RESPONSIBLE RESOURCE USE

Are you practicing Holistic Conservation, or not ?



The following presentation/resource remains the intellectual property of Richard Sowry, The views and opinions expressed herein are made in his personal capacity Not for distribution, no profit is to be made from selling this presentation/resource.

Conservation or Preservation?

Conservation

2

IUCN Original definition: "the Wise Sustainable Use of the planet's natural resources....."

IUCN <u>*Current*</u> definition: "The protection, care, management and maintenance of **ecosystems**, **habitats**, **wildlife species** and **populations**, within or outside of their **natural environments**, in order to safeguard the **natural conditions** for their **long-term permanence** (*sustainability*)"

Preservation

The same as Conservation, except the objective is to maintain in present condition, & involves <u>No Sustainable Use</u>

IUCN: The International Union for Conservation of Nature is an international organization working in the field of nature conservation and sustainable use of natural resources. It is involved in data gathering and analysis, research, field projects, advocacy, and education. Their mission statement reads: "Influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable."



There are 3 Key aspects to achieving a Sustainable Conservation Model:



3

Ecological Sustainability The Offtake or Use of Resources & Regenerative Processes



Economic Sustainability

The Material Welfare & Livelihoods of mankind



Social Sustainability

Value to Society, Alignment with Rational Society's Norms & Standards

..... all must be given equal priority

Ecological Sustainability... to achieve this the

Offtake and Use of resources must be sustainable and the management Regenerative

Some Resource Use and Management Actions to consider:

- Water Consumption (400 litres per person on site per day Works out to approximately 2 Million Litres per month for a 60 bed lodge, and this water is mostly sourced from boreholes)
- Wildlife Offtakes (Hunting, Problem Animals & 'Road Kills'- The Amount, the Age Class & Sex per species that are removed)
- Habitat Management must be Regenerative (Ensures healthy water, mineral and energy cycles. Capped soils do not facilitate water infiltration to sustain the water table and boreholes) To learn more ... Watch the Netflix film "Kiss the Ground"
- Waste created by use (Wet and Dry, Includes rubbish, sewage, old oil etc. Where does it all go, Is it being recycled ... think of the context of 200 plus Bungalows in a 3000 hectare reserve. Waste attracts Wildlife and if not managed properly it creates 'Problem Animals')
- Soil Roads construction and maintenance uses gravel ... the density of road networks ...each gravel road represents an erosion line, 270 km roads @ 2.5 m wide = 675 000 m². Off-road driving impacts result in soil compaction & death of plants which leads to erosion
- Manipulation to provide Game Products (Bush Clearing & Artificial Water Holes to attract game)
- Vegetation Impacts (Clearing of Vegetation for camps, airstrips, roads, Off Road Driving impact on sensitive areas results in death of grass and rare plants)

Ecological Conservation Priorities 5 Order of priority Soil, Animal Plant Groundwater communities communities & Air **Note: Communities, not individuals.....**



Economic Sustainability

To achieve this we need to ...

- Generate sufficient revenue to Cover the Expenses of the Wildlife Management
 - (eg. roads, fences, counter-poaching, water for wildlife, censuses, research, erosion work, etc.)
- Provide Employment & Benefits for Mankind to justify the 'Land Use' as 'Wildlife"
- If tourism is your revenue generator then you must offer a Sustainable Experience = WILD EXPERIENCE, otherwise tourists get bored and do not come back time and again.

Fact: People remain fascinated by WILD EXPERIENCES and lose interest in Artificial (Canned) Experiences

eg. National Parks vs Zoos ;

Responsible Hunting vs Canned Hunting

... If you De-Wild the Habitat and the Wildlife, you are Devaluing those resources you are dependent on and that is not sustainable

Social Sustainability ... to achieve this the

- The land use must be of value to ALL of society, especially those communities living with wildlife adjacent to the wildlife areas
- The Operations, Activities and Management Practices in the reserve need to align with a Rational Society's Norms and Standards
- RATIONAL means "based on clear thought and reason" ... it is based on Facts
- A Person's Ethical beliefs stem from their cultural background and life experiences, so attempting to describe acceptable Ethics is very difficult
- One can only defend a stance on what is Ethically Acceptable, once you analyse what impacts we humans are really COMPLICIT in for our existence on planet earth !

Here are some facts relating to Resource Use on Planet Earth the realities of our existence on a planet with **7.7 billion humans** !

