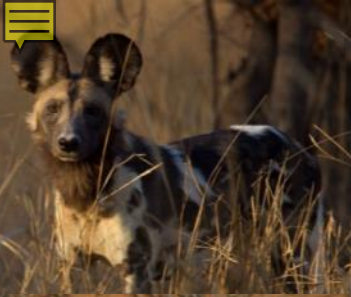


Transboundary Conservation of Endangered African Wild Dogs

Dr Rosemary Groom
African Wildlife Conservation Fund





African Wild Dogs

African wild dogs are the most endangered large carnivore in Southern Africa

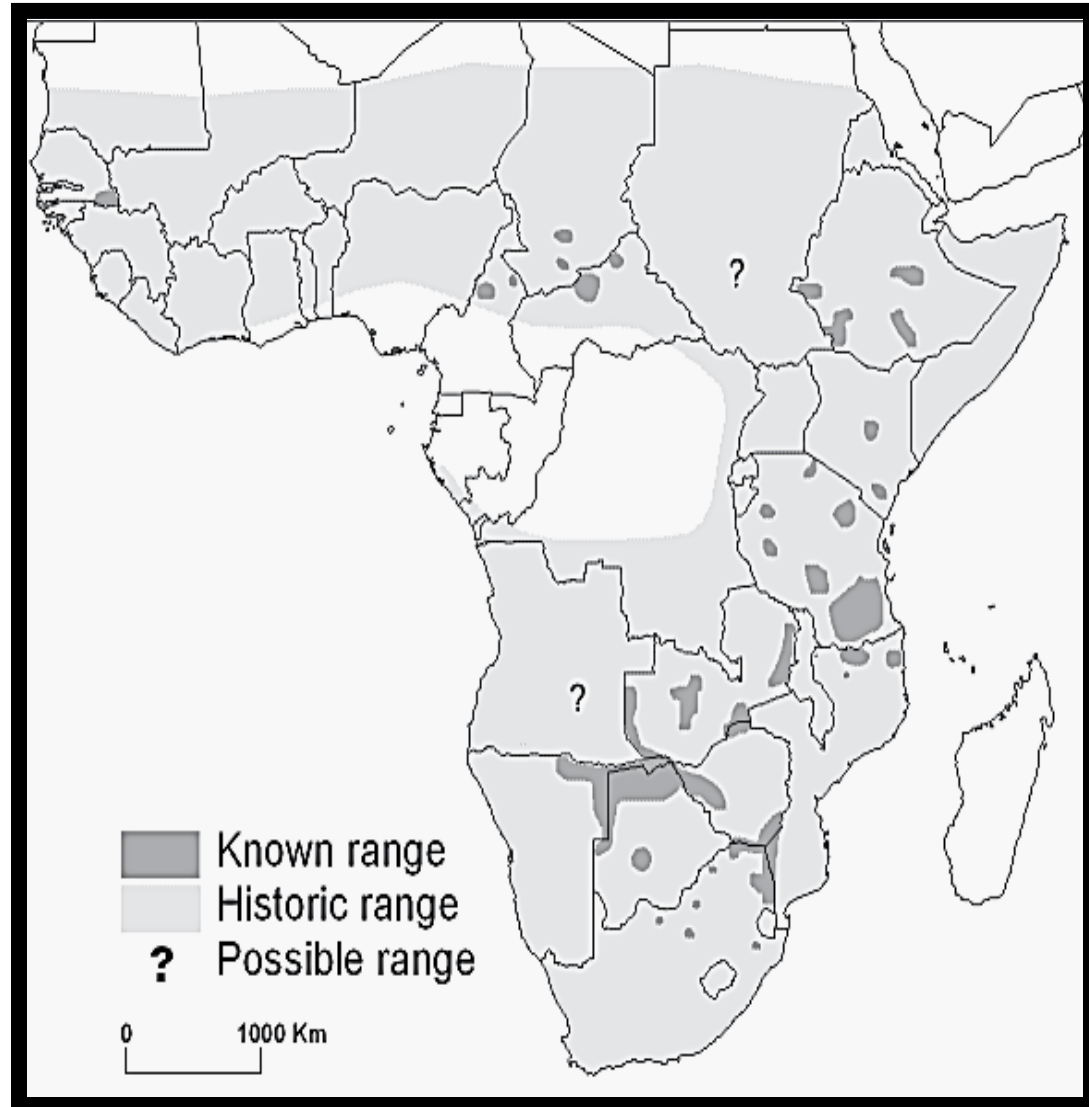
**Latest IUCN Figures: <6,600 individuals remain in the wild
(660 packs ---- 660 breeding females)**

