zone around a dam to protect wildfowl.

In 1959 the national parks and Ngorongoro were given their own laws and Boards of Trustees (both became parastatal authorities in the 1970s, as TANAPA and NCAA respectively). By 1960, national parks and game reserves covered 13% of Tanganyika, the forest reserves a further 14%, and the GCAs (many of which overlapped with forest reserves) covered 8%. However, the GCAs have little conservation meaning today, because there is no restriction on settlement within them. With ever increasing demands for land, they have become settled and in many (such as the GCA in which Kilimanjaro International Airport is located) the wildlife has disappeared altogether.

In the years following independence in 1961, the Game Department opened up the GCAs to regular hunting to increase earnings from wildlife. In 1965, for the first time, tourist hunting was permitted in the game reserves, starting with the vast Selous Game Reserve, which was divided into 47 hunting blocks in a system designed by Nicholson. However, the political changes that took place in Tanzania in the early 1970s led to a complete ban on sport hunting in 1973. That year, 75 game officers, representing almost the entire senior staff were transferred out of the Wildlife Division. Underlying reasons for this drastic action was also to nationalise the industry and tourist hunting was reopened in 1978 under control of the Tanzania Wildlife Corporation (TAWICO), a government parastatal. Hunting was conducted in fewer areas than today, due to the limited capacity of TAWICO, and also in the dire economic climate in the early 1980s it was difficult for outfitters to operate in the remote hunting blocks. Few hunting records survive from the TAWICO era.

In the 10 years following the lifting of the hunting ban in 1978, the Selous Game Reserve again became the focus of licensed elephant hunting, under the general supervision of TAWICO. During the mid-1980s some 70-90 elephants were shot per year in the reserve, mostly by clients of a consortium that to this day retains a virtual monopoly on elephant hunting in Tanzania. What was probably one of Africa's last 100 pounders was shot in the Selous Game Reserve in 1986, but by 1987 it became clear that under the enormous impact of poaching, the reserve had virtually no large elephants remaining. In 1988, massive corruption and incompetent management by TAWICO was evident, and the management of hunting was removed from them and placed once again with the Wildlife Division.

In 1988/89 the Tanzania Government, with support from the GTZ funded Selous Conservation Programme, launched a massive antipoaching operation (Operation Uhai) as a joint exercise between the Wildlife Division, TANAPA, the police and the army. As a result of this action, and the coincident ivory trade ban, poaching in Tanzania, particularly in the Selous Game Reserve was reduced to low levels.

Since 1988 the industry has shown substantial growth. A number of changes were introduced, notably the increase in private sector safari outfitters and some funds generated from the wildlife sector channelled to local communities. In addition, the fee structure was overhauled. A former comprehensive daily fee of US\$ 400 was reduced to US\$ 100 while permit, observer, trophy handling and block fees were introduced. These amounts, together with trophy fees are shared between the

Government, the Tanzania Wildlife Protection Fund (TWPF), Retention Schemes and District Councils.

Subdivision of concessions

Changes have been made to many of the hunting concessions originally established according to the layout of the old GCAs. During the 1990s many concessions were subdivided into up to 4 parts. Many of these former concessions were vast and far greater than could be utilised as a single concessions (some up to 9,000 km²). This trend will have to stop as few vast concessions now remain. When concessions were split, the original quota have usually been applied to each of the subdivisions, thus vastly increasing the quota of the original area. However, the original quota were usually set at levels of offtake that can be achieved by an operator from a single hunting camp. Quota are adjusted annually and with time substantial differences from the original quotas develop. The setting of quota is discussed at length later in the document.

Development of protected areas

Tanzania has the greatest network of protected areas in Africa. These include game reserves, game controlled areas, national parks, Ngorongoro Conservation Area, forest reserves and recently the development of wildlife management areas. Marine Parks are established offshore. A new Wildlife Act is in preparation and shall include new categories for protection of wetlands and game corridors.

Considerable evolution of the protected area network continues to take place. Some of the important developments in the past decade include the current transition and expansion of Saadani Game Reserve into Saadani National Park. Katavi National Park has been extended and Rukwa and Lukwati Game Reserves gazetted to replace the flooded Uwanda Game Reserve. Kimisi Game Reserve has been gazetted to extend the Burigi Biharamulo Game Reserve complex. Liparamba, Swaga Swaga, Msanjesi and Lukwika-Lumesure Game Reserves further extend the game reserve network. New hunting blocks are being established, while others are becoming redundant.

Available literature on the hunting industry

There was a lack of policies, plans and data to guide the management of the tourist hunting industry, which led to the initiation of the Planning and Assessment for Wildlife Management Project (PAWM) in 1990. This USAID sponsored programme was designed to tackle key planning issues at a national scale with the overall aim of promoting the sustainable development of the wildlife sector. PAWM undertook a comprehensive analysis of the tourist hunting industry and compiled a database for computerisation. The Wildlife Division, with support from the PAWM, compiled a Policy and Management Plan for Tourist Hunting (attached as Appendix 8). This management plan was signed and accepted by the then Director of Wildlife, but has never been implemented.

In 1996 an audit of the entire hunting system and the Tanzanian Wildlife Protection Fund (TWPF) was done by Broomhead at the request of the Wildlife Division with funding from GTZ. This was a comprehensive study in which a computerised system for the entire hunting industry was developed, with an emphasis on the financial management. The support included the provision of computers, advanced software and training of personnel. The system was intended to improve transparency of hunting and prevent the manipulation of quotas, but was never implemented by the

Wildlife Division. Excuses given at the time were that computer generated receipts would not be legal. Reports presented by Broomhead (1997) do however provide a precise indication of the revenues received by the Wildlife Division at that time.

In 1999 a Microsoft Access database was developed at the request of the Selous Game Reserve to get an overview of the hunting there. This was developed by Cauldwell with support from GTZ. It was a low cost initiative, but has been maintained and analysed and through this process has evolved into an effective monitoring tool for the hunting that takes place in the entire Selous ecosystem. Hunting permits, quota and trophy quality data are entered and the database provides an overview of the income generation, utilisation of quota and species, trophy quality, comparison of hunting companies and experience of professional hunters. A recent analysis of the Selous hunting and photographic tourism data from this database by Cauldwell is presented in Appendix 9. Hunting in the Selous Game Reserve represents approximately 35% of the tourist hunting in Tanzania. Lessons learned from hunting data of the Selous Game Reserve should be applicable to the hunting industry in Tanzania and outcomes of this analysis are therefore widely used as background material to this paper.

Computerisation of hunting permits from the Moyowosi, Burigi and Ibanda ecosystems has also been initiated. Booth (2002) analysed an early version of the above Access database which contained hunting data (1986 – 2001) for the Game Reserves in the Kagera Region, i.e. Burigi, Biharamulo, Ibanda and Rumanyika Game Reserves as a component of the management plans of those reserves. These Game Reserves were heavily influenced by the refugee influxes from neighbouring Rwanda and Burundi following the unrest in those countries, which adversely affected the wildlife populations and the hunting. The report nevertheless gives many useful insights into the industry.

1.2 Management and Administration of Tourist Hunting

The various hunting concessions are distributed throughout the country either in Game Reserves, Game Controlled Areas or Open Areas (Fig 1). The Wildlife Division leases the concessions to hunting outfitters that fulfil the requirements defined in a set of hunting regulations (within Appendix 8) and who have been authorised to guide foreign clients on big game hunting safaris. Each concession is allocated a quota of animals that can be hunted during the season (July to December). The quotas may be adjusted annually for a variety of reasons (see further discussion below) and a single outfitter can be allocated more than one concession. Concessions are leased on a five-year tenure, however there is no guarantee that a concession will be re-allocated to the same operator. Nevertheless some operators have held concessions in excess of 25 years.

Allocation of concessions

The existing system of awarding hunting concessions by the Wildlife Division entails companies submitting their applications to the Wildlife Division, which are screened according to the following criteria:

- Company legal status
- Type of venture (local, foreign or joint venture)
- Capital and working equipment commitment.

An Advisory Committee on Block Allocation appointed by the Minister of Natural Resources and Tourism evaluates the applications and provides recommendations to the Minister for approval. The Director of the Wildlife Division is both the Secretary to the Advisory Committee and advisor to the Permanent Secretary of the Ministry of Natural Resources and Tourism. Concessions are not allocated according to a transparent market-driven system.

Once allocated a concession, the outfitter is required to pay all the necessary fees, and apply for hunting permits for clients that intend to visit the area. The outfitter is also required to enter into an agreement with the Director of Wildlife that outlines the responsibilities of the government and the outfitter. The outfitter must abide by the wildlife laws and is expected to contribute to antipoaching, road construction and community development. These criteria are only vaguely defined. A professional hunter licensed by the Wildlife Division must guide clients on the hunt. The conditions of lease require the leasing outfitter to pay a prescribed Block Fee of US\$ 7,500 /year. They also undertake to utilise the wildlife on quota to generate revenue not less than 40% of the value of the total quota allocated. Failing to do so, the outfitter is required to make a top-up payment to the Wildlife Division to meet the 40% minimum. The allocation of concessions and the implications thereof are further discussed in Section 2.5.

Conditions of a permit

A gazetted schedule of trophy fees sets the price in US dollars for every type of animal that may be hunted on a foreign hunting license (see Appendix 1). A minimum safari length and rifle calibre is specified depending on the species to be hunted. Based on these criteria a hunting permit is issued authorising the client to hunt a selection of animals. After completing his/her safari, the client must return the hunting permit indicating which animals have been killed and/or wounded. The game scout that accompanied the safari verifies the Hunting Permit as being correct and an invoice is raised by the hunting office billing the client for the animals hunted. On receipt of the trophy fees payment and a trophy-handling fee, an export license is issued allowing the client to take his/her trophies home. (Legislation relating to hunting is explained in greater detail in Appendix 8)

Fees payable for tourist hunting

The following schedule of fees is payable by the tourist hunter and hunting operation:

Item	Requirement	Cost
Permit fees	For a hunting safari up to 7 days	US\$450
	For a hunting safari more than 7 days	US\$600
Conservation fee	Daily fee per tourist hunter	US\$100
Observer fee	Daily fee per person accompanying a tourist hunter	US\$50
Trophy handling fee	For a hunting safari up to 7 days	US\$200
	For a hunting safari more than 7 days	US\$300
Block fee	Annual fee per concession payable by the hunting company	US\$7,500
Professional hunters license (annual)	Professional hunters resident in Tanzania	US\$1,000
	Professional hunters non-resident in Tanzania	US\$2,000

CITES restrictions

CITES Appendix I restrictions are applied that limit the numbers of elephant (50), leopard (500) and crocodile (100) hunting trophies that can annually be exported from Tanzania and imported into other countries signatory to the CITES agreement. Tanzania recently requested the CITES secretariat for a raise in the leopard quota and was granted an increase from 300 to 500 animals per year. Tanzania similarly intends to request an increase in the quota for elephant trophies from 50 to 100 per year. During final preparation of this report, the issue of whether to include lion onto CITES Appendix 1 was hotly debated.