Social Sustainability – Water Use

- Boreholes and extraction of ground water it is unseen, but what effect does this have on the ecosystem, and is it sustainable ?
- Dams and their impacts eg. Kariba and the impact on the Mana Pools floodplains



NET TOTAL EMISSIONS WHITE OAK PASTURES

VS OTHER PROTEINS

(PER POUND OF PRODUCT

9

CONVENTIONAL BEEF (U.S.) 66 PORK (CA) 67 CHICKEN (U.S.) 97 CHICKEN (U.S.) 77 BEYOND BURGER^{IM} 78 SOY BEAN (U.S.) WHITE OAK PASTURES BEEF



Social Sustainability – Food Production

- The reality of 7.7 Billion people eating Fruit, Vegetables & Meat This is what you are Complicit in
 - Farming of Crops & Fruit : requires removal of all the wild animals, removal of the natural bush, plough & plant crops, killing of all insects (pesticides), knock on effect of pesticides on birds ... then we can harvest crops
 - Production of Meat : Conditions how animals are kept, what animals are fed, how animals are harvested and processed, Animals Die. Approximately 30% of the maze grown on the planet is fed to Cattle ... which were designed to eat grass. The net total emissions depend on how the livestock is farmed
 - Ecological Principle: We need hooved animals on the land. When HOLISTICALLY and REGENERATIVELY managed they keep the Rangelands of the world Healthy, Productive & Sustainable (Savory Holistic Management)
 - Ecological Principle: Modern cropping is degrading the state of the land, so we cannot afford to primarily subsist on a vegetarian/ vegan diet
 - Watch these ... <u>https://www.youtube.com/watch?v=L8ZOO_pRvp4</u> & <u>https://youtu.be/b1tZnOQrTi4</u> & <u>https://www.youtube.com/watch?v=xMjKcCfBtfl</u> & <u>https://www.youtube.com/watch?v=scn9JTwRZSc</u>







Social Sustainability – Power and Fuel

- These are the sights associated with our consumption.....need I say more
- Coal mines for Power stations

10

Oil wells, Oil Rigs &r Oil refineries All For Electricity, Transport, & Textiles



Social Sustainability – Luxuries

11

• Diamonds These are the mines where they are produced



Is the use of *Rhino Horn* any different ?... both leave a scar on the earth and both have irrational value

Social Sustainability - Setting Rational Standards

• For the survival of mankind, 'Zero Resource Use' is unavoidable !

So how do we set Rational Socially Sustainable standards?

Lets start by having Respect for the Planet and the Creatures that live on it ...

We should all be Environmentalists

- We should all support true Animal Welfare
- However, 'Animal Rights Extremism' (which is being *Traded as* 'Animal Rightism' for marketing purposes) is <u>not Ecologically and Economically feasible</u> for the survival of Planet Earth. It implies that humans have no right to make use of animals or their products, it does not acknowledge the food chain or any of the natural cycles of life.

Social Sustainability.... a balanced approach

13

RESPONSIBLE RESOURCE USE

Holistically Sustainable

Traded as 'Animal Rightism', but is Extremism NTENSIVE RESOURCE USE Results in De-Valuing of Wildlife Not Rationally Feasible for survival of planet earth 'Canning of Wildlife' Disrespectful to Wildlife Results in De-Wilding and De-Valuing of Wildlife





How to apply these principles to a Wildlife Area ...



Sustainably generating income: Tourist Safaris

In a Climax Wild State the 2 main ways of sustainably generating income from Wildlife that maintain the Wildness of both the Wildlife and Habitat:

- Game Viewing/ Photographic Safaris
- Hunting Safaris

<u>We need BOTH</u> if we are going to be able to JUSTIFY WILDLIFE as a VIABLE LAND USE GOING FORWARD !!

Why is hunting in some areas necessary?

- If you won a Game Viewing/ Photographic Safari to Africa where would you go ?
 - Over 95% of foreign tourists I have asked this question over a 20 year period, chose one of 3 destinations – Serengeti, Okavango or Greater Kruger National Park
- This is Influenced by:
 - Marketing by the TV 'Wildlife Channels'
 - Ease of access related to infrastructure such as international airports, tarred roads
 - Regional stability (safety)
 - The majority of Photo Tourists do not go to the back of beyond !!

So how are the other Wildlife Areas in Africa going to sustainably generate revenue ?



Why is hunting in some areas necessary?

18

Not all habitat with wildlife is productive enough for sustainable alternatives.