Current range: < 7% of historical range

Low density, wide ranging species

Home ranges can be over 300,000 ha

Wild Dog Range







Only 2 dogs per 10,000 ha



Baltimore: 23,800 ha

621,342 People

Less than FIVE Wild Dogs

Washington DC: 17,700 ha

601,723 People

Less than FOUR Wild Dogs



Over 1.2 million people – less than one average pack of African wild dogs

Often stray beyond the boundaries of protected areas

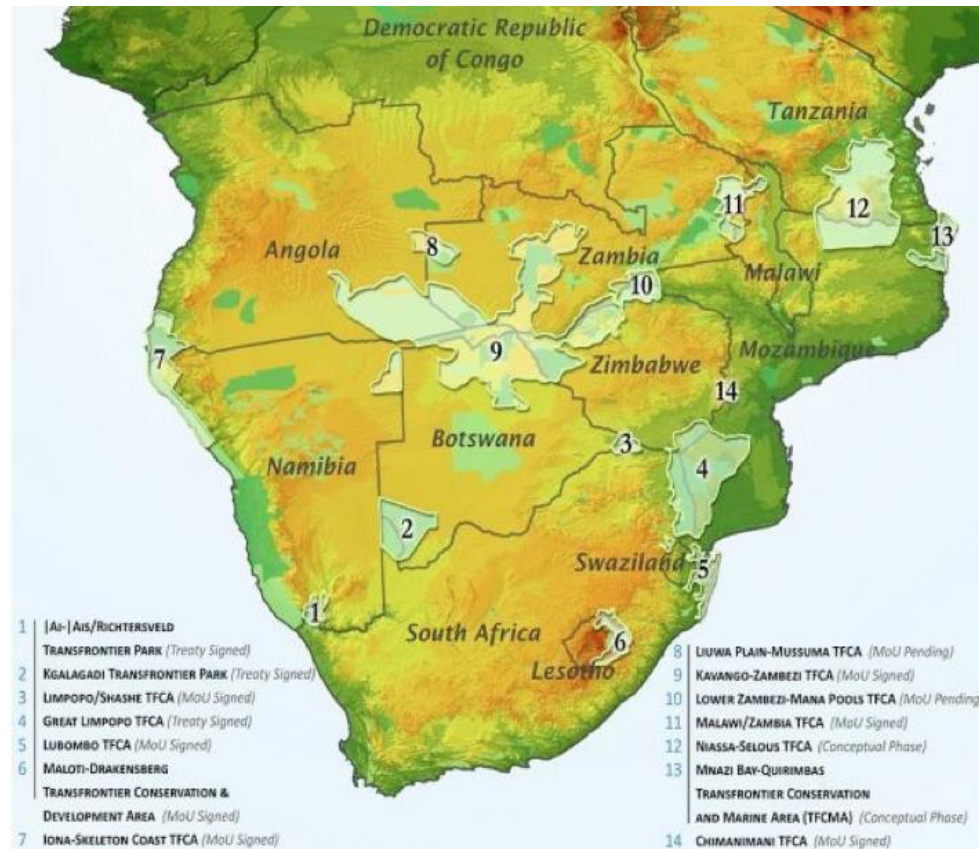
❖ Anthropogenic mortality



African wild dogs require management on a significant geographical scale



Transfrontier Conservation



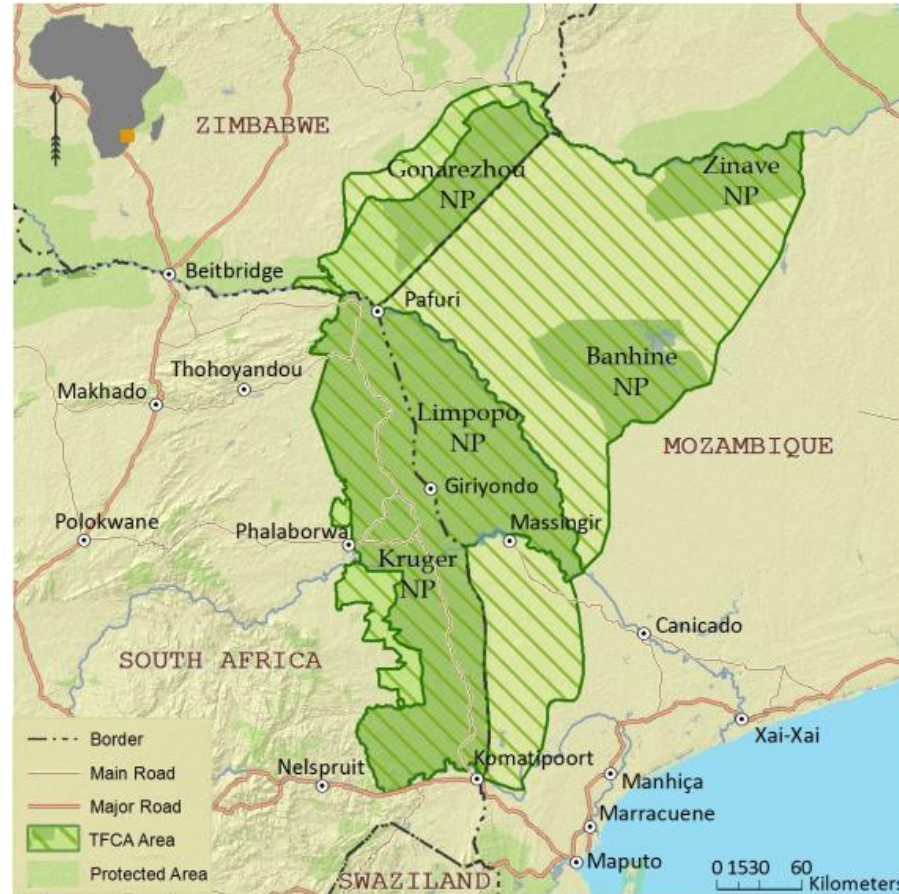
Nearly 70% of wild dog resident range is known or suspected to be connected across international borders

Transfrontier Conservation



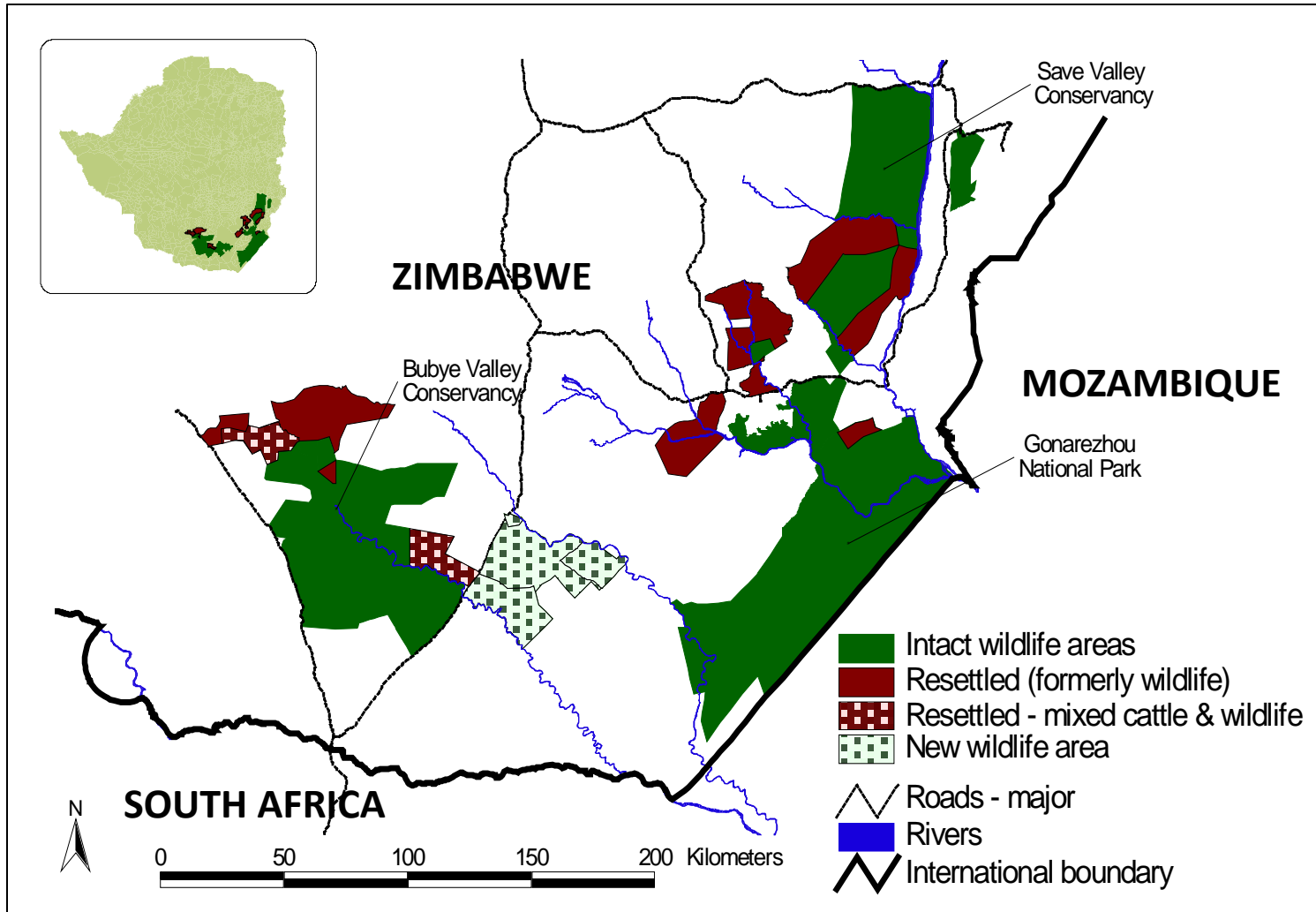
A reserve of 500,000 ha contains no point more than 40 km from its borders – a distance easily travelled in a day or two by African wild dogs...

