maximising wildlife benefits by minimising threats...

Conservancy status

Benefits from natural resources in 2011

the chart shows the main benefit sources and values
and their percentage of the total benefits

Approximate Total Benefits N$ 178,630

- Combined tourism benefits N$ 0 (%)
- Combined hunting benefits N$ 36,900 (21 %)
- Veld product benefits N$ 15,860 (9 %)
- Other benefits (e.g. interest) N$ 125,870 (70 %)

Two of the most significant benefits for the conservancy:
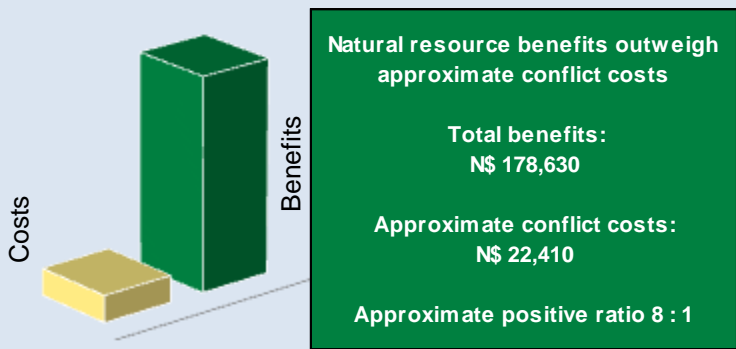- ✓ cash income to the conservancy to cover running costs and invest in developments
- ✓ employment benefits to conservancy residents

Conservancy income			N$ 178,630
Employment benefits	Private Sector		
	Conservancy	14 staff	N$ 55,350

Cost of natural resource conflicts in 2011

estimates are based on average national values

Estimated human wildlife conflict cost	N$ 22,410
Estimated poached high value species loss	N$ 0
Total conflict cost estimate	N$ 22,410

Natural resource cost–benefit ratio in 2011

the chart shows the approximate ratio of benefits to costs

Natural resource benefits outweigh approximate conflict costs

Total benefits:
N$ 178,630

Approximate conflict costs:
N$ 22,410

Approximate positive ratio 8 : 1

* The annual data collection process results in a lag of 1 year for income data *

Management performance in 2012

Category	Score	Performance
1 Adequate staffing	2	
2 Adequate expenditure	2	
3 Audit attendance	5	
4 NR management plan	2	
5 Zonation	2	
6 Leadership	2	
7 Display of material	2	
8 Event Book modules	3	
9 Event Book quality	2	
10 Compliance	2	
11 Game census	2	
12 Reporting & adaptive m/ment	2	
13 Law enforcement	2	
14 Human Wildlife Conflict	3	
15 Sources of NR income	2	
16 Benefits produced	2	
17 Resource Sustainability	2	

Wildlife status summary in 2012

B. Zebra, Duiker, Elephant, Giraffe, Impala, Kudu, Roan, Sable, Steenbok, Warthog

Human wildlife conflict

Human wildlife conflict trend

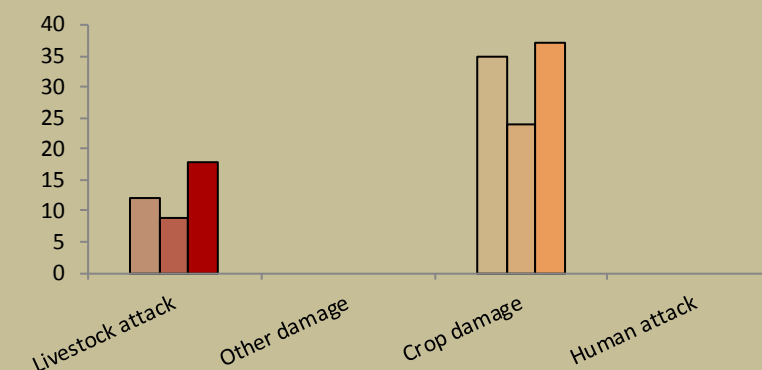the chart shows the total number of incidents each year,
subdivided by species, grouped as herbivores and predators