There is a **Productivity Gradient** (based on soils & rainfall), Decreasing from South to North in the wildlife areas adjacent to the KNP, this will also be present in other areas across the Planet.

- Within a lodge's game viewing area there needs to be a game viewing product that is attractive enough to provide a sustainable experience ... keep the tourists satisfied and coming back
- there needs to be sufficient ground water to meet the needs of the lodge @ 400 litres per person per day, a 60 bed Safari Lodge will use in the region of 2 million litres of water per month
- If these 2 criteria are not able to be met, the land use is not economically and ecologically sustainable and another conservation based land use needs to be utilized..... Responsibly conducted Hunting Safaris !





- The word 'Trophy' is misinterpreted...the 'Trophies' are actually memento's of the hunt. i.e. horns, skins, skulls, photos and videos.
- What about impacts of other mementos that tourists collect ? ... eg. the impact on Habitat and Species loss from Barley farming in the UK, for the production of Whisky
- Is Trophy Hunting really any less or more ethical than Golf ?... think of the impacts associated with a golf course: water use, herbicides, pesticides, removal of natural bush and animals living there
- Whether it's hunting for 'Meat' or a 'Trophy' an animal is harvested (Dies)
- 'Trophy Hunters' utilize the whole carcass, the same as 'Meat Hunters'
- Value of a Cape Buffalo as 'Meat' = R10 000 (approx. US\$ 650) vs
- Value of a Cape Buffalo as a 'Trophy' = R350 000 (approx. US\$ 25 000) ... as a Wildlife Manger, which income would you rather have ?
- Banning Trophy hunting does not result in another use of Wildlife, it devalues Wildlife and results in Land Use change !!

The Real issue is whether hunting is practiced Sustainably and Ethically and whether the Revenue generated from it is Spent Responsibly...

To Set Responsible Standards we need **Operating Protocols** for Game Viewing & Hunting Operations

- Understand the Economic, Ecological and Social impacts
- Maximize the positive impacts

20

Mitigate and Manage the negative impacts to ensure they are Sustainably practiced



21 Operations Protocols

 What aspects are included in Operations Protocol? some examples from an Operations Manual & a Hunting Protocol

NGALA PRIVATE GAME RESERVE

ENVIRONMENTAL OPERATIONS MANUAL

	Greater Kruger Hunting Protoco for Reserves where hunting takes p					
eference Number:						
Parties responsible for	Formulation:	_	-			
Writer: Compileris:		Richard Sowry				
Date Effective:		2020/10				
Date of Revision:		OCTOBER 2020				
Consultation Process:		APNR JC Menters, APNR Warders, SANPerk LEDET, APNR Reserve Representatives	, MIPA,			
Review Date:						
Number of Pages:		20				

REVIEW AND APPROVAL PROCESS

Reviewed by APNR JMC	Signiture.	Coster	
Approved by Warden Reserve:	Reference in Minutes	Onic	
Approved by Chair Reserve:	Reference in Minutes	Date	
Signed into Effect.	Signature	Date	-

Greater Kruger Hunting Protocol For Reserves where hunting takes place: Effective from 5th October 2020

Photographic Operations Protocol: Ngala



Hunting Operations Protocol: Greater Kruger

Some important aspects to ensure sustainability :

- Ensure the "Fittest Genes" are not removed before they have bred (Ecological)
- Ensure the resource is not over-utilized, set Quotas for Offtakes(Ecological)
- Ensure that the Resource utilized is attaining true market related value (Economic)
- Hunting should be conducted according to a set of rules to ensure that there is respect for the wildlife and the environment (Social)
- The breeding of the animals should not be manipulated to enhance characteristics that did not naturally occur (de-Wilding ... Economic & Ecological)
- Humane aspects, Limit the Possibility of wounding animals through ensuring quality of marksmanship & hunting skills competency (Social)
- Aircraft may not be used for the location of animals as this Disturbs, De-Wilds & Cans the experience, but aircraft may be used to locate wounded animal if other ground based efforts have failed (Economic & Social)





Which offtake of the following two elephant would be sustainable ?