Greater Limpopo TFP



The Greater Limpopo TFCAs, supports almost one tenth of the global population of African wild dogs

Zimbabwean GLTFCA





The African Wildlife Conservation Fund




*African Wildlife
Conservation Fund*


www.africanwildlifeconservationfund.org






Attack.R 6/28/2012 9:52 AM 









African Wildlife Conservation Fund



Management Plan for African Wild Dogs in the Greater Limpopo Transfrontier Conservation Area

African Wildlife Conservation Fund
2013

Phylogeographic and phylogenetic structuring of the African wild dog (*Lycoon pictus*) population of the Greater Limpopo Transfrontier Conservation Area

PhD Proposal 2013
Laura Tessem

1. Problem Description

- 1.1 African Wild Dog
- 1.2 Great Limpopo Transfrontier Conservation Area
- 1.3 Allele effect
- 1.4 Genetic diversity

2. Research statement

- 2.1 Research Objectives
- 2.2 Research Questions
 - 2.2.1 Allelic diversity
 - 2.2.2 Dispersal dynamics
 - 2.2.3 Genetic Distance
 - 2.2.4 Allele effect

3. Research Relevance

- 3.1 Societal significance
- 3.2 Scientific relevance
- 3.3 Innovative aspects

4. Approach

- 4.1 Obtaining samples
- 4.2 Processing of the samples
- 4.3 Genetic markers
- 4.4 Statistical analysis


5. Affiliation with (inter)national research programmes

6. Timetable of the project and working programme

7. Requested Budget

8. References

Supervised by
 Jørgine van Vuuren, Univ. Johannesburg
 Rosemary Groom, Univ. Johannesburg