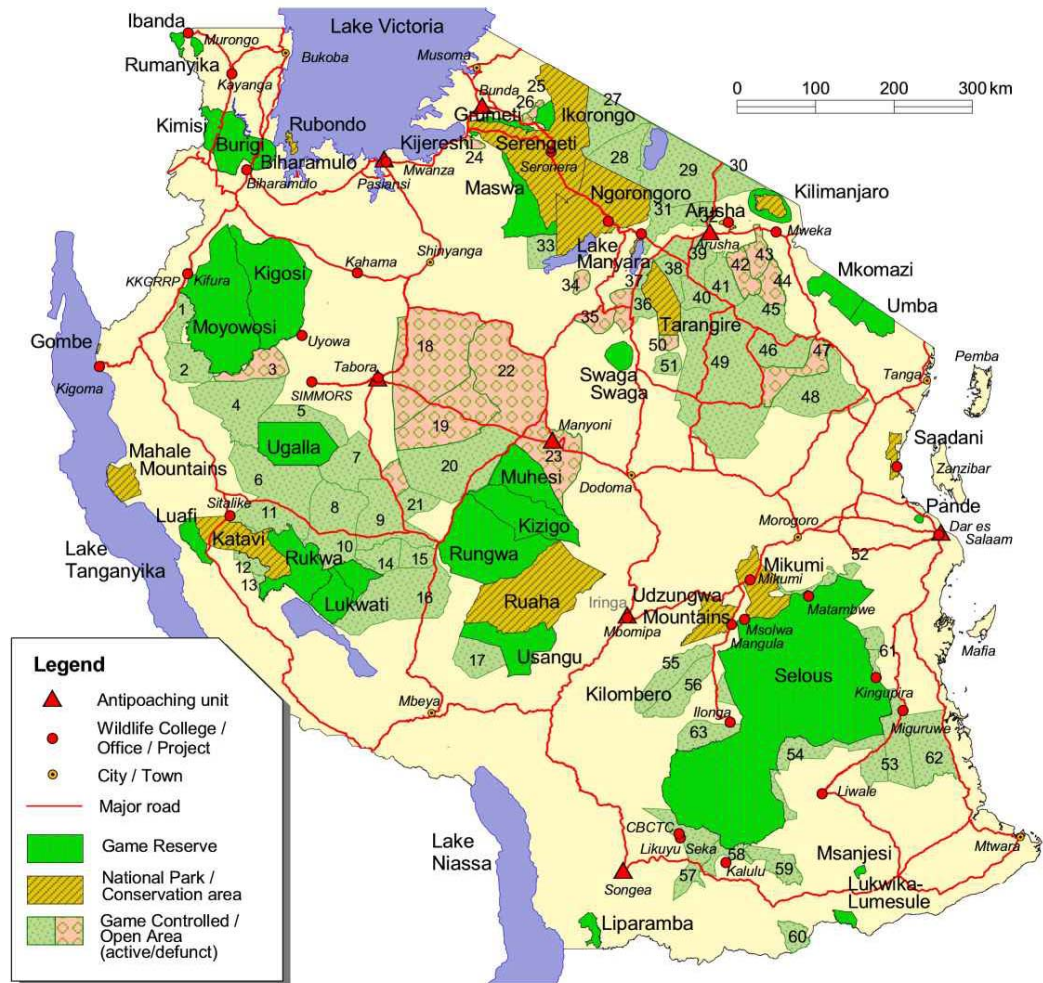
For CITES Appendix I listed animals, the hunting client must bring a certificate from the CITES authorities in the country where he/she intends to export the trophy stating that they will allow this person to import such a trophy. A hunting permit is then issued to the client (a special permit in the case of an elephant). Once hunted, a CITES export permit and a CITES trophy tag are issued by the Wildlife Division. The number of trophy tags available to the Wildlife Division is controlled by CITES.

Length of safari

The Wildlife Division offers 21-day, 16-day, 14-day and 7-day safaris (see Appendix 1). Elephant, lion, leopard, hippo and a variety of large antelope (greater and lesser kudu, eland, puku, gerenuk, oryx, sable, sitatunga and roan) are only available on 21-day safaris. Bushbuck, bushpig, dik dik, duiker, hyaena, oribi, reedbuck and waterbuck can only be hunted on a safari of 14 days or more, while 7-day safaris are solely for buffalo and variety of plains game (hartebeest, warthog, gazelles, impala, topi, wildebeest and zebra). Three buffalo can be hunted on a 21 or 16-day safari, whereas two buffalo can be taken on a 10 or 7-day safari. A 21-day safari allows the client the greatest flexibility to choose his/her hunting bag, and is thus the most popular safari, although few clients will stay the full length or hunt the full bag permitted. The marketing strategies for wildlife are further discussed in Section 2.8 and Appendix 4.

Resident hunting

Resident hunting is allowed in Tanzania but is restricted to open areas. Resident hunting permits are issued by District Game Officers for their own district. Applicants must have residence status and present proof of legal gun ownership. Permits are issued for a variety of common game species such as impala, hartebeest, topi, buffalo and game birds. Permits are not issued for rare and valuable species such as elephant, lion, leopard, hippo, sable, roan, sitatunga and a wide variety of other species. Two fee structures are applied, for Tanzanian citizens and residents respectively. The fees are low and the income generated from resident hunting is minimal and provides no economic return to the areas where resident hunting takes place. Consequently there is no effective management of these areas. There is equally no effective supervision of resident hunting and abuse of the system is common. Over-shooting of permits occurs widely and wildlife populations in areas where resident hunting is frequently conducted have been dramatically reduced. Few reliable data are available on resident hunting, what data exist do not adequately reflect the actual situation. This paper does not dwell on the issue of resident hunting.



Open areas (OA) and game controlled areas (GCA)

Western Tanzania

- 1 Makere Forest
- 2 Uvinza OA
- 3 Gombe GCA
- 4 Luganzo GCA
- 5 Ugalla OA

- 6 Msima GCA
- 7 Ugunda GCA
- 8 Inyonga West GCA
- 9 Inyonga East GCA
- 10 Rungwa River GCA
- 11 Mlele North GCA

- 12 Mlele South GCA
- 13 Lake Rukwa GCA
- 14 Piti West OA
- 15 Inyonga East
- 16 Chunya OA
- 17 Utengule Swamp OA

- 18 Wembere OA North
- 19 Wembere OA Central
- 20 Wembere OA South
- 21 Itulu Forest East
- 22 Singida OA
- 23 Manyoni OA

Masailand

- 24 Maswa OA
- 25 Nyichoka OA
- 26 Sibora OA
- 27 Loliondo GCA
- 28 Loliondo South GCA
- 29 Lake Natron GCA
- 30 Longido GCA

- 31 Mto wa Mbu GCA
- 32 Monduli Juu
- 33 Maswa Makao
- 34 Yaeda Chini OA
- 35 Lake Balangida
- 36 Babati OA
- 37 Burunge

- 38 Lolkisale
- 39 Simanjiro West
- 40 Simanjiro Kitangare
- 41 Simanjiro Naberra
- 42 Simanjiro East
- 43 Sanya Lelatema
- 44 Ruvu Same

- 45 Ruvu Masai
- 46 Kitwai North
- 47 Kitwai Central
- 48 Kitwai South
- 49 Masai OA
- 50 Mkungunero
- 51 Kondoa OA

Selous / SE Coastal

- 52 Gonabis / Jukumu WMA
- 53 Liwale OA North
- 54 Liwale OA South
- 55 Kilombero GCA North

- 56 Kilombero GCA South
- 57 Namtumbo WMA
- 58 Tunduru WMA
- 59 Sasawara Forest

- 60 Tunduru Forest
- 61 Tapika OA
- 62 Kilwa OA North, Central & South

- 63 Mahenge OA South

Figure 1: Protected Areas, wildlife infrastructure, game controlled and open hunting areas of Tanzania

2. PERFORMANCE OF THE TOURIST HUNTING INDUSTRY

2.1 Overview of Total Income

The primary measure of performance of the Tanzanian tourist hunting industry is the income generated, and how this is split between the Wildlife Division and the private sector. However minimal literature is available to get an overview of these amounts, and estimates are made here from what data are available.

The following overview provides a realistic estimate of the magnitude of the industry as well as its growth over the past years. The methods used to calculate these figures are explained in Appendix 3. Figures are confirmed by Kibebe (1994), Kitwara (1996), TAHOA (1999) and Pasanisi (2001).

Year	Revenue accrued by Wildlife Division			Gross income from hunting industry All hunting areas
	Selous Game Reserve		All hunting areas	
	Income	% growth		
1988	US\$ 1,000,000 *		US\$ 1,200,000 ¹	US\$ 4,600,000 **
1992	US\$ 1,600,000 *	60%	US\$ 5,300,000 **	US\$ 13,900,000 **
1996	US\$ 2,600,000 *	62%	US\$ 7,400,000***	US\$ 19,400,000 ¹
2001	US\$ 3,600,000 *	38%	US\$ 10,500,000 ¹	US\$ 27,600,000 ¹

Sources of data: * Appendix 9; ** PAWM (1995); *** Broomhead (1997); ¹ Appendix 3

An alternative method using the Selous hunting data for 2001 as a basis is used to calculate the gross income generated by the industry and provides a similar result to the above estimates (see Appendix 3). It is estimated that approximately 20,500 hunting days are sold annually to 1,370 clients, generating a gross income for the industry of over US\$ 30 million from daily rates. In addition, many of the leasing companies have up to 40% mark-up on the trophy fees thus generating an additional US\$ 8.5 million.

By comparison to the above figures, Hurt and Ravn (2000) estimated that the minimum revenue of the tourist hunting industry in Tanzania in 1995 was approximately US\$ 30 million (see table below). They arrive at this figure based on a hypothetical situation where 30 hunting companies fully utilise 80 concessions, which can be regarded as quality areas. Of these revenues, 45% would accrue to the safari outfitters and 41% would accrue directly to the Wildlife Division with the balance going towards other service providers.

Full use of 80 Blocks = 676 clients	Revenue	%
Client safari fees @ US\$20,000/client	US\$13,520,000	45.2
Government fees @ US\$6,300/client	US\$4,258,800	14.2
Trophy fees @ US\$12,000/client	US\$8,112,000	27.0
Air charters @ US\$3,000	US\$2,028,000	6.8
Miscellaneous (curios, hotel etc)@ \$3,000/client	US\$2,028,000	6.8
Minimum gross revenue	US\$29,946,800	100%

The figures of Hurt and Ravn (2000) were calculated for the year 1995 and are therefore very optimistic in comparison to the figures presented above. Their figures were calculated from a hypothetical situation and possibly represent the potential that

the hunting industry could have generated at that time given optimal conditions, suggesting that a 50% increase in funds is possible.

The figures calculated in Appendix 3 compare well with the figures of Hurt and Ravn (2000). While the industry is generating a substantial income, there appears to be a 40-50% scope for improvement. The Tanzanian economy and tax revenue could benefit a great deal with improved management and better control of the hunting industry, particularly regarding subleasing as discussed in Section 2.5.

Basic facts on the hunting industry

Some basic facts that demonstrate the performance of the tourist hunting industry in Tanzania are presented below:

- Trophy fees represent 60% of the income generated by the Wildlife Division from hunting (Fig. 2)
- Average income to the Wildlife Division per hunting client is approximately US\$7,000
- Income generation in the Selous Game Reserve has grown on average by 13.7% per annum from 1988 to 2001. Income from trophy fees and conservation fees has grown by 14% and 17.5% respectively.
- Income generation per unit area from all hunting areas of Tanzania is approximately US\$ 40 / km². Hunting income per unit area for the Selous Game Reserve (SGR) is approximately US\$ 70 / km²
- Photographic tourism in the Selous Game Reserve generates approximately US\$ 130 / km² prior to a recent expansion of the area. Photographic tourism in the SGR generates nearly double the income than does hunting tourism in the same reserve, but at over 50 times the tourist density per unit area. The impact of photographic tourism through off-road driving, fuel spillages & waste disposal, disturbance of wildlife, need for infrastructure, presence of support staff etc certainly exceeds the impact of a limited offtake of wildlife through hunting.
- The number of hunting clients visiting the Selous Game Reserve has grown by nearly 400% from 1988 to 2001. Income generation has however grown by a lesser 250% over the same period, despite an increased utilisation of concessions. Income generated by the Wildlife Division per hunter day has remained static at approximately US\$520 per hunter day.
- 141 concessions are leased to 42 companies, however 32 groups of companies exist. 51 concessions (36%) are leased to the 3 largest groups.

2.2 Comparison Against Other Sport Hunting Systems in Southern Africa

A comparison of the approximate gross income against other sport hunting industries in southern Africa is provided below.