- Hyaena
- Elephant
- Lion
- Hippo
- Crocodile
- Pigs/Porcupine
- Other predators
- Antelope/baboon
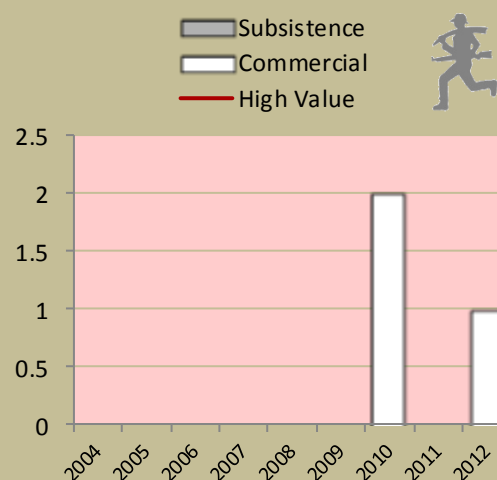
Most troublesome problem animals 2010-2012
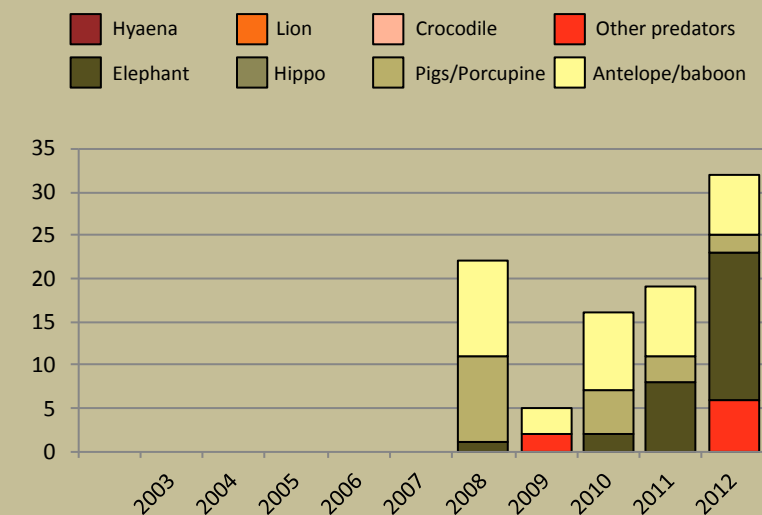
the chart shows the number of incidents per species for the last 3 years;
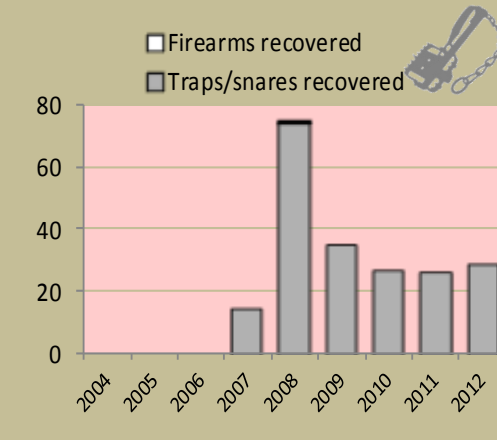the darkest bar (on the right) indicates the current year for each species