A multidisciplinary approach to conservation



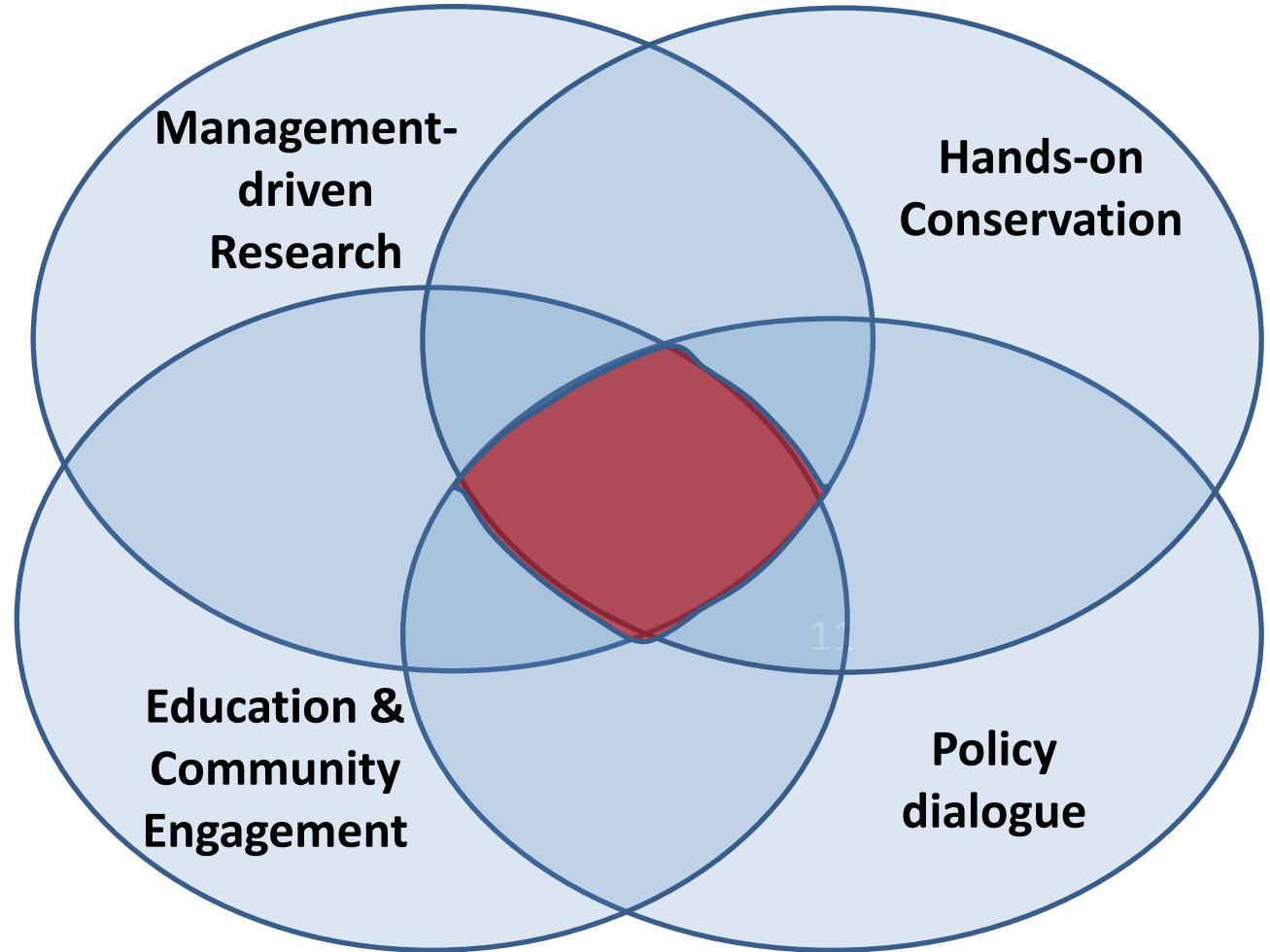
**Management-
driven
Research**

**Hands-on
Conservation**

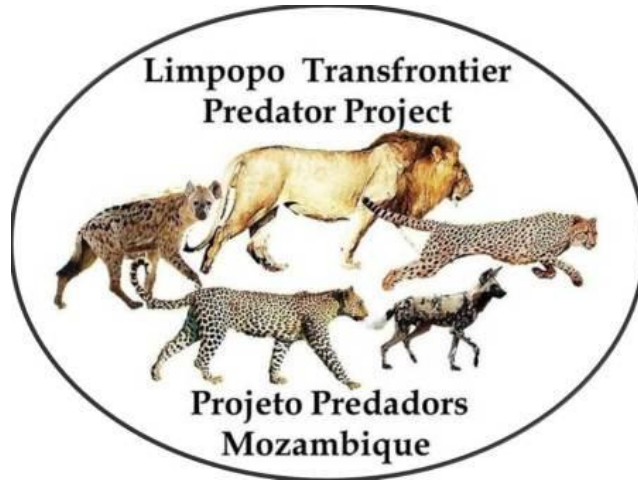
**Education
and
Community
Engagement**

**Policy
dialogue**

A multidisciplinary approach to conservation



Transboundary Collaboration

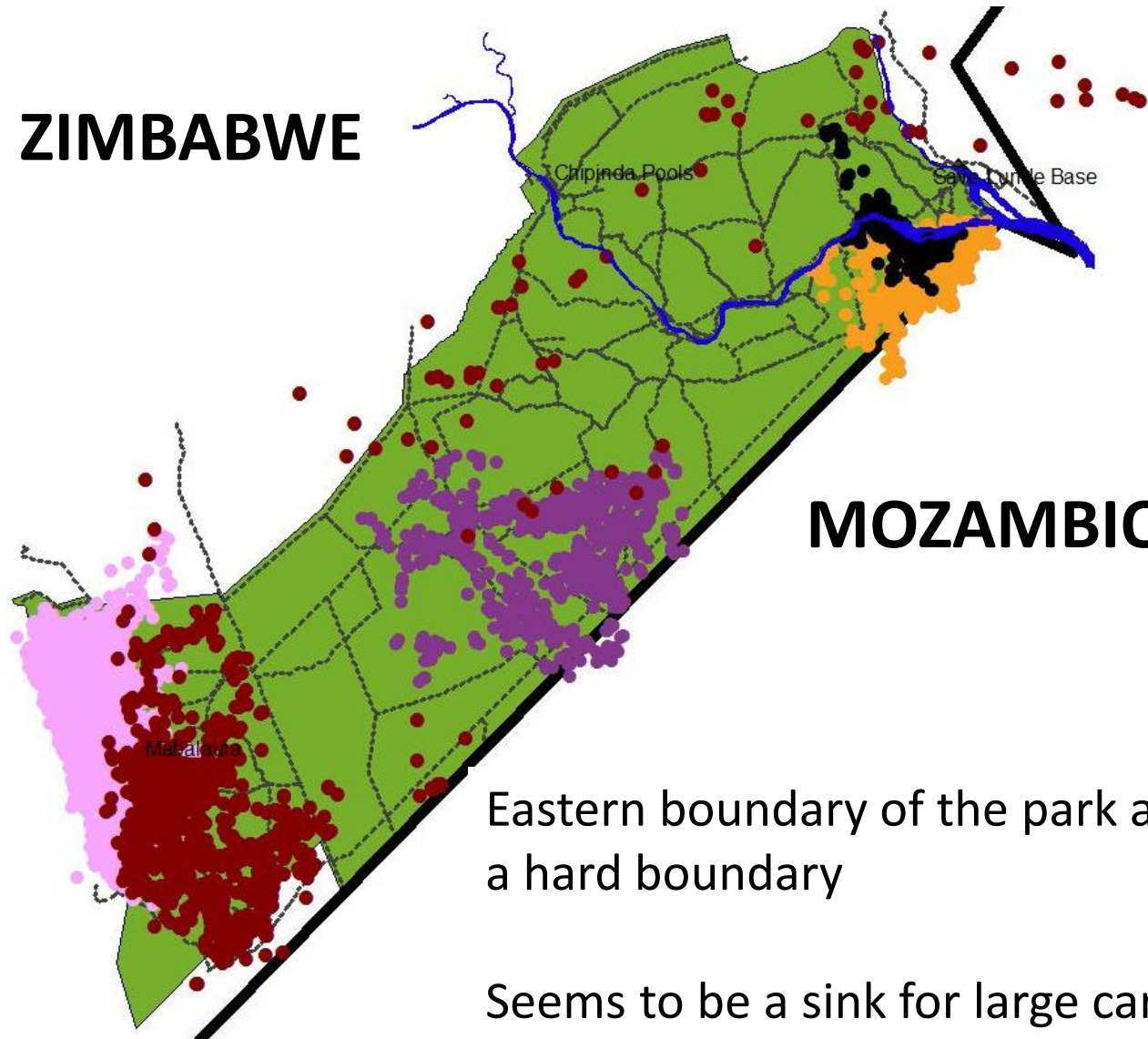


Genetics Project
Photographic Database
Photographic identification software...





ZIMBABWE



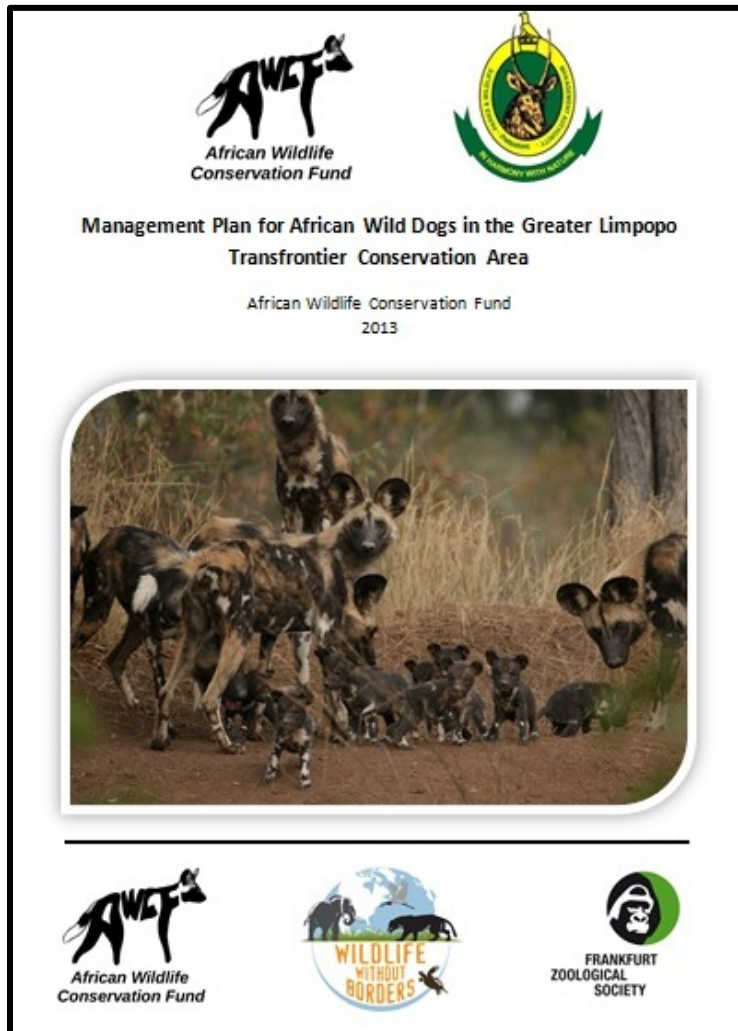
MOZAMBIQUE

Eastern boundary of the park acting like a hard boundary

Seems to be a sink for large carnivores

Unsustainably high level of mortality inside the park along that boundary

Management Plan for Wild Dogs in the GLTFCA



Uses the RWCP (ZSL/WCS) Southern African Regional Strategy for cheetah and wild dogs