Country	Approximate Gross Income	Comments
Tanzania	US\$ 27.6 million	See discussion above
Zimbabwe*	US\$ 22 million	Mixture of “big game” hunting and game ranching/farming. Represents the highest amount obtained which was achieved in 1998. The Industry has since been in decline.
Botswana*	US\$ 15 million	“Big game” hunting reliant on WMAs. Considerable community involvement.
Namibia*	US\$ 5 million	Reliant on “Plains Game” hunting. Private sector driven but with limited big game hunting opportunities.

* Source of data: TRAFFIC, 2001

The size of the South African tourist hunting industry is uncertain and is therefore not listed in the above table. That industry has many local sport hunters and it is not easy to distinguish these from foreign hunters. However, the true tourist hunting industry there is certainly valued considerably higher than the Tanzanian tourist hunting industry. The industry in South Africa is largely private sector driven which has the advantage that they can respond rapidly to market fluctuations. Furthermore, the South Africa hunting is managed for maximum profits, with many private ranches having no predation and with minimal poaching. (It also has a vibrant game ranching industry with over 20,000 animals sold at live auctions in 2003). Tanzania however has the advantage of far greater wildlife resources over South Africa.

Botswana hunting industry

An economic analysis of the Botswana sport hunting industry (ULG, 2001) demonstrated its positive contribution to national development criteria, especially in promoting development, employment and economic opportunities in remote areas. The turnover of the industry in 2000 was estimated at US\$ 15 million. Of this turnover, 47% is generated from daily fees, 35% from trophy income and the balance from other levies, tips, curio sales etc. ULG (2001) concluded that the per capita contribution of hunting in the districts where the hunting is conducted is worth more than 10 times the per capita contribution of the industry to Botswana as a whole. Patterns of spending indicated that government (central and local) received 23% of all expenditure by the industry while support services (accommodation, accounting, advertising, air charter etc.) cost 18% of total expenditure. Payments to communities accounted for 15% with the balance accruing to management remuneration, commissions, profits, capital services and supplies.

Zimbabwe hunting industry

An analysis of the Zimbabwe sport hunting industry for the period 1984 – 2000 showed that gross revenue (Daily rates + Guest non-hunting Rates + Trophy fees) steadily increased from US\$ 2.1 million in 1984 to US\$18,5 million in 2000, peaking at US\$ 22 million in 1998 (WWF, 2002). The split between daily rate and trophy fees was 59:41, placing an emphasis on the right to hunt (i.e. daily rates) rather than shooting of animals.

General

During preparation of this report the following hunting-related issues are noted elsewhere in East and Southern Africa:

- Political consequences in Zimbabwe have virtually brought the hunting system there to a standstill;
- Botswana has banned the hunting of lion;
- The Zambian Wildlife Authority has brought about major upheavals into the leasing of concessions in attempts to control corruption;
- Arguments rage in Uganda and Kenya on whether or not to allow tourist hunting.

2.3 Breakdown of Income

The breakdown of total Wildlife Division revenue generated from hunting in the Selous Game Reserve according to the components permit fees, conservation fees, trophy fees and block fees was averaged for the years 1996 to 2001 and is presented as a pie chart in Figure 2.

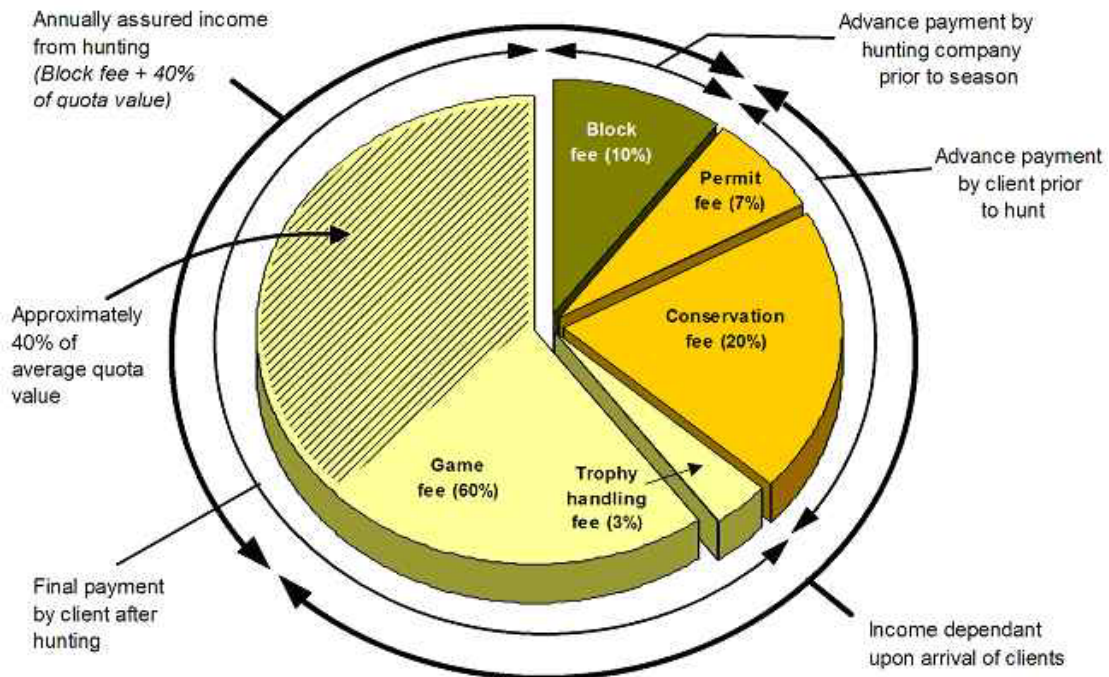


Figure 2: Breakdown of hunting income in the Selous Game Reserve paid to the Wildlife Division (see also Appendix 9)

Tourist fluctuations and reliability of income

The companies leasing blocks are legally required to utilise at least 40% of the value of the quota failing which they must pay the Wildlife Division the shortfall. The Wildlife Division is therefore assured of receiving the block fee (representing 10%, see Fig. 2) plus 40% of the annual quota, which in reality represents approximately 36% of the total Wildlife Division revenue (averaged from 1996 to 2001 of the Selous

hunting data). The guaranteed annual income to the Wildlife Division is therefore: $36\% + 10\% = 46\%$. The remaining 54% is dependant upon the arrival of hunting clients, which is influenced by fluctuations in tourist demand and the marketing strategies used by the leasing companies. The Wildlife Division therefore carries a risk of losing up to 54% of its average income depending on global stability and the operational efficiency of the companies leasing concessions. There is a significant annual fluctuation in the number of hunting tourists coming to Tanzania. In Appendix 9 it is shown that local and international terror attacks have caused dramatic drops in the number of tourist hunters. The fluctuation between the maximum and minimum number of hunting clients visiting the Selous Game Reserve from 1996 to 2003 represents 26% of the average number of clients over that period (see Appendix 9).

Dependence on trophy fees

The dependence of the current hunting system on income from trophy fees (60%) is clearly evident from Figure 2. As a result, the hunting system requires an increased offtake of animals to boost income. As a conservation agency, the Wildlife Division should be striving towards increasing the conservation and reducing the offtake of wildlife. This does not necessarily imply non-sustainability within the hunting system, but both sound conservation and economic principles would require that the maximum benefit should be achieved from the minimum offtake.

Payment schedule

Under the current system, the outfitters are only required to pay the Block fee (US\$7,500) in advance (only 10% of their payments to the Wildlife Division). The remainder of the funds are paid only after their clients arrive: 27% when the hunting clients arrive and purchase a permit, but the bulk (63%) is paid at the end once hunting season is completed and accounting work has been finalised, the deadline for this payment being 30 April. On the other hand, the outfitters typically demand a 50% advance payment of the daily fees by their clients on booking a safari 6 to 8 months prior to the hunt. The remainder of the daily fees must be paid in full at least 2 months prior to the hunt. Interest accrued by the industry on this amount probably exceeds US\$1 million per annum. The outfitters also encourage their clients to take out insurance against cancellation of a hunting safari, as refunds are normally not considered. The hunting outfitters therefore take minimal risk of loss of income.

The current financial system with the major income based on trophy fees does not encourage other forms of income generation within the concessions, for example fishing or photographic tourism. Indeed companies are not even allowed to engage themselves in other income generating activities.

Effects on the hunting system

The net result of the current hunting administration strategies adopted by the Wildlife Division is that it has been structured to favour a select group of hunting companies for the following reasons:

- The Wildlife Division assumes the greater proportion of risk on behalf of the outfitters, shielding them from fluctuations in tourist demand;
- Their selection criteria, fixed concession fees and exclusion of other activities protect their selected companies from competition on the open market;
- There is little pressure brought to bear on the outfitters to bring clients to Tanzania because the fees due to the Wildlife Division from the outfitters are so low;
- The fee structure allows companies to accrue significant amounts of interest.

A better system is outlined in Annex 8: Management Plan for Tourist Hunting, where the emphasis of income generation (greater than 60%) is on daily fees and lease of concessions. Such payments would be payable to the Wildlife Division at an earlier stage thus shifting the financial risk to the outfitters. Performance of leasing companies must be assessed on total income generated from a concession (including the lease). Such a system would also reduce the emphasis on offtake of animals and encourage other forms of income generation. At the same time, financially marginal companies would be discouraged.

2.4 Income Generation per Concession

The analysis of the Selous hunting data highlighted the differences in income generation capacity of the various blocks in the Selous Game Reserve. The highest earning concession yielded US\$108,000 per annum for the Wildlife Division compared to the lowest earning concession with US\$29,000 per annum for the Wildlife Division. This difference was attributed to a number of factors such as accessibility and/or wildlife densities. However, the analysis drew attention to the impact of block size. Larger concessions in the southern sectors of the reserve generated lower incomes than smaller concessions in the north. Based on income generation per concession, areas in the Selous could be grouped as heavily utilised, optimally utilised and under-utilised (Appendix 9).

The 2003 hunting data from the Wildlife Division for all of Tanzania were plotted on graphs showing total income per company and income generated per block. The most severe case of over-utilisation occurs in Loliondo Block in Northern Tanzania leased by Ortello Business Corporation (Appendix 9).

Gross annual income of the outfitters / company from hunting in the Selous Game Reserve over the period 1990 to 2001 was estimated from the hunting data and the results presented in the table below.

Company category	Estimated gross annual turnover	Estimated average income per concession
Pasanisi / Barlett / TAWISA / Holland & Holland Group	US\$ 3,470,000	US\$ 450,000
Other companies not subleasing	US\$ 460,000	US\$ 175,000
Companies subleasing	US\$ 115,000	US\$ 47,000

The companies leasing hunting concessions can generate substantial income, but there are big differences in income between companies. The real reasons that bring about these differences are brought about by the marketing strategies of the leasing companies.

Outfitter marketing strategies

The outfitters that lease the larger more productive concessions use their marketing strategies to take advantage of the rigid government pricing structure. Such outfitters deliberately under-utilise their quota, which reduces their payments due to the Wildlife Division as well as their running costs, while at the same time their reduced offtake allows them to offer a highly exclusive product at high prices. These

companies generate their profits by maximising the income generated per client. The system further works in their favour as their reduced offtake provides them with lower subsequent quota allocations and consequently less pressure to perform. These outfitters are often influential with senior government.

The opposite of this scenario are those leasing companies offering cheaper safaris and thus utilise their concessions heavily to generate the necessary turnover. Their high levels of utilisation lead to higher quota allocations, which further encourage over-utilisation. These companies tend not to hold concessions for as long a period as the more exclusive outfitters. In addition, these companies are not competent in marketing their hunts directly and thus do not develop a sufficient client base of their own and therefore tend to sublease their hunting to wandering professional hunters and/or other operators. Those persons finally involved in the actual hunting activities have little or no commitment to the area or for their own reputation and are most often the persons that bring the industry into disrepute.