Use facts to make informed decisions The graph below shows the Growth characteristics of tusks of elephants in the Kruger National Park (Whyte & Hall-Martin) If you want the large tusk genetics to remain in the system then harvest those age/ weight classes below the 'average line'



Both photographs are of the same Elephant – named "Mandleve" (1937-1993)

1972 – age 35 Years

26



- In the prime of his life Physically
- Has not yet passed on his genes
- Commercial value, about US\$ 80 000
- Not Ecologically Sustainable if removed

1992 – age 55 Years



- 1 year before he died, done his breeding and passed on his genes
- Commercial value, upwards of US\$ 3 Million
- Social consequences which must be holistically managed
- Ecologically Sustainable if removed

27

Economic and Ecological translation for different species:

Unlimited in Size , Trophy Free Ranging Wild Lion

ng Wild Lion US\$ 100 000 @ 7 years it is Ecologically Sustainable

Unlimited in Size, Trophy Free Ranging Wild Buffalo @ 12 years it is Ecologically Sustainable US\$ 25 000

If ivory over 100lbs/ per side, then upwards of US\$ 3 million

Unlimited in Size, Trophy Free Ranging Wild Elephant

@ 50 years it is Ecologically Sustainable



To ensure that Activities are conducted Responsibly, both types of Safaris require Competent Guides

- For Game Viewing/ Photographic Safaris:
 - The Appropriate Legal Guiding Qualifications, such as SASSETA/ FGASA, First Aid, PDP
 - Legally competent with the appropriate SAPS Firearm Competency certificate.
 - On site SOP's & Logistical training (in place, but not yet consistent in the standard)
 - Conservation training W.R.T Impacts (in place, but not yet consistent in the standard)..... soon to be established as the 'Responsible Resource Use' (RRU) module

Competent Guides

- For Hunting Safaris the Reserve Representative's Qualification guidelines are as follows:
 - The individual should have at least 5 years Professional Working Experience as a Game Ranger, FGASA DG Guide or Professional Hunter that includes the pursuit of Dangerous Game.
 - The Reserve Representative must have passed the "Reserve Representation for Hunting Course". If the Representative has not represented a reserve on a hunt in 3 years then they are required to re-qualify.
 - Legally competent with the appropriate firearm (SAPS) Competency certificate.
 - Must have a good working knowledge of the reserve including roads, camps, boundaries and other infrastructure
 - The reserve representative will be responsible for judging the age of the animal and will advise on what they believe the tusk/ horn dimensions to be. The estimated age and dimensions will be recorded by the Reserve Representative prior to the taking of the animal.
 - It is the Reserve Representative's responsibility to ensure that all the necessary information of the hunt is recorded and filed appropriately. The records shall include the permit, the category of the animal to be hunted, good photographic evidence to be able to assist with judgement and assessment of the animals age and horn/ tusk judgement, as well as aiding better decision making going forward. An example of this record is available for inspection. This report must be concluded within 30 days of the hunt taking place.
 - The Reserve Representative shall be subject to corrective measures in the case of repeated errors in application of the protocol.
 - Conservation training W.R.T Impacts (in place, but not yet consistent in the standard)..... soon to be established as the 'Responsible Resource Use' (RRU) module

EXAMPLE PRIVATE GAME RESERVE

MONTHLY SUMMARY FOR THE MONTH OF:

Example

1. OCCUPANCY

		LODGE X - OVERNIGHT							
	Regular staff	Temporary	Paying	Compliment	Other	Staff Visitors			
		construction	guests	ary guests &					
		staff		kids					
Monthly total bed nights	2123	77	1211	23	27	88			
		Average	e Per Night Pe	er Month		118.30			

	LODGE Y - OVERNIGHT									
Regular staff	Temporary construction staff	Paying guests	Compliment ary guests & kids	Other	Staff Visitors					
821	33	502		19	36					
					47.03					

	Lodge X	Lodge Y
Guest beds	44	18
Month days	30	30
Guest occupancy, including compl.	93.48%	93%
Guest occupancy, excluding compl.	91.74%	93%
Percentage International guests	87%	94%

l	2. WATE	R USAGI	<u> </u>										
					Averag	e water co	nsumption	for period:			1-30	<mark>Septem</mark> t	<mark>ber 2019</mark>
	person pe	r day avg (Lodge X)	305		person pe	r day avg (Lodge Y	548				
_	MONTH	Jan'19	Feb'19	Mar'19	Apr'19	May'19	June'19	July'19	August'19	Sept'19			
odge X	No. days	31	28	31	30	31	30	31	31	30		u	1
	USAGE	1,188,000			1,158,000								
	MONTH	Jan'19	Feb'19	mar'19	Apr'19	May'19	June'19	July'19	August'19	Sept'19			
lge Y	No. days	31	28	31	30	31	30	31	31	30			1
	USAGE	582,000	555,000	575,000	676,000	679,000	598,000	950,000	857,000	774,000			
	Kitchen/Scu	ullery Consu	mption				16,500		Kitchen/Scu	ullery Consu	mption/wat	er bottling p	lan
	Laundry Co	onsumption					190,000		Laundry Co	nsumption			
	workshop						19,500						
	Lodge	Х							Lodge	Y			