Status of the dogs in Zim, Moz & SA

Threats and limiting factors

Coordination for research and conservation

Priorities for research and capacity building

Genetics Project

Phylogeographic and phylogenetic structuring of the African wild dog (Lycaon pictus) population of the Greater Limpopo Transfrontier Conservation Area



PhD Proposal 2013
Laura Tensen

Collected over 250 genetic samples – 4 populations

- Connectivity with Kruger National Park
- Allelic diversity – is there genetic depletion?
- Dispersal dynamics – are there barriers to effective natural dispersal?
- Genetic distances – closeness of genetic relationships
- Allee effect – does fitness decrease with smaller populations?



Rabies Vaccination



FMD VACCINATIONS RETURN MARCH 2012

DATE	NAME OF DIP TANK	FMD VACCINATION			RABIES VACCINATION		
		CATTLE CENSUS	VACCINATED	MISSING	CENSUS	VACCINATED	MISSING
19/03/12	MAKANANI	1948	1923	25	152	115	37
	DHAFI	1625	1439	186	123	78	45
	CHILUGWI	1699	1327	372	105	62	43
	GEZANI	2876	2400	476	116	116	-
	BONDELA	1502	1225	277	200	79	121
	CHOMUNANGA	1776	1250	526	149	47	102
	PUKUPELA	2035	2300	-	129	75	54
	DAVATA	926	1079	-	125	37	88
	PESVI	1099	775	324	131	42	89
20/03/12	MALIPATI	1565	1423	142	318	173	143
	MAOSE	1282	1100	182	118	109	9
	RUTANDARE	2471	2278	193	238	133	105
	CHISHINYA	1454	1467	-	194	64	130
	SAMI	1181	1000	181	100	100	0

RABIES VACCINE RETURN

B/F	REC	USED	WASTAGE	ON HAND
NIL	4000	3222	0	578

Education and Outreach



In collaboration with Lowveld Rhino Trust
and Frankfurt Zoological Society

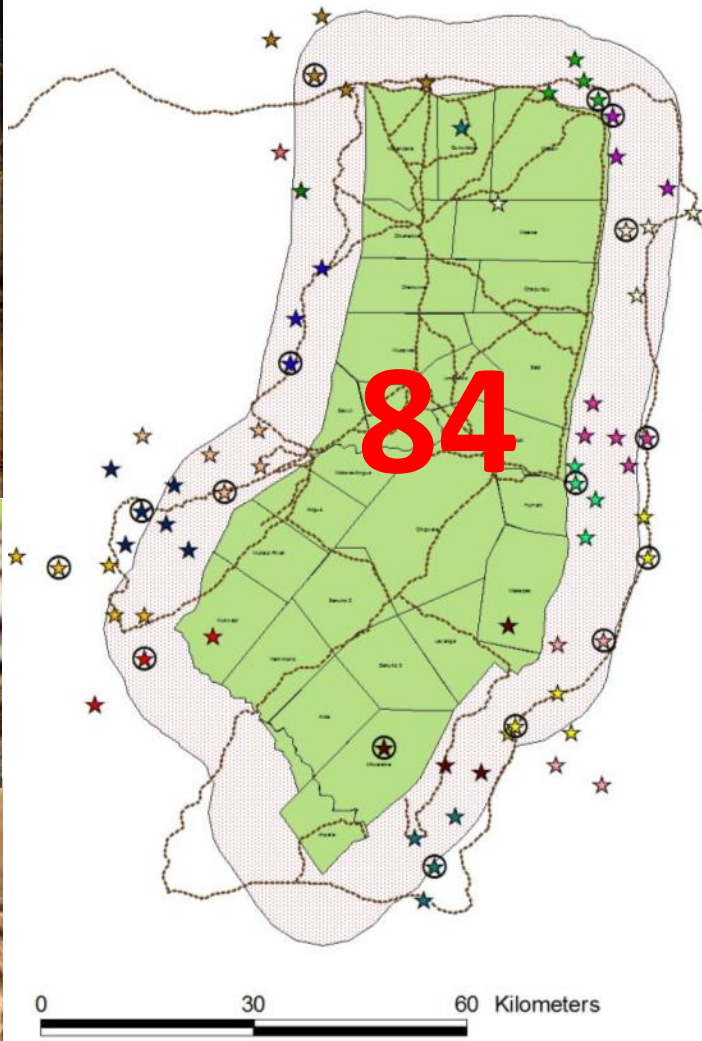




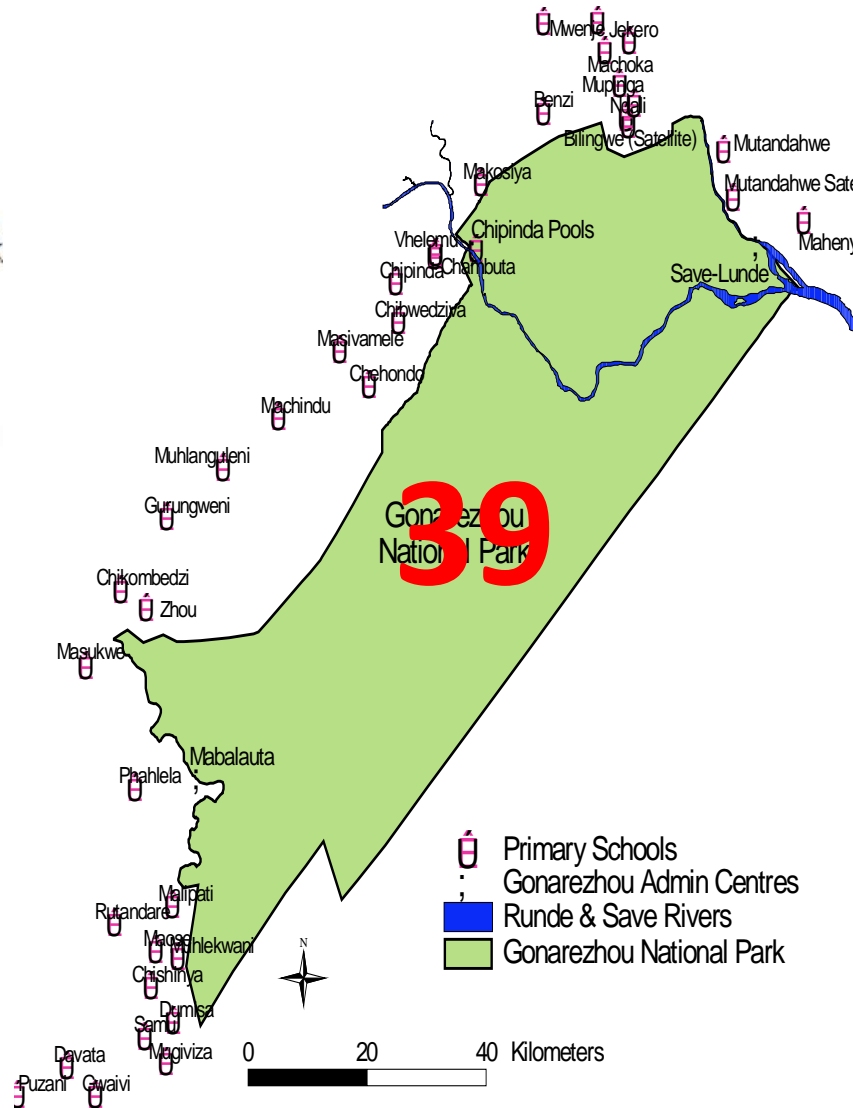
“In the end, we conserve only what we love. We will love only what we understand. We will understand only what we are taught” (Baba Dioum, Senegalese poet).