The above text describes a simple model for opposing strategies of companies that lease hunting concessions. In reality there is a full spectrum of strategies that complete the range between these opposing sides, but the situation can be best described as comprising 3 discrete groups, those exclusive outfitters, a moderate group that strive for a balance between their own profits and offering an ethical hunting product, and the fly-by-night types that attempt to maximise profits from minimal investment and maximum tax evasion.

2.5 Subleasing, Value and Allocation of Concessions

Subleasing of concessions occurs widely in the hunting industry in Tanzania. The Wildlife Division has implemented an affirmative action policy aimed at increasing the ownership of companies leasing concessions by Tanzanian nationals. A concession is leased by the Wildlife Division at a fixed rate of US\$ 7,500 per year. Many of the local leasing companies do not have the capacity to market their hunts internationally and are not able to secure clients. They therefore sell their quota to professional hunters or companies with clients, referred to here as wandering professional hunters (usually of foreign origin). The leasing company is usually responsible for providing a camp in the concession. These facilities and the right to a hunt is normally sold to the wandering professional hunters at US\$ 600 to US\$ 700 per day depending on whether a hunting vehicle is provided. The wandering professional hunters however bill their clients between US\$ 1,500 and US\$ 1,800 per hunting day.

Taxation

The leasing company is responsible for paying all Government fees and is liable for taxation by the Tanzanian Revenue Authority (TRA). Virtually all of these wandering professional hunters are foreigners, some do not register with the Wildlife Division and enter Tanzania on tourist visas together with their clients. These hunters bill their clients in foreign currency overseas and the bulk of the income paid by their clients never enters Tanzania (estimated to represent up to 30% of the gross value of the tourist hunting industry). Some of these wandering professional hunters do not even pay professional hunter fees. Evidence of this is in pamphlets offered by outfitters advertising hunting in Tanzania, but their companies and professional hunters do not

appear in the statistics. There is strong reason to believe that the major part of these funds are never taxed, which could only be possible if the TRA are not given access to the quota allocations of the Wildlife Division that stipulate the minimum income requirements expected from concessions. It is clearly difficult for TRA to regulate the income lost through subleasing as it is not open and transparent. The only option to clarify this issue is for the Wildlife Division to implement effective control of the subleasing, and to collaborate and share data with the TRA.

Vague basis for allocation of concessions

There is no true market-based competition between companies as concessions are leased at a fixed rate to selected companies, however there appears to be an intense struggle between the current group of outfitters for recognition by the Wildlife Division for the allocation of concessions. Allocation of concessions is according to a command system, but it is not clear what criteria are used as a basis for the allocation. Some vague requirements are outlined in a Consensus of Agreement on the allocation of concessions between the Minister, the Permanent Secretary and the Tanzanian Hunter's Association whereby outfitters are expected to contribute towards protection and community development. But these requirements are so vague and un-objective that they cannot be measured effectively. The Consensus of Agreement stipulates that the renewal of concessions will be automatic where an outfitter fulfils the vague set of conditions. There have been cases where this agreement has been taken to court and decisions of the Director of Wildlife on the allocation of concessions, backed up by the Minister have been overruled.

Holding of concessions

In 2003, the Wildlife Division allocated the 141 hunting concessions to 42 outfitters in Tanzania (Appendix 2). One group of companies under common ownership (Gerard Pasanisi, Barlette Safaris and Tanganyika Wildlife Safaris with a total of 20 concessions) controls 35% of the concessions in the Selous, plus additional concessions in open areas adjacent to the Selous (Wildlife Division, 2002). The Tanzanian Game Trackers Safaris – Wengert Windrose Safaris Group is increasing the number of concessions that are leased and currently holds 15 leases. The Tanzania Big Game Safaris, Tandala Hunting Safaris, Tanzania Safaris and Hunting Group is another significant player in the industry holding 16 leases.

Duration of lease

Outfitters regularly bring up the issue that short leases issued by the Wildlife Division is a major obstacle to their investment and care of their hunting areas. Ensuring a secure lease for a sufficient period of time is a key issue towards improving the standard of hunting. Insecure leases have been a problem in the past, analysis of the Selous hunting data reveals that during the period 1993 to 1995 there was a great deal of uncertainty regarding lease of concessions, however from 1996 there has been a much improved continuity in the lease, and the level of continuity has continuously increased up to 2003 (see Table 6: Appendix 9). Also a number of outfitters have retained their concessions for longer than 25 years.

A solution to many inherent problems discussed in this document is to establish the true market value of hunting and particularly the lease of concessions. Concessions are currently leased for a 5-year period. In economic terms this is a long time to issue a lease, and extending beyond that would have detrimental effect on establishing the market values for concessions.

Value of concessions and hunting companies

The analysis of the Selous hunting data reveals a wide range in the income generated from concessions, with the highest earning concessions generating 4 times the income of the lowest earning concessions. The willingness of outfitters to lease lower potential concessions at the current rates strongly suggests that a considerably higher lease is possible from the concessions with higher potential.

In some instances entire concessions are subleased and there is reliable evidence that these are leased at values up to 20 times (in excess of US\$130,000 per annum) the rate at which they are leased from the Wildlife Division. There is unsubstantiated evidence that rents of up to US\$200,000 per annum are possible from some of the highest potential hunting concessions. Clearly the current fixed rate of US\$7,500 per annum is a gross under estimate of the value of concessions.

Outfitters are able to sell their companies at high prices. Evaluation of a company sold recently indicates that the market value of a concession lease (after deduction of fixed and movable assets) was conservatively estimated at US\$ 50,000 per annum. The demand for concessions is high and they are certainly valued commercially at not less than US\$ 150,000 to US\$ 200,000 per 5-year lease.

The value of a hunting company is therefore determined essentially by the allocation of concessions which is done through political decision, and common sense implies that each outfitter is wise to make every effort to influence the process. A market-based allocation would dramatically alter the situation to one where companies are valued on sound economic principles rather than the subjective discretion of a few individuals.

2.6 Priority Species for Income Generation

Analysis of the Selous data confirms the importance of buffalo, leopard and lion to the tourist hunting industry. These three key species are responsible for generating 42% of the trophy fees for the Wildlife Division. Buffalo are by far the most important species contributing 22.1% (representing 13.3% of the total Wildlife Division income). This species is being heavily hunted with approximately 1.5 animals shot per client that visits the Selous. Clearly the viability of the Selous, and much of Tanzania as a prime-hunting destination depends on maintaining a healthy buffalo population.

Of concern however, is that the data suggests there is a general decline in the numbers of lion and leopard being hunted per year (only 1 in 5 clients takes a lion trophy), and approximately 40% and 63% of the lion and leopard quota are utilised respectively. These data alone suggest that the quotas are too high. The data also shows that increasing numbers of buffalo, wildebeest and zebra are being hunted each year, which could be a reflection of the pressure on outfitters to meet the 40% rule while faced with declining lion and leopard hunts.

Hunting of elephant

Performance of elephant hunting towards income generation has been low with 1 in 11 clients visiting the Selous taking an elephant trophy, and elephant contribute 7.6%

of trophy fees for the Selous Game Reserve. However the past years have seen a rapid increase in the numbers of elephants hunted. In 2001, only 1 in 15 clients hunted an elephant. Elephant hunting is concentrated in the greater Selous Ecosystem and few elephants are hunted elsewhere. Low elephant offtakes are due to the restrictions imposed by CITES. Tanzania suffered heavy elephant poaching in the eighties, which caused a serious decline in elephant populations. Old bulls carrying large ivory were targeted in this poaching and very few remained. To encourage recovery of elephant populations, CITES listed elephants on Appendix 1 and restricts the number of trophies for export from Tanzania to 50 animals. To limit the offtake and keep within the CITES requirements, the Wildlife Division does not list elephants in the quota for hunting concessions. Instead special elephant permits are issued and strict minimum size trophy requirements are imposed, whereby the largest tusk must have a minimum of 1.7 m length or weight of 20 kg. This regulation has served well and elephant populations have recovered in many wildlife areas of Tanzania. The carrying capacity for elephants has been reached in some areas, such as the Selous Ecosystem and crop raiding in the village areas around the Selous has become a serious problem. These areas are regaining a reputation for prime elephant hunting, and in another 10 years there will be a multitude of elephants in the 70-pound trophy category. There is however inadequate monitoring of populations making the situation difficult to demonstrate.

Hunting outfitters stress that there is a strong demand from tourist hunters for elephant trophies. The importance of elephant hunting in Tanzania is certainly going to increase and changes to the current system are needed. The CITES quota should be increased in accordance with the population increase and it is felt that the minimum trophy standards should be adjusted. Elephants should be placed on the hunting quota for the areas where good trophies are available. Recommendations for changes in the regulations of elephant hunting are further discussed below in Section 2.8: Pricing Structure and Trophy Fees.

2.7 Quota Setting

Monitoring efforts of Tanzania's wildlife populations tend to concentrate in and around national parks and Ngorongoro Conservation Area. Most areas managed by the Wildlife Division, which include most of the country's hunting blocks, are not subject to any regular population monitoring, with the exception of the Selous Game Reserve.

Developing an ecological basis for setting quota is not easy. It is extremely costly to conduct regular aerial surveys countrywide. Furthermore, aerial surveys are unable to provide data for key species such as lion and leopard and do not provide consistently reliable trends of buffalo populations. The current tourist hunting industry depends on the offtake of these 3 species. Aerial census data provide only trends in various animal populations and the method alone therefore does not provide sufficient information for setting quota for any species. To derive scientific estimates for lion and leopard populations for small areas requires detailed study over several years at least. It is clearly not feasible to accurately estimate populations for all hunting areas. It is doubtful that a truly scientific basis for setting quota will ever be developed in the complex multi-species ecosystems in Africa. Instead the cumulative experience of setting quotas over many years that relies on several verifiable indicators (population

estimates, trophy quality, age, abundance, offtake levels etc.) that can demonstrate little or no significant detrimental impacts on the wildlife populations provides the bench mark that allows for the confidence of setting future hunting quota through an adaptive management approach.

The Wildlife Division's capacity to implement an adaptive management of quota is questionable. Approximately 7,500 animals representing up to 60 species are hunted annually in over 130 blocks. Analysing past records to evaluate quota utilisation is an enormous undertaking, yet the Wildlife Division has twice not accepted attempts to assist computerisation of the system. While computers are widely used as glorified typewriters, there is no computerised analysis in place. The situation would be very different if the computerisation initiatives of PAWM (USAID) and Broomhead (GTZ) had been implemented and allowed to evolve through regular use. The shortage of data and lack of objectivity in managing offtake by the hunting industry will in future lead to a mistrust from the international community.

Trends in trophy quality (and age of animals harvested) provide a useful indicator of the sustainability of hunting on a population if trends are available over a reasonably long period. Unfortunately no organised system of monitoring trophy quality has yet been put in place. There are data available since 1999 from the Selous Game Reserve, and the first results are included in Appendix 9.

The approach used by the Wildlife Division to allocate quotas is to rely on the knowledge of Project Managers and District Game Officers who suggest quotas for the Game Reserves and Game Controlled and Open Areas respectively. Aerial survey data are taken into account (where available) together with past hunting records and recommendations of professional hunters and outfitters.

As described earlier, there is a tendency for outfitters to be allocated their required hunting quotas, particularly those exclusive and influential outfitters who tend to demand lower quotas. The less scrupulous outfitters tend to request higher quotas, which are readily granted as these bring, increased income to the Wildlife Division. There are also allegations by some hunting outfitters that quotas are increasingly raised regardless of the population status, and this is done deliberately so that the Wildlife Division accrues greater income from the 40% quota utilisation requirement. Some concessions have been subdivided into four quarters yet the original quota has been maintained for each quarter, thus effectively quadrupling the quota of the original area. Some people allege that the Wildlife Division is purely a financially driven organisation, however this is countered by the fact that hunting has been abandoned in some areas (e.g. Mkomazi, Saadani Game Reserves, outskirts of Kilimanjaro) for protection of the wildlife and greater ecosystems.