The most troublesome species in 2012 are on the left

The least troublesome species in 2012 are on the right

Elephant, Antelope, Caracal, Hyaena, Baboon, Wildcat, Pigs, Wild dog

Type of damage by problem animals 2010-2012
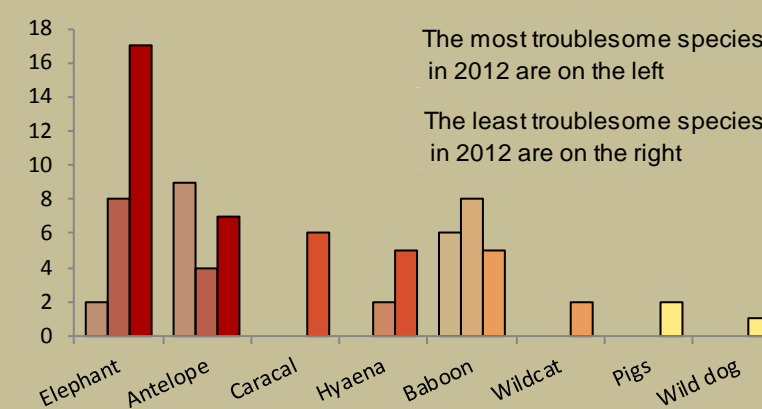
the chart shows the number of incidents per category for the last 3 years;
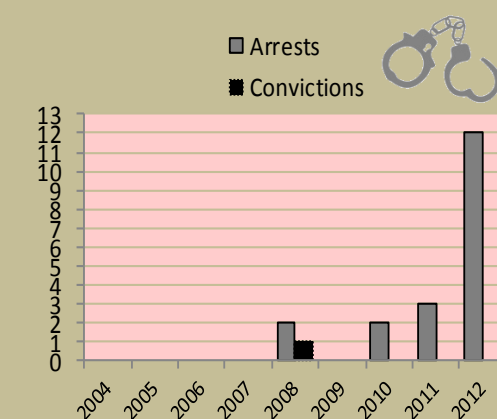the darkest bar (on the right) indicates the current year for each type

Livestock attack, Other damage, Crop damage, Human attack

Poaching

Number of incidents per year

Commercial poaching is a serious threat to
conservancy benefits. The chart shows the
number of incidents per year

- Subsistence
- Commercial
- High Value

2004 2005 2006 2007 2008 2009 2010 2011 2012

Traps and firearms recovered

number of incidents per category

- Firearms recovered
- Traps/snares recovered

2004 2005 2006 2007 2008 2009 2010 2011 2012

Arrests and convictions

number of incidents per category

- Arrests
- Convictions

2004 2005 2006 2007 2008 2009 2010 2011 2012

Wildlife removals – quota use and value

Species	Quota 2012						Animals actually used in 2012					
	Total	Potential Total Value N$	Trophy	Potential Trophy Value N$	Other Use	Potential Other use Value N$	Trophy	Own Use & Premium	Shoot & Sell	Capture & Sale	Problem Animal	Total Use
Duiker	6	2,344	2	2,316	4	28		1				1
Elephant*	3	248,162	2	244,982			1					1
Gemsbok								1				1
Giraffe	1	7,055	1	7,055								
Hyaena	2	5,962	2	5,962								
Kudu	4	8,730	2	8,472	2	258		1				1
Leopard	1	20,586	1	20,586								
Roan*	1	47,556	1	47,556								
Steenbok	6	36			6	36						

Potential value estimates (N$) for quotas are based on:
- **Potential trophy value** - the average national trophy value of each trophy species multiplied by the quota number
- **Potential other use value** - the average national meat value of each common species multiplied by the quota number
  - the average live sale value of each high value species (indicated with an *) multiplied by the quota number
  - high value species are never used for meat

Key to the status barometer

Wildlife status

extinct, very rare, rare, uncommon, common, abundant

weak/bad, reasonable, good

Management performance & other data

Success/threat flags

- success/benefit created
- weakness/action needed

Conservancies reduce environmental costs
while increasing environmental benefits.
Benefits from wildlife can far outweigh
human wildlife conflict costs.

With Event Book Data

George Mukoya **2012**

monitoring numbers and trends for a healthy conservancy...