‘Education is the most powerful weapon you can use to change the world’.

Nelson Mandela



Save Valley Conservancy



Gonarezhou National Park



School Based Program

- Work in 123 Primary Schools (37 different communities)
 - 16,000 students, 500 teachers
- Multi faceted
 - Teacher training
 - Provision of conservation awareness materials
 - DVD showing
 - Support of environmental clubs
 - Secondary school scholarships
 - Literacy Program



Community Program

- Mobile education units
- Capacity building for human-wildlife conflict mitigation
- Discussion and involvement in project - ownership



Literacy





Official literacy figures in Zimbabwe: 91.3% literate

The Progressive Teachers Union of Zimbabwe, stated that the country's literacy rate could be **below 30%**.

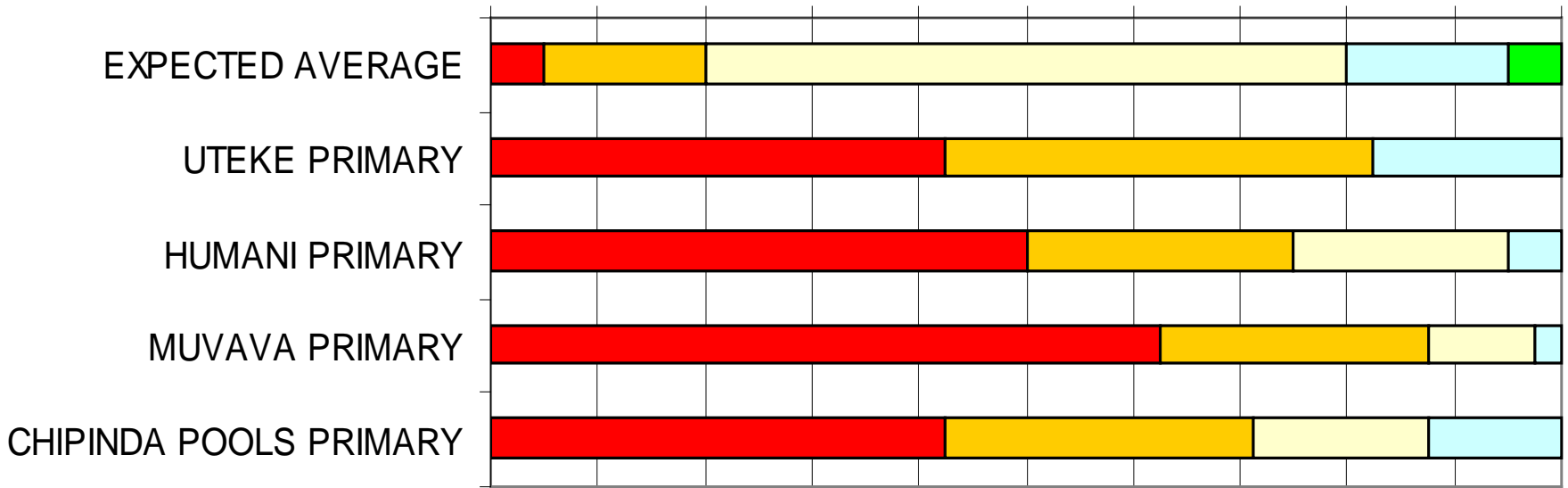
A recent SACMEQ survey in Zambia indicated levels of **functional literacy of 30% to 40%**, and much lower in many rural schools.

'Happy Readers' (independent) tested literacy in over 50 Zimbabwean schools, using internationally recognised standards, and adjusting for second language english speakers. Estimated **literacy at just below 20%**.

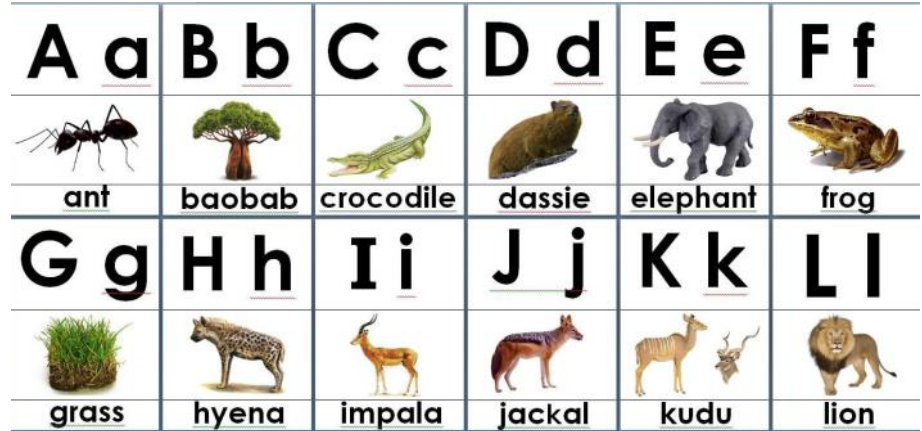
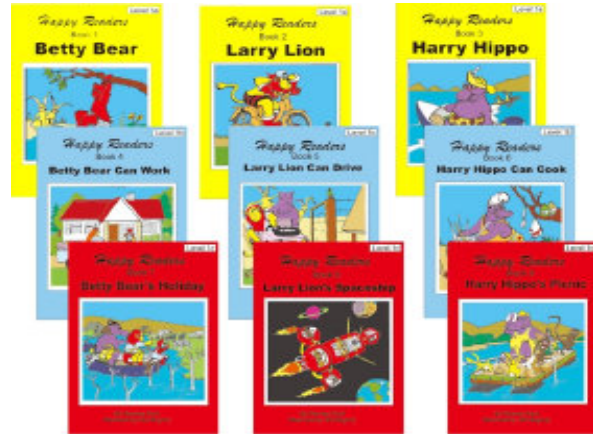
Literacy levels speak for themselves – Only **18.4% pass rate in O-Levels** in 2012.