Sale of quota

An idea currently supported by some wildlife officers is that outfitters should be required to purchase the entire quota (100% as opposed to 40%) at the start of the season regardless of whether the animals are hunted. This idea goes against the management plan for tourist hunting (Appendix 8). A very real danger with this approach is that unscrupulous outfitters could develop the notion that all animals on the quotas are theirs, and having paid for them, may as well shoot them. Outfitters would offer many hunts free to clients as a marketing strategy (shoot a lion and get a

leopard free), and utilisation of species such as lion, leopard and buffalo, which are already heavily hunted, would increase dramatically. Such an approach would further increase the income generated from game fees, which will have an increasingly detrimental impact on wildlife populations. This paper takes a strong stand opposing this approach!

Lion quota and hunting

There is concern by many people that lion quotas are too high. In the Selous Game Reserve on average only 52% of the lion quotas have been used since 1996. Lion trophy fees are high at US\$2,000 per animal therefore increasing the number of lion on quota greatly increases the quota value and is the easiest means of applying pressure on the hunting operators to increase revenue.

Whitman *et. al.* (2004) have used field data and careful modelling to demonstrate that harvesting only lions of 6 years and older (which can be determined from nose colour) is not harmful to a normal lion population. A relatively high offtake is possible provided no young lions are removed and the quality of trophies would be much improved. Their results imply that strict adherence to offtake of only old animals would make quotas for lions obsolete. They speculate that applying similar principles to other species would contribute towards the sustainability of hunting. Based on their results and external pressures to uplist lion at CITES, the Wildlife Division is considering to a system of discouraging the export of lion trophies from animals less than 6 years old. The method of ageing trophies prior to issue of export documents is not yet clear, but this is a step towards better management of the lion population in the country.

A few professional hunters have tried this technique but found that it is difficult to assess the nose colour of live lions while hunting them. Frequently light is poor and the lions are usually too far from the hunters to clearly assess their age from nose colour. Also hunters believe there is too much variation between lions, with some old lions having pale noses, and the reverse might also be true. Experienced professional hunters find skull structure, in particular skull width, to be a good indicator of age on a live adult male lion. Unfortunately few professional hunters have this level of experience.

The Wildlife Division imposes a minimum requirement for leopard trophies whereby the body length (excluding the tail) must equal or exceed 1.3 meters, and this age criterion for lions is thus not an entirely new concept to the hunting industry. Minimum trophy sizes are also applicable to elephants. The minimum requirement for leopards is easily met, with the average body length of animals hunted in 2001 being 2 meters (Games & Severre, 2002). A minimum 6-year age requirement for lion trophies will present a far greater challenge to the hunting industry.

Impacts of hunting

There is unsubstantiated evidence from professional hunters that trophy quality and age of key species such as buffalo has declined in the last five years in some key areas. Many hunting outfitters also admit that it is becoming increasingly difficult to hunt good lion trophies. Many outfitters are now restricting the numbers of lion hunted in their concessions to encourage an increase in the available lion trophies despite high quota allocations. Some operators are imposing their own tight standards

on the age and quality of lion trophies taken, but others are over-shooting their quotas and taking young animals.

A few species, such as lion are being affected by trophy hunting, however the vast majority of species are unaffected. Wildlife populations have declined in many areas of Tanzania, but this is attributed to increased settlement and illegal offtake of bushmeat. There is no evidence that the regulated tourist hunting industry has contributed to the general decline of wildlife populations, but there is plenty of evidence that the presence of a regulated hunting industry contributes significantly to reducing the illegal activities of poachers and provides an economic incentive to protect vast areas.

2.8 Pricing Structure and Trophy Fees

The fees charged and the number of days required for hunting various animals is based on the gazetted schedule of fees (Appendix 1). This is effectively the marketing system used by the Wildlife Division. The disadvantage of this gazetted schedule is that it is rigid and adjustments to the trophy fees need to be made with Ministerial approval and are thus difficult to achieve. To increase income, the easiest option to the Wildlife Division has therefore been to increase the quota settings for some concessions thereby forcing the shooting of more animals.

The rigid marketing system creates difficulties for the outfitters (as discussed in Appendix 4). The numbers of many species that can be hunted is controlled by the quota allocations, and offtake is actually forced by the 40% utilisation requirement. Many species require a 21-day permit to be hunted (e.g. hippo, sable, roan, klipspringer), however the numbers of hunts that an outfitter can sell effectively depends on the number of lion, leopard and buffalo trophies available in his concession and on the quota. Outfitters are not able to bring clients at the costs of hunting in Tanzania to take a 21-day license to shoot an antelope, and thus these trophies become difficult to market.

In most cases the numbers of other species are higher and are mostly sufficiently abundant to be unaffected by the levels of tourist hunting offtake.

Trophy fees for tourist hunting were gazetted in 1991 and have not been amended since. As a result, the trophy fees charged (in US\$) for some key species are significantly lower than that applicable elsewhere in the region as shown in the table below:

Animal	Trophy fees (US\$)			
	Tanzania	Zimbabwe	Botswana	Zambia
Elephant	4,000	9,000	19,000	-
Lion	2,000	3,420	5,500	2,750
Leopard	2,000	2,000	4,100	1,750
Buffalo	720	1,680	2,500	1,000
Zebra	590	680	1,000	600
Sable	1,200	2,000	-	2,700
Hartebeest	370	1,000	-	650
Waterbuck	440	1,200	-	1,000
Wildebeest	320	600	950	650
Impala	240	120	400	100
Warthog	320	175	300	300

In Tanzania three buffalo are available on a permit at increasing prices:

1st buffalo – US\$ 600; 2nd buffalo – US\$ 720; 3rd buffalo – US\$ 840

Tanzania is therefore offering three key animals at a price similar to one animal in Zimbabwe or Botswana. As a result buffalo are being heavily hunted in Tanzania. Income generated for the Wildlife Division is heavily dependant on buffalo hunting and raising the fees for buffalo will have a big impact on the industry. A proposal has been submitted by some of the outfitters (Mantheakis & Oelofse 2003) proposing a more flexible approach to the marketing, while urging strongly that trophy fees should not be raised. This proposal (Appendix 4: Optimisation Proposal) claims it can improve the quota utilisation for lesser species and reduce the emphasis on the main species of lion, leopard and elephant.

Fees and restrictions on elephant hunting

There is consensus that elephant fees are far too low. Tanzania has been required through CITES restrictions to limit trophy hunting of elephant to not more than 50 animals per year. The Wildlife Division has achieved this by imposing a high minimum trophy size limit. Problems have arisen with under-sized elephants being shot, which is due to various reasons: i) the low trophy fee whereby professional hunters and their clients are willing to face a possible penalty for the sake of getting their elephant trophy; ii) a high demand for elephant trophies which is currently not being met; and iii) inexperienced professional hunters misjudging the ivory on live elephants. Raising the trophy fee considerably would facilitate enforcement of the regulations and adherence to CITES limits.

Outfitters have proposed an increase in elephant fees through imposing an additional ivory tax of US\$ 50 per kg that is above the minimum limit (Rohwer 1998). The Selous Conservation Programme (1999), referred to as SCP, presented a more comprehensive proposal in which the minimum requirement for elephant trophies should be relaxed and the fees should be raised, but that the fees should be based on trophy size according to the following criteria:

1. Only bulls must be hunted
2. Minimum trophy size should be thirty (30) pounds (all weights given refer to the largest tusk and are given in English pounds as this is the traditional measure for elephants; current limit of 20 kg = 44 pounds)
3. If a bull under thirty (30) pounds is shot, the price should be US\$ 10,000.

4. An elephant between thirty (30) and fifty (50) pounds costs US\$ 8,000.
5. An elephant between fifty (50) and seventy five (75) pounds should cost an additional US\$ 100 for every pound over fifty (50) pounds.
6. An elephant over seventy five (75) pounds should cost US\$ 10,500 plus an additional US\$ 200 for every pound over seventy five (75) pounds.

The SCP (1999) proposal raises the elephant trophy fees considerably higher than the proposal of Rohwer (1998) as shown in the table below. An even higher fee structure than the SCP proposal could be possible. Systems must be simple, practical and enforceable. Experiences from a similar approach to elephant hunting in Zimbabwe were that such systems are cumbersome to administer, and they eventually set a single limit at a fixed price. Experience generally in Tanzania shows that complicated systems do not work.

Weight of largest tusk		Rohwer (1998)	Selous Conservation Programme (1999)
Pounds	Kilogram		
30	13.6	-	US\$ 8,000
50	22.7	US\$ 4,150	US\$ 8,000
75	34.1	US\$ 4,700	US\$ 10,500
80	36.3	US\$ 4,800	US\$ 11,500

The SCP proposal further recommends that systems should be developed to include the control of crop-raiding elephants (including female animals) into the tourist hunting industry. This concept is further discussed below under the heading Problem Animal Control.

Consideration should be given to endemic species and those species not easily hunted elsewhere, in which the Tanzanian hunting industry has an effective monopoly. These should be offered at a high cost. Such species (and current trophy fees) include:

Animal	Current price	Proposed price
Gerenuk	US\$ 1,300	US\$ 2,000
Sitatunga	US\$ 900	US\$ 1,500
Lesser kudu	US\$ 1,300	US\$ 2,000
Roosevelt's Sable	US\$ 1,200	US\$ 2,000

While some increases to trophy fees are justified, large crosscutting increases are not recommended. The Tanzanian hunting industry is already heavily dependent on trophy fees, and emphasis needs to be shifted towards daily fees and concession lease fees. Raising trophy fees is therefore not the recommended solution. A simple comparison of the ratio between trophy fees and daily fees for various countries is presented below:

Country	% Trophy Fees	% Daily Fees
Tanzania	60	30 *
Botswana	35	47
Zimbabwe	41	59

* Includes permit fees and trophy handling fees as these are directly related to the number of clients

Problem Animal Control

The SCP proposal on elephant hunting discussed above further recommends that systems should be developed to include the control of crop-raiding elephants (including female animals) into the tourist hunting industry. This seems a logical solution to a chronic situation that becomes an ever-greater problem as wildlife populations increase in response to better protection. The involvement of tourist and professional hunters has also been proposed by the hunting fraternity on many occasions. The problem relates not only to elephants, but also to a range of animals that are considered dangerous game such as lion, crocodile, and to a lesser extent buffalo, hippo and leopard and even lesser crop raiding animals such as baboons, monkeys and bushpigs. The problem relates not only to crop-raiding, damage to property and loss of livestock, but more severely to injury and loss of human life. In Tanzania approximately 200 people are killed by wildlife every year. Man-eating lions are a serious problem in Tanzania particularly in the south east, with approximately 30% of cases of wildlife-related loss of life attributed to active predation by lions (Balduş 2004). Killing sprees even occur where troublesome individuals or prides of lions develop a particular taste for human flesh.

The authors are conscious that incorporation of problem animals into tourist hunting can lead to problems. The system opens opportunity for abuse to shoot animals under the guise of problem animal control, and erodes the importance of quota setting. Experiences show that the elimination of man-eating lions is extremely difficult, sometimes taking up to 2 years of diligent effort to locate and despatch these animals in the village areas. Incidence of man-eating correlates with rainfall, with most cases occurring during the rainy season when wildlife is dispersed and the widespread tall grass seems to give the lions greater confidence. Use of tourist and commercial professional hunters in these areas for a variety of reasons is simply not an option.