31

3. OFF ROAD DRIVING

Ο

32

MONTH	Jan'19	Feb'19	Mar'19	April'19	May'19	June'19	July'19	August'19	Sept'19		
Offroad	54	51	70	50	53	59	50	73	63		
incidents											
No.drives	395	386	402	366	397	402	399	406	388		
(Lodge X)											
No.drives	185	174	199	178	182	193	187	195	186		
(Lodge Y)											
Incidents /	0.09	0.09	0.12	0.09	0.09	0.10	0.09	0.12	0.11		
drive											

4. ROAD MAINTENANCE & HABITAT

Annual Maintenance schedule complete. None done during month

Approximate gravel extracted during the



5. FUEL CONSUMPTION

PET ROL consumption for period DIESEL consumption for period

Sep-19 was Sep-19 was

682	liters.
5,540	liters.

6. WEATHER 2015

	Lodge	Х	Lodge	Y
MONTH	Rainfall (mm)	No. Rain Days	Rainfall (mm)	No. Rain Days
January	109	6	88	6
February	112	5	94.5	5
March	48	4	33	4
April	0	0	0	0
Мау	0	0	0	0
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
Sept	1	1	1	1
October				
November				
December				
	270	16	216.5	16

7. GUIDES

NAME	FGASA	PDP	1st AID	DEAT	Rifle
	level				Competen
					су
Name ????	level1	У	valid	У	yes
Name ????	level1	У	valid	У	yes
Name ????	level1	У	valid	У	yes
Name ????	level1	У	valid	У	yes
Name ????	level1	У	valid	У	yes
Name ????	level1	у	valid	у	yes
Name ????	level 1	у	valid	у	yes
Name ????	level1	у	valid	у	yes
Name ????	level1	у	valid	у	yes
Name ????	level 1	у	valid	у	yes
Name ????	level1	Y	Valid	Y	Yes
Name ????	level 1	у	valid	у	yes
Name ????	level 1	у	valid	у	yes
Name ????	level1	у	valid	у	yes
Name ????	level1	у	valid	у	yes
Name ????	level1	у	valid	у	yes



34

1. AUDIT PROCESS

The ECO inspected the Ngala Safari Lodge and Ngala Tented Safaris facilities on **30 May 2018** to undertake the <u>17th bi-annual audit</u> as prescribed by the Integrated Environmental Management (IEM) process and as per the conditions of the Operations Manual (OP'sM) agreed to by SANParks and &Beyond: Ngala Management. The following aspects were addressed:

- Met the Operator/s from Ngala and discussed the implications of compliance with the OPs'M.
- Discussed the outcome/s of Bi-Annual Audit Nr. 16 and the progress that was made over the past few months.
- Evaluated compliance with the contents of the OP'sM and the policies of SANParks including <u>National Environmental Legislation</u> pertaining to sensitive areas.
- Problems encountered are described under each heading and summarised under the title of a finding. All findings require immediate attention.
- Discussed mitigation measures where applicable and formulated ACTION plans or recommendations as necessary.
- · Suggested the implementation of remedial actions as required
- Rhengu has also submitted some **recommendations**. These should be implemented as far as possible.
- Reports were submitted to the Department of Environmental Affairs (DEA), Ngala Management and the South African National Parks (SANParks).

Assessment Team:

- Ngala Safari Lodge Manager: Aaron Jones.
- ECO: &Beyond: Ngala: Ralf Kalwa.
- Section Ranger: Kingfisherspruit: Richard Sowry.
- Ngala Guides and Managers.

2. UPDATED CONTACT DETAILS OF REPONSIBLE PERSONS

1. ECO: Ralf Kalwa Rhengu Environmental Services Cell: 082 414 7088 E-Mail: <u>rhengu@mweb.co.za</u>

2. Ngala Safari Lodge Manager: Aaron Jones. Tel: 015 793 1453 Fax: 015 793 1555 E-Mail: aaron.jones@andbeyond.com

3. AUDIT APPROACH

The Operations Manual (OP'sM) addresses the mitigation and management for the operational phases of the project and details specific actions to be followed. It is to be used by the contractors/operators and others involved with the construction- and operational phases of the development.