Current wildlife numbers and status

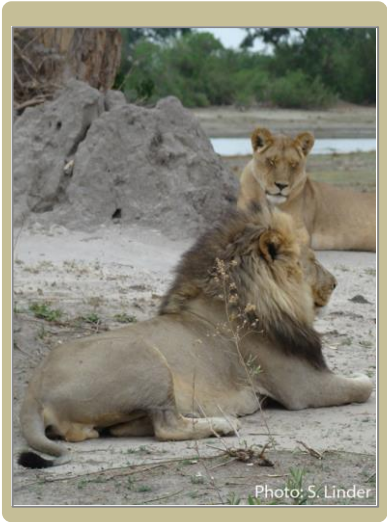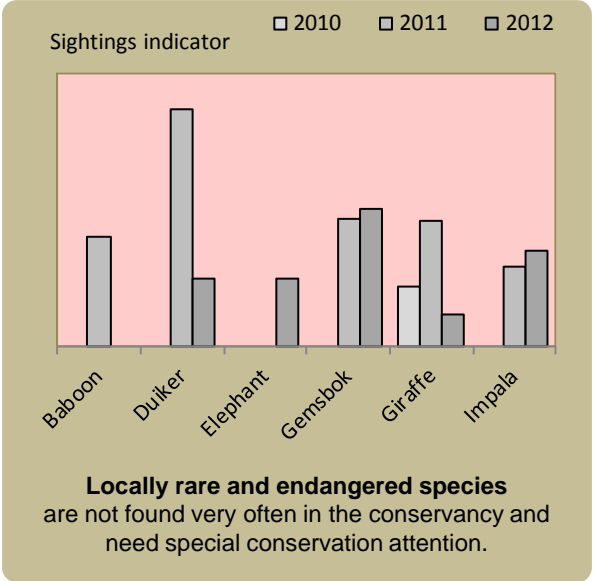| Species	Animals Seen	Estimate	Wildlife Status		
			Count Trend	National Guideline	Desired Number
B. Zebra					
Duiker					
Elephant					
Giraffe					
Impala					
Kudu					
Roan					
Sable					
Steenbok					
Warthog					

Wildlife Status

Count trend – gives the species status in the conservancy based on game count trend data.

National guideline – gives the species status in the conservancy using national guidelines for the conservancy; for example, lions may cause local problems, but are of high value and are rare at landscape level.
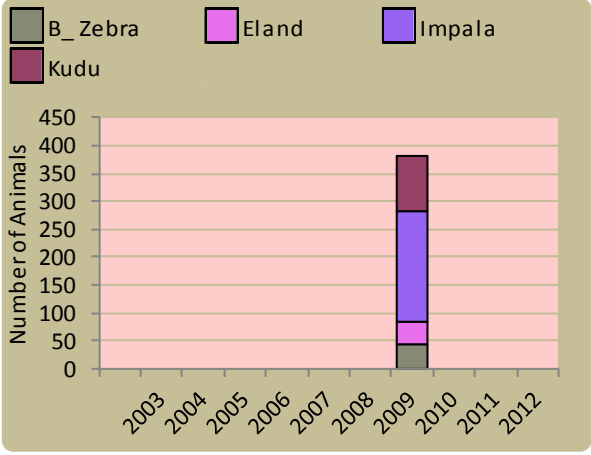
Desired number – gives the species status in the conservancy based on what the conservancy would like to have.

dark green (abundant) – there should be less;
light green (common) – the desired number is reached;
yellow (uncommon) – there should be more;
light orange (rare) – there should be more than double;
dark orange (very rare) – there should be more than triple;
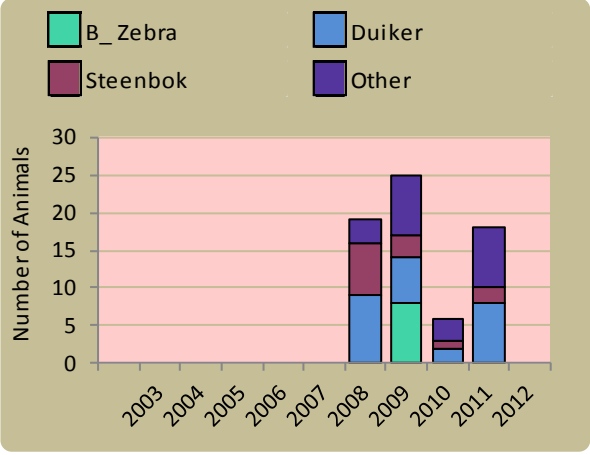**red** (extinct) – the species needs to be reintroduced.
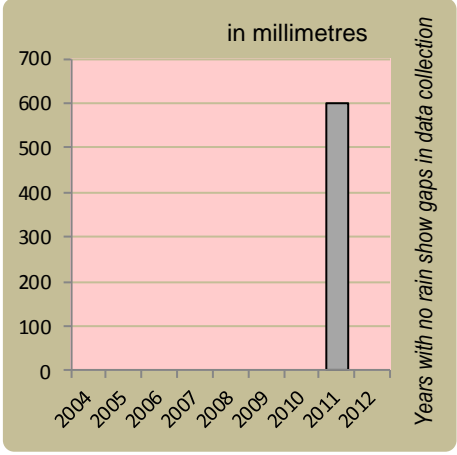
Locally rare species

Sightings indicator □ 2010 □ 2011 □ 2012

Baboon, Duiker, Elephant, Gemsbok, Giraffe, Impala

Locally rare and endangered species are not found very often in the conservancy and need special conservation attention.