Compensation is a difficult and politically sensitive topic, and is not considered within the scope of this document, save to say that some consideration should be given towards establishing a fund from dangerous animals hunted that is used as a means of compensation for seriously injured persons and instances where there has been some loss of life. Loss of life cannot be compensated, but a compensation fund generated from hunted dangerous game could be used as a means of reducing the occurrence of problems, for example strengthening of people's houses in affected areas and providing safe access to water. The following levies is being proposed (Balduş 2004):

Dangerous game	Compensation fee (US\$)	Approximate number hunted	Estimated Income (US\$)
Lion	1,000	250	250,000
Elephant	1,000	50	50,000
Leopard	500	300	150,000
Buffalo	100	2,000	200,000
Hippo	100	160	35,000
Crocodile	100	170	17,000
Total			702,000

3. TOURIST HUNTING AND WILDLIFE MANAGEMENT AREAS

Wildlife Policy

The concept of Wildlife Management Areas (WMA) in Tanzania has evolved from experience in the field. The development of the concept in Tanzanian legislation has been slow with the first drafts appearing in the National Wildlife Policy in 1996. At that time, it was envisaged that the WMAs would replace many Game Controlled Areas or Open Areas as shown in the following extract from the Wildlife Policy (1998):

“Wildlife Management Areas (will be created) in place of Game Controlled Areas where the private sector will be encouraged to set up joint ventures with village communities to utilize wildlife. Furthermore, those village communities and landowners (will be allowed) to manage their wildlife and to retain all benefit from such utilization schemes. In return, the owner or lessee of the land will have to abide by certain regulations governing the development of agriculture and livestock”.

The objectives of the Policy clearly demonstrate that it is the government’s intention to support wildlife development in rural areas outside the protected areas. On Wildlife Protection, the policy objectives are:

“To promote the conservation of wildlife and its habitats outside core areas (NPs, GRs & NCA) by establishing WMAs;”

“To transfer the management of WMA to local communities thus taking care of corridors, migration routes and buffer zones and ensure that the local communities obtain substantial tangible benefits from wildlife conservation;”

When referring to Wildlife Utilisation, the policy objectives state:

“To ensure that wildlife is appropriately valued in order to reduce its illegal offtake and encourage its sustainable use by rural communities;”

“To create an enabling environment which will ensure that legal and sustainable wildlife schemes directly benefit local communities;”

The Wildlife Policy (1998) was welcomed across the country as it presents the ideals of community involvement and participation in the management of wildlife on village land through the creation of WMAs. The policy falls short of identifying the pitfalls and explaining the finer details of how these ideals are to be achieved, however it is not necessarily the role of the policy to identify how it is to be implemented. Rather, there is a distinct lack of will to implement the policy.

Previous achievements

Much has already been achieved in the field of community wildlife management in Tanzania. Most notably are the successful community conservation schemes around the Selous Game Reserve developed with support from GTZ. These schemes give much of the responsibility of day-to-day management duties to the communities, such as basic monitoring and protection. In return the village natural resource committees are allocated a quota of common wildlife species that can be harvested so that the

meat can be sold at nominal rates within the village. Wildlife populations in these areas have grown over the duration of these initiatives and some of the best elephant hunting in Tanzania takes place in these areas.

WMA regulations

With a liberal Wildlife Policy, the Wildlife Division has been required to develop and implement the concept of WMAs. But it was only after much deliberation and discussion that the regulations detailing the procedures to be followed for the establishment and management of WMAs were released at the end of 2002. These regulations list 16 pilot areas in Tanzania where the concept of WMAs will be tested over a three-year period (2003 – 2005). A number of applications for establishment of WMAs within these pilot areas have been submitted to the Wildlife Division, but by mid 2004 the actual step of formally establishing the first WMA has yet to be taken.

The above regulations for this pilot testing phase do not place any real control of the WMAs in the hands of the communities as was first envisaged when the Wildlife Policy was compiled. It is widely known that hunting will be the major source of income for the WMAs, but scrutiny of the regulations reveals that the Wildlife Division will retain full control over the appointment of outfitters to hunt the WMAs, and what they are allowed to hunt by controlling the quotas.

Communities and tourist hunting

As discussed earlier in this document there is an intense struggle for recognition by the Wildlife Division between hunting outfitters, and there is the good, bad and dishonourable among them. This document also reveals that the revenue generated from tourist hunting is considerable, actually enormous in comparison to most rural village economies, most of which are absolutely destitute.

Many rural villagers will work a day's labour for the minimal amount of TZS 600 (US\$0.50 – 0.60). In comparison many foreign hunters will pay a daily rate of US\$ 1,500 or more per day for the privilege of luxury style hunting. This equates to 6 years of hard manual labour, 7 days every week, to the poor villager. Thrusting such people into a situation where they must negotiate big business deals with some of the most indiscriminate businessmen of the business community would be disastrous at this stage (There is already evidence of corruption between village leaders and hunting outfitters in some of the areas identified as pilot WMAs). This explains why the Wildlife Division has retained full control over the outfitters and their quota allocations over this pilot-testing phase.

Yet the fundamental issue remains, the WMA land belongs to the communities and they must be involved in the process of appointing outfitters and must receive an equitable benefit from the proceeds generated from their land. Experiences elsewhere in Africa show that communities can learn the necessary skills and a staged development of community empowerment is required (*Child in prep*). A Management Plan for Tourist Hunting (Appendix 8) was developed by the Wildlife Division which presents a generous formula for sharing of benefits between the communities, district councils and the Wildlife Division. In the long term there will be a win-win situation for all sides and provide scope for growth of the industry if this basic ideal can be achieved.

Hesitation of hunting outfitters

Many of the outfitters leasing concessions are opposed to the concept of WMAs being introduced into Tanzania. The outfitters who have secured leases for concessions are afraid of change. They fear they might lose what they have and that costs will rise. As shown earlier, the Wildlife Division prevents alternative forms of income generation and concessions are therefore reserved for hunting outfitters, and they are protected from competing against other forms of wildlife tourism. This paper also shows how the Wildlife Division carries much of the financial risk for the outfitters. If there is a drop in tourists visiting the country, the Wildlife Division will shoulder the greatest loss. The Wildlife Division has further fixed the costs at which the outfitters lease concessions, thereby shielding them from their own natural market forces. The introduction of the WMA concept will incorporate the communities into the decision-making role regarding wildlife utilisation and the outfitters will need to start negotiating with many new players in the industry. Many more competitive outfitters will be able to enter the market and they will need to compete on the open market against other wildlife related tour operators. It is therefore not surprising that so many of the current select group of outfitters are opposed to the threat posed by the introduction of WMAs.

A few of the forward-looking outfitters are entering into dialogue with the communities and engage in small-scale social upliftment projects. However, most companies do mere 'window dressing' and are not taken to task, as the requirements set by the Wildlife Division are particularly vague in this regard. Hunting outfitters, and indeed many tourist providers want it to be their privilege to decide when and how to engage with communities without having the need imposed upon them. They prefer a paternalistic approach rather than a true empowerment of the communities to manage the wildlife. This approach will have to change as the communities become more experienced in dealing with outfitters.

A competition for space is emerging between hunting and photographic outfitters in Masailand in northern Tanzania. Photographic tour operators have the advantage of not needing exclusive access rights to vast areas and are infringing into some of the game controlled areas. The Wildlife Division is currently opposed to this trend and acts in the interests of the hunting outfitters. This power base will change with effective implementation of the WMA concept.

4. PROBLEMS ASSOCIATED WITH TOURIST HUNTING

A number of problems are known to exist within the tourist hunting industry. Many of these are explained below. Problems are listed with the intention of encouraging discussion and developing solutions. Responsibility of finding solutions however, rests with the Wildlife Division.

Inadequate control

There are inadequate control mechanisms applied by the Wildlife Division and as a result corruption appears to have become ingrained into the primary means of control of hunting, i.e. game scouts supervising the actual hunt. The differences between the government game scout salaries and the fees paid by foreign hunting clients is tremendous resulting in a situation where the game scout is easily bribed.

- There is little effective control from the game reserve offices. Senior wildlife officials seldom go on field visits and many hunting persons do not report to the local wildlife offices, and total control in most cases is reliant upon a game scout.
- Many outfitters tolerate and even encourage a corrupt practice of clients tipping the game scout at the start of a hunting safari in return for 'no problem safaris'.
- Overshooting of permits does occur and trophies are discarded in the field, in such cases only the better trophies being declared and exported.
- Hunting permits do not list the presence of observers and not all outfitters are honestly declaring the presence of observers in their hunting camps.
- Very few wounded animals are declared. Very few hunting clients have proper hunting experience and many professional hunters lack the necessary skills. Even the best hunters occasionally lose wounded animals, and something is certainly fishy if outfitters declare less than 10% wounded animals lost. Statistics from the Selous hunting database reveal that a wounding rate of only 1.5% is declared.

Professional hunters not professional

- Too many professional hunters are simply not competent to hunt big game in Tanzania. This lack of competence ranges from inadequate handling of large calibre firearms, inadequate field experience and ignorance of relevant Tanzanian law. The problem occurs because there is no certification of competence for professional hunters in Tanzania. A written examination is required at present, but the standard of this exam is disgracefully low and does not do justice to the industry.
- A fundamental problem is that there is nobody or organisation in Tanzania who could certify their competence. As a result the Wildlife Division issues only provisional professional hunters licenses. Legally there are no licensed professional hunters in Tanzania. Hunting is a dangerous sport and accidents frequently occur where even experienced professional hunters are mauled/killed by the animals they hunt. The Wildlife Division is placing itself in a risky legal situation provisionally authorising persons of unknown ability to guide high paying foreign tourists.
- Many young South African "professional hunters" are hunting in Tanzania. There is minimal big game hunting in South Africa and these people therefore have to gain their experience in Tanzania, yet are provisionally authorised as professionals from the start.

- Professional hunters that are disqualified for bad hunting practices elsewhere in Africa are allowed to guide hunting clients in Tanzania, even with the Wildlife Authorities having full knowledge of the digressions of such professional hunters elsewhere.
- Some professional hunters have a disregard for the hunting regulations and are disrespectful to wildlife officials. Evidence for this statement is the corruption of game scouts and under-sized elephant trophies being shot. Issues are reported and the rogue elements in the industry are known, but appropriate action is seldom taken. Even professional hunters that were barred at some stage from hunting in Tanzania are able to renew their licenses without difficulty.
- Inability of hunters to recognise sexual differences results in many female animals being hunted mistakenly, particularly with leopard, topi, hartebeest and zebra.

Under-sized trophies are legalised

- Elephant trophies that do not meet the minimum standard are provided with the necessary CITES export documentation.
- A promotional pamphlet produced by the Wildlife Division in 2002 shows a hunter posing with an under-sized elephant trophy.
- Many other under-sized animals are also being hunted which are detrimental to the dynamics of populations, particularly lion, leopard and buffalo.

Ethical standards not maintained

- A number of hunting outfitters are not adhering to any code of ethics. Examples of ethical contraventions are:
 - Hunting from vehicles and a reluctance to walk
 - Wounded animals are frequently not followed
 - Commercial videos that are detrimental to the hunting industry are produced, in which animals are incited to charge and there is a blatant disregard of hunting ethics. Commercial photography fees are due but such videos are not declared and fees are thus not paid.
 - Charging animals are sometimes shot above permit and/or quota requirements under the guise of 'self protection'
 - Hunting cats at night with artificial lights and calling of lions using tapes and other artificial means
 - Small aircraft are being used to easily locate trophy animals, particularly in areas where wildlife populations are low and decent trophies are difficult to find.

Quota adjustments

- The Wildlife Division issues additional quotas to outfitters upon request during the hunting season.
- There are allegations that quota are adjusted for some companies after the hunting season has ended.

Environmental standards not maintained

- Environmental standards for hunting camps are inadequate, and the existing standards are not enforced at all.

- In some camps there is an excessive accumulation of litter around hunting camps over many years.
- Permanent constructions are not permitted but the use of cement in hunting camps is widespread. Cutting trees for camp clearing and construction gets excessive. Many camps are located in ecologically sensitive sites but with little concern to the environmental impact.

Zanzibar not signatory to CITES

- Zanzibar wildlife authorities do not consider themselves signatory to CITES and make no attempt to control the export of CITES restricted wildlife products originating from the mainland. Many countries are of the opinion that if a product is legally exported, then it may be legally imported. There is a substantial loophole for the export of many wildlife products without the full set of legal documentation, in particular to countries with lax import regulations.