The roles of the Environmental Control Officer (ECO), the Section Ranger (SR), the General Manager (GM) and the Contractor/s are well described in the Integrated Environmental Management (IEM) process and are highlighted in the OP'sM which was accepted and signed by the various role players.

35

Auditing of Game Viewing/ Photographic Operations

4 AUDIT RESULTS

Through a process of regular audits, the ECO will assess whether the various role players are compliant with the contents of the OP'sM, policies of SANParks and Environmental Legislation applicable to sensitive areas.

Issues of **non-compliance** with the above, will be highlighted and responsible persons will be required to address these issues with immediate effect. Issues of non-compliance are described as **findings.** Findings are described as follows:

- The term **FINDINGS** is directly linked to the term **non-conformance** or **non-compliance** of an aspect described in the OP'sM. &Beyond: Ngala must ensure that findings are addressed timeously as they reflect a mistake, which requires rectification.
- The term **RECOMMENDATION** is used loosely to convince the operator into addressing an issue, which is based on a proven track record. E.g. all thatch should be covered with wire mesh to prevent significant damage by baboons.
- Findings will not be issued for aspects of OHASA provided these do not impact or could impact upon the surrounding environment.

Findings are categorised in terms of **importance**, **priority** and **function**. The following is **applicable**:

- Negative Impact Finding (Procedurally incorrect): An aspect which is described in the OP'sM and which is not implemented as per procedure or could result in a significant environmental impact will result in a FINDING. This is regarded as a non-compliance with or a non-conformance of the OP'sM.
- Operational Management Finding: This finding is less important than the category above and has its foundations in aspects of maintenance and operations, e.g. a leaking tap, a dustbin without a lid, a blocked drain etc. Corrective actions will have to be described in an ACTION PLAN.

Findings may or may not result in a breach of contract or in breach of legislation. The SANParks will analyse the list of findings, and together with &Beyond determine whether all possible corrective actions have been implemented and all "avenues of solution" have been investigated. Should normal procedures prove inadequate and result in a lack of progress, a breach in the contract/legislation may be issued.

The ECO cannot be held responsible for aspects pertaining to a breach in the contract between the two parties. The ECO, through regular auditing, merely measures compliance within the framework of the OP'sM and the prevailing Environmental Legislation.

ISSUE	MANAGEMENT ACTION AND MITIGATION	ISSUES/FINDINGS/ACTION REQUIRED RESPONSIBILITY: &BEYOND:NGALA	0	NC	NA
1. Cultural and Natural Resources.	1. No cultural sites and or artefacts may be disturbed. Report finds to the SR and the ECO.		С		
	2. The handling of the find will be referred to the South African Heritage Resource Agency (SAHRA) for advice and guidance.		С		
2. Biosphere Manipulation.	1. No bush clearing is allowed.		С		
	2. No alien/invasive plants may be introduced to the property.	Control and remove all alien-, invader- and exotic plants and trees on the Hans Hoheisen property.	С		
	3. No baiting of wildlife is allowed to enhance game viewing.		С		
	4. No natural resources may be collected and used within the Kruger National Park without the approval of SANParks. Rocks, sand, gravel and wood collection are managed in accordance with specific SANParks policies.		С		
3. Wildlife Management and Research Activities.	1. All approved wildlife management and research activities (including monitoring) as required by SANParks will continue as required. Consultations with Lodge Management (LM) will be undertaken as required.	Ngala are involved (sponsorhip) with a number of wildlife research projects.	С		
	 Ngala Staff and any future developments may not impact upon fixed monitoring sites. 		С		
	 The SR and field rangers will conduct anti-poaching and monitoring patrols on the Ngala property. 	Good co-operation exists on anti-poaching aspects.	С		
4. Carrying Capacity (Staff and Guests).	1. The guest: staff ratio stands at 60:105 all camps included.				NA
5. Water Provision and	1. Adhere to the principles and conditions of the Water Policy.		С		
Extraction.	2. Water usage must be measured and reported in the Monthly Report submitted to the SR and the ECO. The recommended SANParks norm has been pegged at 350litres/person/day (165 persons x 350litres= 57 750 litres per day) for all forms of water use.	Water consumption has once again improved significantly over the audit period. On average 49 636 litres were used per day (50 010 and 52 466 litres during previous 12 months) from November to April. A figure of 57 750 litres is recommended as a maximum. Once again well done to all involved.	С		