Wildlife introductions

■ B_Zebra ■ Eland ■ Impala ■ Kudu

Number of Animals

Wildlife mortalities

■ B_Zebra ■ Duiker ■ Steenbok ■ Other

Number of Animals

Annual rainfall

in millimetres

Years with no rain show gaps in data collection
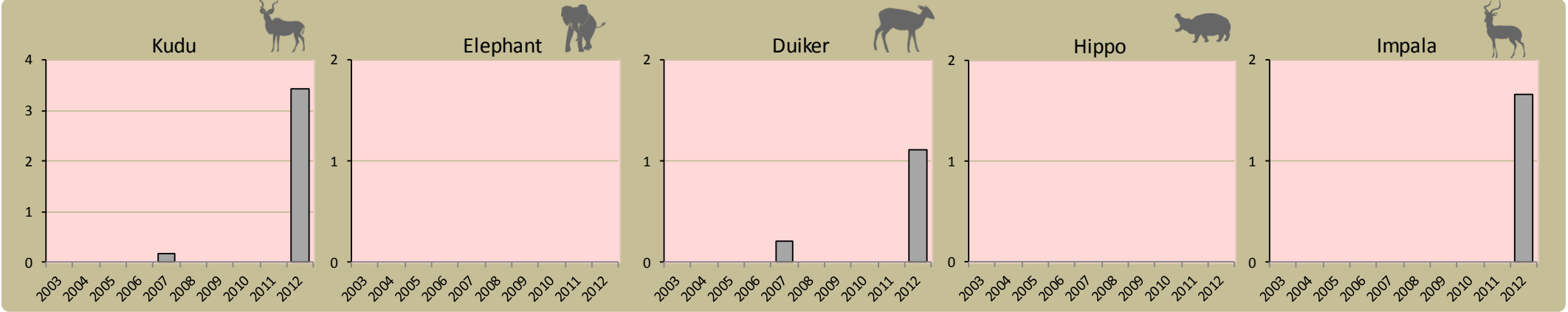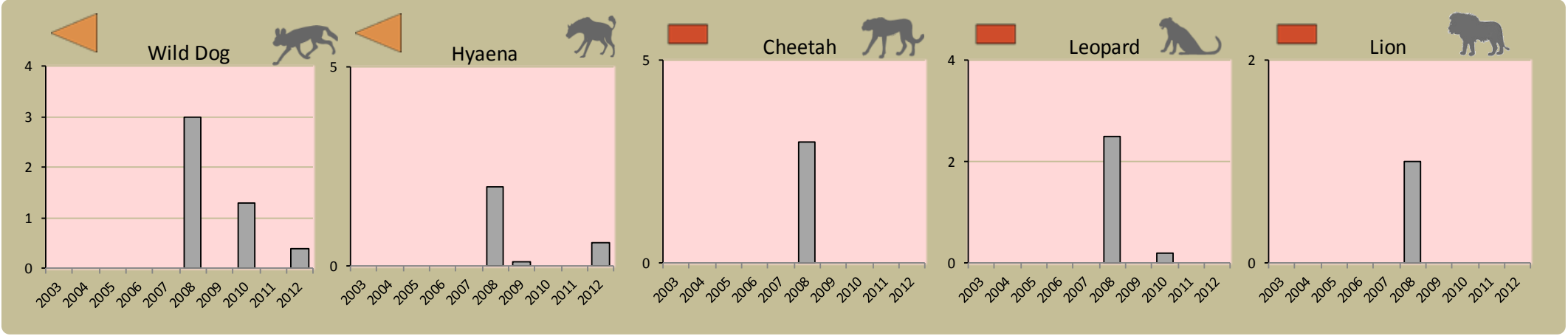
Fixed route patrols

charts show the number of sightings of each species per fixed route foot patrol each year