Summary of Schools tested - all grades













0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



■ Non-Readers ■ Poor Readers □ OK □ Good ■ Excellent





A a	B b	C c	D d	E e	F f
					
ant	baobab	crocodile	dassie	elephant	frog
G g	H h	I i	J j	K k	L l
					
grass	hyena	impala	jackal	kudu	lion

M m	N n	O o
		
mongoose	nest	ostrich
P p	Q q	R r
		
porcupine	quelea	rhino

- Mongooses are small carnivores
- Mongooses eat eggs, lizards, insects and snakes
- Mongooses can be active during the day or at night
- Some species of mongooses live in groups and others live alone
- In Zimbabwe the most common mongoose is called a slender mongoose
- The smallest mongoose is called a dwarf mongoose

- Nests are homes for animals and birds
- There are many different kinds of nests
- Birds lay their eggs in nests
- Nests can be on the ground or in a tree
- Frogs and snakes can also make nests for their eggs
- Most birds only make nests when they reproduce. The rest of the time they do not use a nest
- Birds should NOT be disturbed at their nest

- Ostriches are birds – but they cannot fly
- Ostriches are the largest living bird
- Ostriches have very long necks
- Ostriches eat seeds, grasses and other plants
- Ostriches do not need to drink water
- Ostriches can run very fast (70km/hr)
- Male ostriches are territorial
- Ostriches lay big eggs in a nest on the ground

- Porcupines are herbivores
- Porcupines are a carnivore during the night (nocturnal)
- Porcupines are rodents (fishers and mice)
- They are the largest rodent in Africa
- Porcupines have long sharp spines called quills
- Porcupines use their quills to defend themselves against predators
- Porcupines use old termite mounds for a den

- Queleas are small birds
- Queleas live in very large flocks when they are in the reproductive season
- Queleas eat seeds from grasses and trees
- Queleas make a noisy call when flying and nesting
- The red-billed quelea is one of the most abundant birds in the world (there are lots and lots of them)
- Queleas are in the weaver family

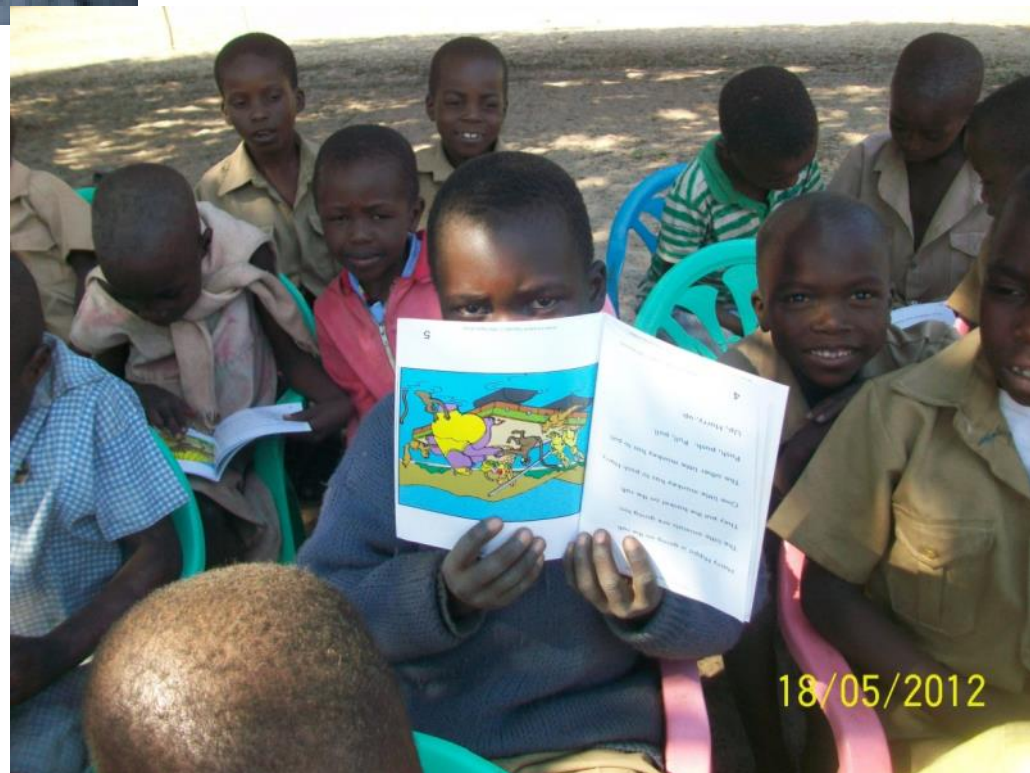
- Rhinos are very endangered
- There are two species of rhino: white and black
- Black rhinos eat shrubs and trees (browsers)
- White rhinos eat grass (grazers)
- Rhinos are active during the day and night
- Rhinos have two horns on their faces which are like our fingernails and hair
- Rhino horn is NOT medicine, but some people in Asia think it is