5. AUDIT FINDINGS:

Finding Number	Issue
1.	 Water Use Registration: &Beyond must register all its water use as per DWS legislative requirements. Management have made contact with the responsible official at DWS and the application is <i>in prep</i>. This includes bore holes, sewerage permits and abstraction points. Submit copies of water use licences to the ECO. URGENT: This finding stands over from previous audits.
Operationa Finding	I Management Findings: Issue
Number	
1.	Road Network: See Appendix 4. Much work has been undertaken on the roa network over the past few months. This is commendable and must continue t ensure that all road sections are brought into line with SANParks Standards.
2.	 <u>Main Camp Staff Village</u>: <u>Litter and Bits and Pieces of Waste</u>: Bits and pieces of litter and waste is still found in and around the staff village especially around the waste bin sites. This includes old concrete and ash pits. Please address this aspect to ensure a litter and concrete free staff village. <u>Storm water control and erosion management</u>: Run off and wash away problems persist in the staff village, behind the staff village at Tented Camp (access road to BOH) and at the Tented Camp swimming pool. <u>Redundant Equipment and Old Materials</u>: The collection and storage of redundant equipment and materials persists. These materials are never re-use and invariably become dumping sites. Clean up the stockpile yard.
3.	Hans Hoheisen Garden: The exotic trees and plants not indigenous to the Kruger National Park landscape must be removed and replaced with indigenous vegetation commensurate with the Kempiana Landscape.
4.	Fences: Hans Hoheisen and the Main Camp reedbed fences require repair work.
5.	COC: Copies of all COC certificates (see page 13) must be made available to the ECO for perusal.
6.	<u>Fuel Load</u> : Ensure that all fire risks are addressed. Fuel loads around Tented Camp are particularly high.
Auditing of Game Viewing/ Photographic Operations

A. EXECUTIVE SUMMARY

10,

Issue	Overall rating
Cultural and Natural Resources	2/2
Biosphere Manipulation	4/4
Wildlife Management and Research Activities	3/3
Carrying Capacity (Staff/Guests)	NA
Water Provision and Extraction	12/13
Fire Management	3/3
Problem Animal Management	6/6
Alien Biota Management	3/3
Field Guides	4/4
Firearms in National Park	2/2
Staff Issues	5/5
After Hours Driving (Access to Ngala)	2/2
Access by Aircraft	4/4
Game Viewing Activities	2/2
Off Road Driving	6/6
Guided Walks	4/4
Fly Camps, Bush Functions, Campfires	6/6
Code of Conduct: Safety and Security	4/4
Incident Procedures	3/3
Construction and Design	6/6
Power Supply and Power Lines	6/6
Waste Management	5/6
Liquid Waste Systems	5/6
Chemicals and Hazardous Substances	4/4
Pets and Poultry	2/2
Control of Game- and Venison Products	1/1
Soils and Road Maintenance	6/6
Official Documentation, Policies and Procedures	2/2
Auditing	3/3
TOTAL	115/118= 97%

Auditing of Game Viewing/ Photographic Operations



38

Including empowerment report: the submission of monthly financial contribution towards local community empowerment including staff wages and revenue generating initiatives in local community

Auditing Offtake report: Elephant Examples

Elephant unds 20-30 years		2017-2018						
AMOUNT	SPECIES	DATE HUNT CONCLUDED	HORN/ TUSK MEASUREMENT	JAW AGE	RESERVE REPRESENTATIVE ACCOMPANYING HUNT	OUTFITTER	PROVINCIAL HUNTING PERMIT NUMBER	COMPLIANCE WITH PROTOCOL
1	Elephant	06/07/2017	L13"X18" - 19 lbs R13"X39" - 26 lbs	23	Joe Soap	X Safaris	13920	yes
1	Elephant	09/07/2017	L13.5"X36" - 35.5 Lbs R13.5"X30" - 33 Lbs	32	John X	Y Safaris	14154	no
2							Percentage compliance:	<mark>50%</mark>

Elephant	unds 30-40 years		2017-2018					
AMOUNT	SPECIES	SPECIES DATE HUNT CONCLUDED HORN/ TUSK MEASUREMENT		JAW AGE	RESERVE REPRESENTATIVE ACCOMPANYING HUNT	OUTFITTER	PROVINCIAL HUNTING PERMIT NUMBER	COMPLIANCE WITH PROTOCOL
1	Elephant	13/06/2017	L14.5"x35" R14"x39" - 37 & 37lbs	39	Joe Soap	X Safaris	13911	yes
1 1 Leephant 16/06/2017	L14"X36" R14.25" X33" - 34 & 31 lbs	30	John X	X Safaris	13910	yes		
2							Percentage compliance:	100%