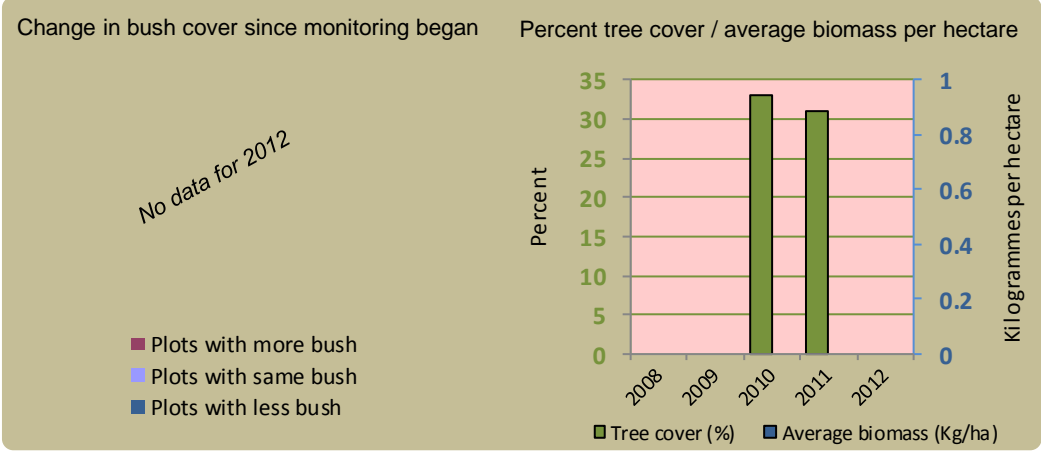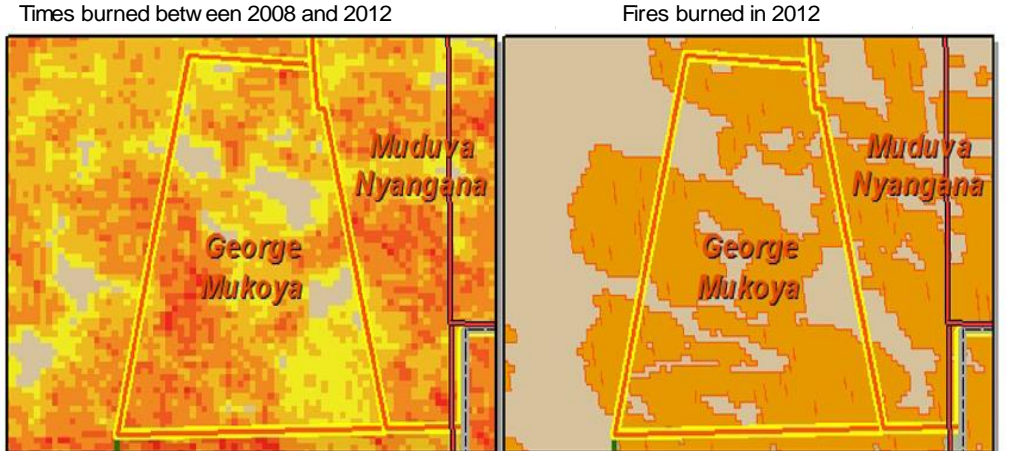Kudu | Elephant | Duiker | Hippo | Impala

Predator monitoring

charts show the average number of animals seen per Event Book each year
status barometers reflect the general sightings trend over the last 5 years

Wild Dog | Hyaena | Cheetah | Leopard | Lion

Vegetation monitoring

Change in bush cover since monitoring began

No data for 2012

■ Plots with more bush
■ Plots with same bush
■ Plots with less bush

Percent tree cover / average biomass per hectare

Percent

Kilogrammes per hectare

■ Tree cover (%) ■ Average biomass (Kg/ha)

Fire monitoring

Times burned between 2008 and 2012

Muduva Nyangana

George Mukoya

Fires burned in 2012

Muduva Nyangana

George Mukoya

Wildlife provides a wide range of benefits. Some wildlife can cause conflicts, but all wildlife is of value to tourism, trophy hunting and a healthy environment.

By using all the available information and adapting and improving activities, threats such as human wildlife conflict, poaching and other issues can be minimised.

Photo: S. Linder