Declining wildlife populations

- Wildlife populations are declining in many parts of Tanzania and there is an effective shrinkage of many hunting areas as a result of increasing human settlement and due to the bush meat trade.

Subleasing and loss of revenue

- Subleasing of concessions is widespread. It is estimated that up to 70% of companies leasing concessions are subleasing these in various ways. Sub-lessees possibly account for approximately 40% of the industry's income, yet there are no specific taxation controls on the sub-lessees who are gaining huge profits at the expense of the industry. Many foreign PHs are bringing clients to sublet concessions, among these are PHs entering as undeclared observers, paying neither observer fees nor PH licenses.

Outfitters shielded from the competitive market

- The Wildlife Division is shielding its selected group of outfitters from natural market forces resulting in a loss of income to the Tanzanian economy.

Outfitters are influential and manipulate senior government

- Some hunting outfitters are highly influential with the Government and influence the block allocation processes and are partly responsible for delays in developing and implementing the WMA concepts.

System of administration

- The Wildlife Division imposes an inflexible approach to marketing hunting in Tanzania
- Rigid game fee schedules and a strong emphasis on trophy fees leaves the Wildlife Division with no option other than to increase quota offtake to generate increased revenue
- Income generation from the concessions is dependant solely on hunting and is not conducive to the development of other sources of income
- There has never been an inventory of the true value of the hunting concessions.

Lack of desire to improve the industry

- A policy and management plan for tourist hunting (Appendix 8) was compiled by the Wildlife Division and accepted in 1995 but has never been implemented. This plan is well formulated and outlines the way for extensive reform in the industry. Many of the problems listed above would be addressed through implementing this plan.
- Support has twice been provided for computerisation of the issuing of tourist hunting permits by the PAWM project and through the Selous Conservation Programme. Neither of these initiatives has been maintained and instead an outdated and non-transparent system of issuing permits is continued.
- The hunting operators association (TAHOA) argue strongly against reform. Influential members of this association were able to convince even the Minister that higher prices for the operators would force them to over hunt the wildlife resource to survive, which is simply wrong and one can only speculate about the underlying reasons. Experience shows that the worse the players, the greater is the level of over-utilisation. To improve the system, the bad players must be removed!

5. TOWARDS BETTER MANAGEMENT OF THE HUNTING INDUSTRY

While credit goes to the Wildlife Division for the growth of the hunting industry and improved management since take over from TAWICO in the late 1980s, there remain many problems that must be addressed. A draft management plan for tourist hunting was compiled by the Wildlife Division, which would bring about significant improvement. The original management plan has been retyped and is attached as Appendix 8. The Director of Wildlife accepted the document and the easiest fast track reform of the industry would be to begin implementing it, irrespective of some modifications and correction of mistakes that are necessary. Some aspects of reform are nevertheless discussed below.

5.1 General Considerations for Management of the Tourist Hunting Industry

The following principles should be considered when planning reform of the hunting industry:

- Competition between operations should be fostered so that realistic market prices are achieved. To achieve this, the wildlife authority should plan to offer fewer concessions than there are operators willing to take them up. In addition, the availability of concessions should be staggered so that a few come up for auction/tender each year or each alternate year.
- Where possible, systems should be transparent, and avoid any command allocation decisions. This requires that the wildlife authority should declare the terms and conditions of the award system well in advance, and that the award is done in public.
- Medium to long-term concession leases are required. Investment in, and development of, the industry with clear management objectives should be encouraged. Reasonable duration of lease is one of the cornerstones to improving quality in the hunting industry.
- Systems must be simple, practical and enforceable. Experience in Tanzania shows that complicated systems do not work.
- The systems for regulating the industry must be appropriate, and conducive to further development of the industry.
- It is easiest to regulate an industry by minimising the rules and maximising the penalties for contravention.

5.2 The Revised Draft Management Plan for Tourist Hunting, Jan 1995

The Planning and Assessment for Wildlife Management (PAWM) project was funded by USAID from 1990 to 1995 to undertake an analysis of the tourist hunting industry and provide guidance to the Wildlife Division. A key output of this project was the Revised Draft Management Plan for Tourist Hunting dated January 1995, it was accepted by the Wildlife Division but has never been implemented. The management plan is simple but well formulated and outlines a detailed reform of the tourist hunting industry. Implementing these reforms would most certainly solve many of the problems inherent in the industry.

The management plan emphasises the allocation of hunting blocks through public tender for a 5-year lease. A system is outlined that would realize the market value of hunting blocks while also encouraging the continuity of lease by companies that occupy concessions.

The management plan provides much emphasis on the involvement of local communities in tourist hunting that takes place on their land through the following means:

- The system works towards situations where communities negotiate directly with the hunting outfitters through their own tender systems for allocating their lease(s);
- Communities provide personnel to supervise hunting on their land;
- Communities participate in the setting of quota;
- Communities receive and manage the revenue from hunting.
- The current layout of hunting concessions in game controlled areas (GCAs), open areas and WMAs should be maintained as far as is possible.

The Wildlife Division remains responsible for hunting in the game reserves. However the responsibilities of the Wildlife Division to control hunting on GCAs, open areas and WMAs shall be:

- To secure the status of threatened species through banning their hunting throughout Tanzania
- Management of the quota for species controlled by international treaties.
- Control the export and handling of trophies
- Oversee the conduct and licensing of tourist hunting and those participating in the industry.

The management plan clearly outlines the various responsibilities necessary to maintain harmonious relationships between outfitters and the local communities.

Reform of the pricing structures and earnings from tourist hunting are well elaborated:

- Concession fees shall be raised up to market rates but shall include the conservation and observer fees and shall be payable prior to each hunting season
- Trophy fees shall be continued, but subject to annual adjustments by the Minister
- Permit and trophy fees shall be continued, and shall be managed by the Wildlife Division
- Outfitters shall be required to submit audit reports with evidence that 55% of earnings are deposited into their Tanzanian bank accounts.

Concession and trophy fees shall be distributed as follows:

Fees from Game Reserves

Game Reserve Retention (to meet management costs)	50%
Tanzania Wildlife Protection Fund (for administration)	10%
District Council (as an opportunity cost of the Game Reserves)	15%
Treasury	25%

Fees from GCA, open areas and WMAs

Local community (for management and community development)	75%
District Council (for support of local government wildlife staff)	15%
Tanzania Wildlife Protection Fund (for administration)	10%

Licensing of professional hunters shall be based on their experience in Tanzania, formal training and an examination. Various levels of licensing shall be introduced, i.e. Full Professional Hunter, Learner Professional Hunter and Trainee. New comers shall be required to undergo formal training and a period of in-service training. Only Full Professional Hunters are authorised to hunt dangerous game.

The management plan calls for a 5-yearly revision and update.

5.3 Adopt a Flexible Approach Towards Marketing

The above-mentioned management plan for tourist hunting (PAWM 1995) incorporates alterations to the marketing strategies for hunting to be adopted by the Wildlife Division, i.e. primarily the lengths of safari necessary for various types of game. Shorter safaris maximise hunter days and thus increase overall income generating capacity by the industry. The Management Plan retains the classic 21-day safari for which the Tanzanian industry is now well known.

A proposal (Appendix 4: Optimisation Proposal) was submitted by the outfitters to the Wildlife Division in 2003 to adjust the days required on a hunting license to hunt various types of game. The authors of this proposal strongly emphasise that an increase to the trophy fees will have a negative impact on the hunting industry. They have observed an over-hunting of key species but under-utilisation of a wide variety of lesser species, referred to below as large antelope, plains, and small game. The proposal assigns groups of animals into various categories that enable the client to select what he/she wishes to hunt within the confines of the number of days he/she is willing to pay for.

The Optimisation Proposal proposes to abolish the 21-day safari and increase the numbers of animals that can be hunted on shorter safaris. However, the number of days required to hunt the big game, lion, leopard and elephant are effectively increased. Under the current system all three animals can be hunted on a 21-day safari, whereas the proposal allows only one of these animals to be available on a 16-day permit. Availability of buffalo is also reduced whereby two can be hunted on a 16-day permit or one on a 7 to 14-day permit.

Comment on the optimisation proposal

The optimisation proposal is included as an annex to this document for the sake of discussion. The authors of this document do not necessarily agree with every aspect of the proposal, it does nevertheless include some pertinent points.

The proposal allows hunting up to 31 animals on a 14-day permit, which is considered by some to be too much. However the proposal does allow the hunting outfitters and their clients a far greater flexibility in selecting their hunting bag. The increased freedom of choice will lead to improved peace of mind for clients and greater tendency to return to hunt again in Tanzania, and thus provide a boost for the industry. By optimising into 16-day safaris with one primary game species per hunt essentially allows the outfitters to sell more hunts, which increases their revenue. It also means that the major game species will be taken for each hunt, since a client will come expressly for that particular animal and potentially more lion and leopard will be

hunted than at present. This would emphasise the need for quotas of the primary game species to be set on an ecologically sustainable basis.

The proposal of Mantheakis & Oelofse (2003) was tested using the Selous hunting data for 2000 and the quota for that period. This resulted in a 24% increase in the overall income generation by the Wildlife Division without any significant change in the ratio between daily fees and trophy fees for the same offtake of primary game. However the calculations assume a 100% success rate for hunting of primary game. The Selous hunting data reveals that only 1 in 5 clients visiting the reserve actually takes a lion trophy, 1 in 4 clients takes a leopard and 1 in 15 clients takes an elephant (based on the 2001 analysis). While not every client necessarily attempts to take a lion trophy, the low success rates may to some extent be deliberately caused by the outfitters to generate a maximum number of days from their allocated quota, as the outfitters generate the bulk of their fees from daily rates. Therefore assuming similarly low success rates, the same offtake of primary game could potentially yield a greater than 24% improvement to the overall income generation.

5.4 Improved Monitoring and Quota Setting Capacity

The Wildlife Division is urged to rationalise the quota setting system basing it on more objective criteria.

Computerisation of hunting data

It is essential that the issuing of hunting permits and the returns be computerised, as adaptive management based on quota utilisation requires the analysis of a huge volume of hunting data, which simply cannot be achieved without computerised support. This process should be linked to a database, which facilitates analysis of hunting data from all areas of the country. Custom software needs to be developed as the hunting industry has many peculiarities that would not be accommodated in regular off-the-shelf computer packages. Such software would be costly but would make a substantial contribution to the Wildlife Division's understanding of the industry and its source of income, thus justifying the cost of its development.

Software introduced through the PAWM project and the Broomhead study are now somewhat outdated due to rapid advancements in computer technology. The database developed for the Selous works well, and has the capacity for computerisation of hunting data at reserve level, but the volume of Selous hunting data may be the limit of an Access database. It is doubtful if this database would have the ability to analyse data for the whole country. This database can however make a significant contribution towards development of comprehensive software.

The hunting permits need to be upgraded and the issuing process needs to be incorporated into a computerisation process. The permits need to include the data on the presence of observers and client nationalities. Funds due from observers are being lost because data are not being recorded, and this provides a loophole for many outfitters that are not recording the presence of observers. It shall also help to control the activities of wandering professional hunters. Also a better understanding of the origins of hunting clientele would assist marketing strategies for Tanzania's tourism. Trophy data recording forms have been developed for the Selous Game Reserve.

These should be issued together with hunting permits that appropriate data can be recorded and returned.

Aerial census

It is accepted that monitoring of wildlife populations is costly given the extent of the hunting areas. Aerial censuses are conducted but in many cases these do not provide adequate data for setting hunting quota.

Aerial census does however represent a first stage of population monitoring and yields a lot of useful information on population trends. The current system should continue on a more regular basis, but more effective monitoring is required on which to develop a sound basis for setting quota.

Trophy quality and age

A requirement to accurately record the trophy quality and age of every hunted animal should be imposed by the Wildlife Division upon the outfitters. The necessary procedures for trophy quality have been developed and tested in the Selous Game Reserve and should be implemented across the country.