Auditing Offtake report: Lion Examples





4	Adult male	dult male lion, recommended minimum of 8 years old for Pride Male and 6 years old for other								
	AMOUNT	SPECIES	DATE HUNT CONCLUDED		AGE	OUTFITTER	RESERVE REPRESENTATIVE ACCOMPANYING HUNT	CITES TAG NUMBER	PROVINCIAL HUNTING PERMIT NUMBER	Compliance With Protocol
	1	Lion	2017/010/12	25 1/2"	08-Sep	John Soap	Joe Soap	X45634	102789	Y
	1								Percentage compliance:	100

Auditing of Hunting Operations

- Report on Revenue Generated and Spent from hunting:
 - Wildlife management;
 - Counter-poaching;

- Social initiatives; and
- Community benefit.
- Presented annually upon application for next season's Hunting Quota

Associated Private Nature Reserves (APNR) : Commercial Elephant & Lion Hunting for Conservation Funding data (only for those reserves that hunt)

				% Allocation of Revenue Spent			
YEAR	Elephant Hunted	Lion Hunted	Revenue Generated	Wildlife Management	Anti- Poaching	Community Outreach	
2019	41	0	\$901,655	26	59	15	
2018	28	1	\$750,070	31	62	7	
2017	26	2	\$756,704	30	63	7	
2016	18	0	\$499,674	35	57	8	
2015	16	1	\$464,311	37	56	7	

All revenue generated from Commercial Hunting in the APNR is spent on

- > Wildlife Management,
- Anti-poaching and
- Community Outreach

	Total Area of Habitat & Wildlife protected:	186 992 ha / 462 067 acre
	Total number of people employed in Wildlife Management & Anti-poaching:	227
/	Lion population from 2019 census:	248
/	Elephant Population from 2019 census:	2338
	Number of Rhinos protected:	332

Examples of criteria from the APNR Hunting Protocol to assist sustainable decision making:

1. The specific elephant selected for hunting is based on scientific data (Whyte & Hall-Martin), relating tusk size to age, ensuring conservation of large tusked genetics in the elephant population is maintained eg. 25-30 yrs old with a maximum tusk weight of 30 lbs per side (these dimensions are below the average for males in the Greater KNP Population)

2. The Lion selected for hunting is based on scientific studies by experts. The criteria of not hunting males under the age of 8 years is sustainable according to the science.

3. For specific Lion selection there is consultation with Game Viewing Safari Lodges to advise on lion pride dynamics and identification, ensuring key individuals are not removed.

4. A qualified and trained 'Reserve Representative' escorts each hunt to ensure correct decision making, and that responsible hunting ethics are practiced without exception

5. Extensive data is collected from each hunt to improve decision making where possible

6. Annual auditing of the offtakes is done to ensure that the prescribed standards are maintained

'Conservation' is a Land Use

45

In South Africa there is approximately 17 Million Hectares of Habitat under General Wildlife outside the National Protected areas.... below is the distribution of map of one of the more common species, the Blue Wildebeest



Figure 1. Distribution records for Blue Wildebeest (Connochaetes taurinus taurinus) within the assessment region



Compare this to the distribution of Wild Lion & Wild Elephant ...



Map sourced from EWT

Map sourced from ESAG



47

Whats the difference between the species that results in this huge contrast ...

	WILD LION & ELEPHANT	WILD WILDEBEEST
	Social & Ecological dynamics require larger land parcel	Social & Ecological dynamics require smaller land parcel
	Lion eats meat More expensive to feed Elephant eats grass & woody plants impact high	Eats grass Less expensive feed, impact low
	Fencing more expensive	Fencing less expensive
	Responsible value chain through Game Viewing Safaris only	Responsible value chain though Game Viewing Safaris, Safari Hunting, Venison, Game Sales





Which of these species has the most secure future ?

- The Wildebeest has the most secure future !
- Simply because our present Wildlife Models ...
 - Incentivise Small Intensive Wildlife areas
 - Devalue Wild Lion & Elephant by demonising Sustainable Use

(These same principles apply to Rhino & Leopard)

Ultimately it is all our responsibility to change this.... and the real issue is not whether you are hunting or game viewing It's how you do it **Responsibly or not ?**

THANK YOU !