The Wildlife Division needs to give consideration towards development of procedures for the simple analysis of trophy data to show trends in trophy quality for various key species. Such data has potential to be a good indicator of sustainable hunting practices. Maintaining adequate trophy quality from a population over a period of time is sufficient evidence that the population is not being over-hunted.

5.5 Improved Performance Criteria for Outfitters

The current system assesses the performance of outfitters by their ability to utilise the allocated quota (i.e. the 40% rule). In some cases this strategy has led to over-hunting which could be detrimental to the Tanzania tourist industry as a whole in the long term.

This strategy should be altered to one in which the outfitter is judged by the total income generated from a concession including its lease. Emphasis should be on the maximum income generation from the least number of animals hunted and encourage other forms of income generation.

Increased responsibility should be placed on the outfitters to contribute towards protection of the wildlife resources, development of their concessions and community involvement. Effective and unbiased indicators are required upon which to assess the contributions made to these requirements. While some outfitters make substantial contributions, others pay lip service to these requirements and do window dressing with paid journalists. Some of the responsibility for monitoring of wildlife populations should be placed upon the outfitters. Indeed some of the most effective monitoring is based on trends in trophy quality and requires involvement of the outfitters. A stringent and independent certification would be the best criteria for outfitters as discussed below.

5.6 Improved Management of Depleted Hunting Areas

The pressure on protected areas imposed by the surrounding communities is relentless. The WMA concept is an initiative to reverse this pressure and encourage the development of buffer zones around protected areas. In some areas this concept can be easily implemented, particularly those areas with only a few small communities that neighbour large protected areas with healthy wildlife populations. Sadly this is not the case for all of the protected areas in Tanzania. Many small protected areas are scattered around the country and the growing human populations are making these areas into islands of wildlife habitat surrounded by a sea of cultivated and semi-urban land. The pressure for natural resource exploitation from the local communities in such circumstances can become too much for the protected area to sustain and its wildlife populations decline to a level that is no longer attractive to the tourist hunting industry. Income generated by the reserve then rapidly diminishes and heralds the beginning of the end of that reserve.

While the above text describes extreme situations, most protected areas find themselves located somewhere between these extremes. Many of the game reserves face heavy and relentless pressure for illegal resource exploitation, wildlife populations are heavily affected but are still able to sustain the hunting industry. However the trend is depressing. A number of hunting concessions have ceased to be viable, while the situation is delicate in many others. Yet there remains a strong demand to hunt these areas, indicating there are no excuses for lack of resources to maintain these areas. It is the pressure to illegally exploit these areas that is on the increase. The costs of protecting and managing these areas are therefore increasing, and the income generated by these areas therefore needs to increase in order to fund their increasing costs. Sadly this is not happening at present, and there is a steady decline in the general viability and number of most hunting areas.

The Wildlife Division needs to take measures to reverse the situation. Special attention needs to be given to those many areas that are becoming marginal, and their viability needs to be improved. This requires greater management skills than is needed to effectively manage the good areas. Sadly these marginal areas are the “Siberia’s” and are used to distance some less effective managers and staff from the focus of attention of the Wildlife Division. In such situations the inevitable becomes predictable, the only question that remains is how long will it take.

Many donors similarly focus their attentions on the better protected areas. Increased funding from whatever source needs to be channelled towards reviving the many depleted areas.

5.7 Diversify the Income Base

Outfitters should be encouraged to explore other forms of income generation within their concessions. Various forms of photographic tourism can easily be encouraged as many ecologically unique areas, including wetlands, forests and mountains are leased as concessions to hunting operators.

Many concessions have attributes conducive to different forms of adventure tourism such as fishing, hiking, canoeing etc. which would reduce the dependence of the

Wildlife Division's income from hunting. Professional hunters are outdoors people, many of them with levels of competence in such activities. While such activities are unlikely to contribute significantly in the short term, if encouraged such activities will find their niche and increasingly contribute to income generation from the concessions.

The Wildlife Policy does state that the protected areas must provide a high quality tourist product rather than attempt to accommodate mass tourism. In keeping with this policy, income generation from concessions should continue to explore the more exclusive forms of income generation from alternative tourist activities. Hunting and photographic tourism mix like fire and water and careful consideration needs to be given to ways of diversifying the income base and the risks involved. A precondition is that rights of access must remain exclusive to the operator (outfitter) leasing a concession.

5.8 Certification of the Hunting Industry

Numerous problems are inherent in the tourist hunting industry. Finding solutions to many of the problems is not always easy, particularly when there is a lack of effective control on the industry. A new idea being considered in the international hunting industry is the concept of certification. Ideas are still in an infant stage, but this concept does offer a constructive approach towards setting standards and improving the industry. The concept is based on the systems applied for control of Forestry.

Forest Certification

Forest certification is a tool that has been developed since the early 1990s to improve forest management. The aim of certification is to make timber production more ecologically and socially responsible, and economically viable by grading sources so that consumers can choose on these grounds. The argument is that environmentally aware consumers will be prepared to pay more for products if they know where these come from and how they have been produced. The certification sets comprehensive standards against which the timber industry's performance can be measured. The Forest Stewardship Council (FSC) is the largest forest certification body, and is funded by charitable foundations, government donors, membership subscriptions and accreditation fees. It is not funded directly by the forestry industry, but companies do pay an annual fee for certification. The fee depends on the size of the company and the volume of timber produced. The FSC is a voluntary scheme. Applicants (timber companies) must request certification and submit full documentation for inspection, including annual work plans and reports prior to a field inspection. Local communities can contribute towards the assessment process.

Drawbacks and challenges to certification

The certification process is costly, time consuming and needs qualified and carefully selected personnel.

It is not easy to set the necessary balance between certification standards and the need to certify sufficient companies

It is a challenge to set the degree to which local communities are consulted / have a voice in the certification process.

Withdrawal of certification from companies that are not showing sufficient progress is not easy and can present confusing signals to the consumers (hunting clients).

The issue of security of tenure and duration of lease are raised as concerns that will relate to certification. Outfitters are not willing to invest the necessary effort when they are not assured of long-term involvement in a concession. The Management Plan for Tourist Hunting, which this document supports, proposes a 5-year lease, as is currently the case. Renewal of the lease is assured provided the leasing outfitter has fulfilled all obligations and bids appropriately for that block. In economic terms five years is a long time to issue a lease, and extending beyond that would have detrimental effect on establishing the market values for concessions.

Hunting certification

The concept of certification is considered here in the form of a high profile independent board that would evaluate and provide certificates of approval on both hunting areas and hunting outfitters. Evaluation of outfitters is on their own invitation. The Certification Board needs the influence to lobby for competitive advantages for certified outfitters with the international hunting associations and access to Western economies.

Maintaining a high standard of hunting requires: i) proper management of the hunting area; ii) professional conduct by the outfitter; and iii) appropriate training for professional hunters. Certification requirements discussed in this document are thus split accordingly into three components.

The certification requirements need to be accessible to the many outfitters that do strive to provide a sustainable and ethical hunting product. To ease initial recognition of outfitters by a Certification Board, the requirements should be split between minimum entry requirements and annual progress requirements. Minimum requirements being standards that all outfitters must meet to obtain a first level of certification, or within a specified period; and progress requirements being standards against which permanent improvement can be shown. A report on the achievement of progress requirements should be made each year, and checked with annual field visits and discussions with local communities. Minimum entry requirements should be limited to encourage cooperation with many outfitters from an early stage, with greater emphasis placed on progress requirements. Where insufficient progress can be shown in two successive years, accreditation should be withdrawn. Proposed minimum and progress requirements are presented in Appendix 5 to this document based on the following criteria:

1. Certificate of approval on hunting areas (concessions) to be based on:

- 1.1 Game populations are naturally sustained within the area or ecosystem of which the area is a part;
- 1.2 Management is in accordance with an approved management plan;
- 1.3 Key wildlife populations are stable and effectively monitored;
- 1.4 Hunting quota are sustainable;
- 1.5 A fair proportion of the funds generated by hunting are reinvested into the management of the area.

2. Certificate of approval for outfitters to be based on:

- 2.1 Hunting shall be conducted only in approved areas;
- 2.2 Outfitter abides by national legislation;
- 2.3 Outfitter agrees to a code of hunting ethics, which are prominently displayed in every hunting camp and advertising media (brochures, websites etc);

- 2.4 Outfitter initiates projects bringing tangible contributions towards the areas of operation;
- 2.5 Outfitter engages in appropriate community empowerment schemes;
- 2.6 Hunting is within quota;
- 2.7 Trophy quality meets minimum standards acceptable for the area;
- 2.8 Baiting for predators according to acceptable methods;
- 2.9 Minimised environmental impact of hunting activities;
- 2.10 Effective company administration;
- 2.11 Audit reports are presented.

3. Certificate of competence for professional hunters

A school of professional hunting needs to be established where concepts and field experience appropriate to African conditions are taught to the highest standards of excellence. This school should be independent but needs recognition from many wildlife authorities and international hunting associations. A strong cooperation with the Certification Board is essential. The school would require its own area where wildlife is abundant, big game is present and extensive field practice is possible. Tanzania would be a suitable country to host the school. Various options are possible for the establishment of such a school, some of these options being:

- The school is established and managed by the Tanzania Hunters Association;
- The school falls under the umbrella of MWEKA, the African Wildlife College;
- The school is managed as a private venture.

In recent years there has been a proliferation of fly-by-night private schools in South Africa offering short courses of dubious standards to school leavers on a range of topics relating to wildlife management, including professional hunting. The essential requirement for a professional hunter there is to be able to shoot an impala. Certificates offered by such schools are of no value, but are giving false hopes and are bringing the wildlife sector into disrepute. A school is required here of sufficient standard and with affiliations and links to various wildlife authorities and international hunting organisations, but ideally should fall entirely within any one of these organisations.

Entry requirements should be based on approval by a selection panel and having an appropriate tertiary qualification to ensure an adequate level of maturity among students. The school must teach field skills as well as theoretical subjects. Firm discipline and keeping physical fitness should be underlying themes to the school curriculum. The school shall issue certificates of competence for professional hunters based upon both practical field tests and written examinations.

Graduates of the school shall be issued with a Learner Professional Hunter certificate, which shall be upgraded to a Full Professional Hunter certificate following satisfactory completion of in-service training. Full Professional Hunter certificates may be issued to experienced hunters based on a few basic criteria that need to be developed.

6. CONCLUSION

The ideals outlined in the Wildlife Policy of Tanzania (1998) place much emphasis on maintaining and developing a wildlife protected area network and involving all stakeholders in the conservation of the resource, and that it must contribute to the well-being of local communities and national poverty reduction.

Income accrued by the Wildlife Division could be substantially improved. Achieving a market value for the hunting concessions would significantly raise income. Some adjustments to trophy fees and improved flexibility in marketing strategies will provide additional income.

Tanzania has an extensive protected area network, but surrounding these are many hungry communities. They are affected by the proximity of the protected areas and the presence of dangerous animals, and thus should receive greater benefits. But more importantly, much hunting takes place on their land, which is generating considerable revenue which they are being denied. These communities must be incorporated into decision-making and receive significant financial reward for the hunting on their land. The way to achieve this is clear, through implementing both the management plan for tourist hunting and the regulations for the development of WMAs.

The current command style of management that the Wildlife Division imposes on the wildlife industry of Tanzania is not sustainable. Many internal forces and external are going to bring about many more changes to the system. Internal forces will come in the form of growing demands from communities and the politicians representing them. Outside influences will come in the form of additional CITES regulations, the revised US Endangered Species Act, independent certification and the negative influences of anti-hunting lobbies. It is the latter forces that are destructive and dangerous to the Tanzanian economy. Pending reform, the Wildlife Division is extremely vulnerable to these negative forces. Cooperating with an independent system of certification would greatly assist the Wildlife Division.