18/05/2012



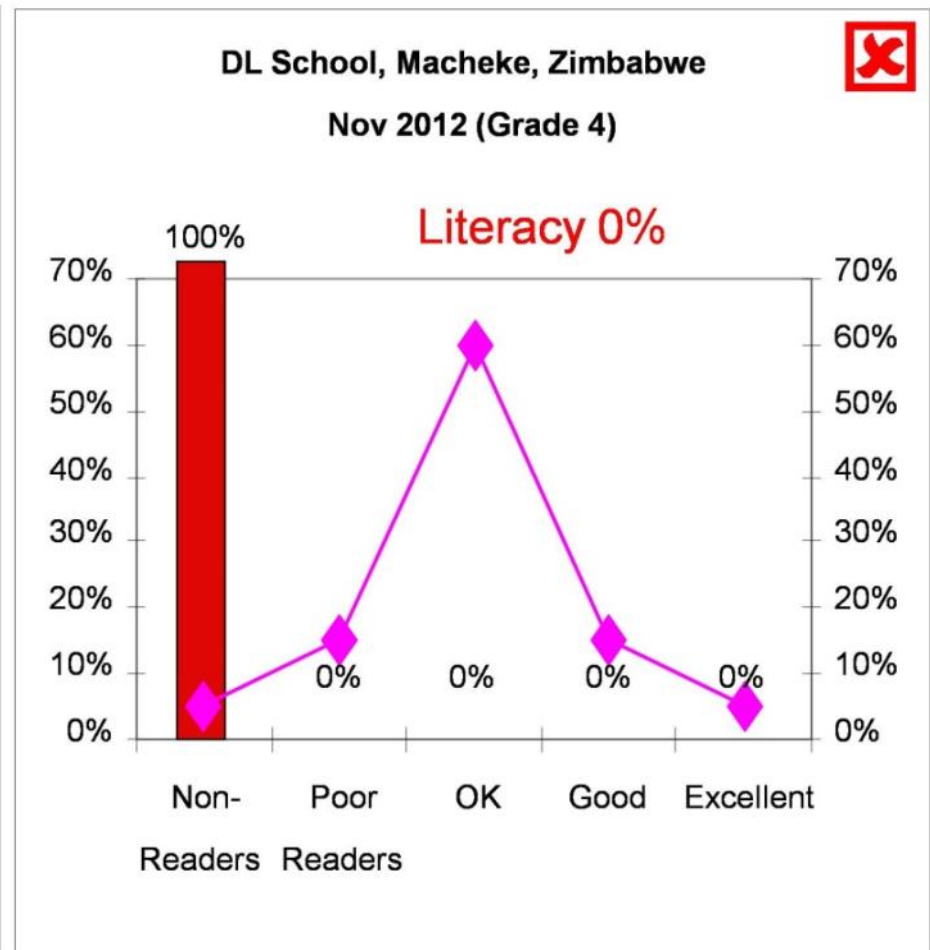
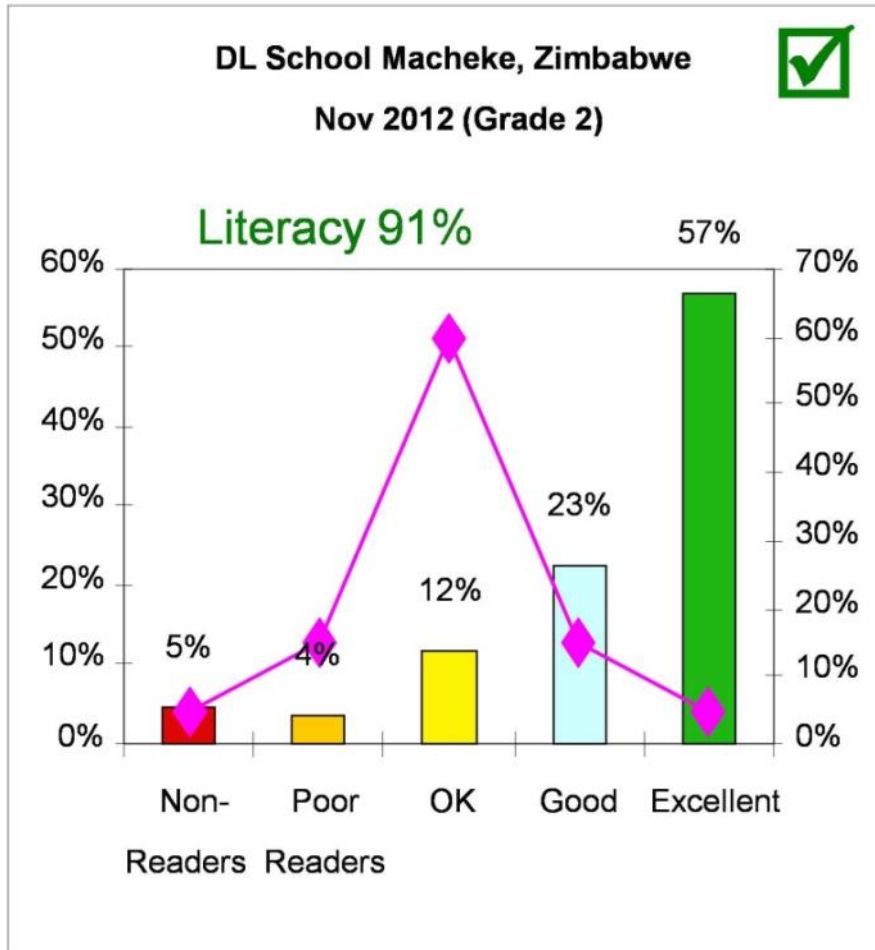
2010/07/08



18/05/2012

Literacy Evaluation

Same school, compare Grade 2 with Grade 4



Grades 2 below used Happy Readers Level1 & early Level2 books from March 2011 to the end of 2012

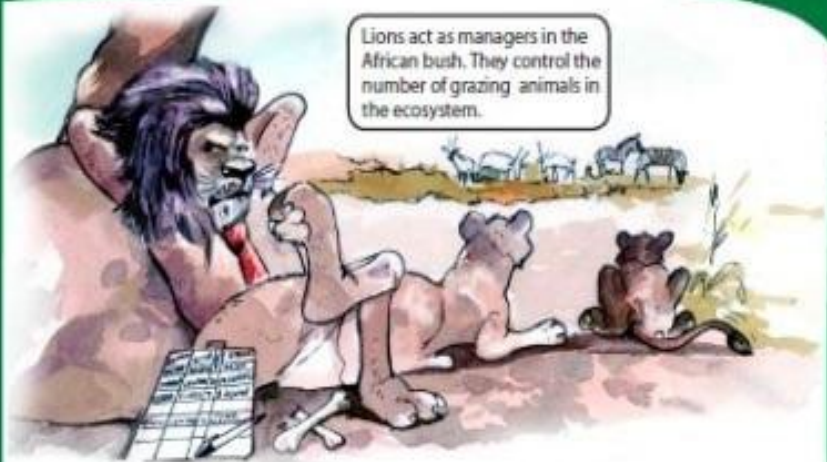
The 3 upper grades (4, 5 & 6) tested above did not have Happy Readers

Pink line shows the expected norm

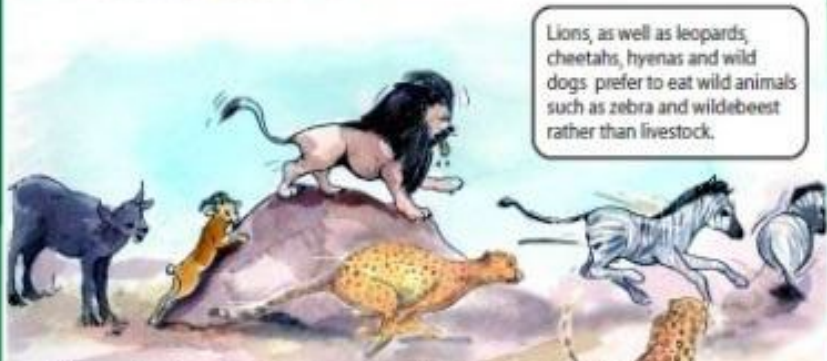
Happy Readers really do make Happy Children!

Conservation Awareness



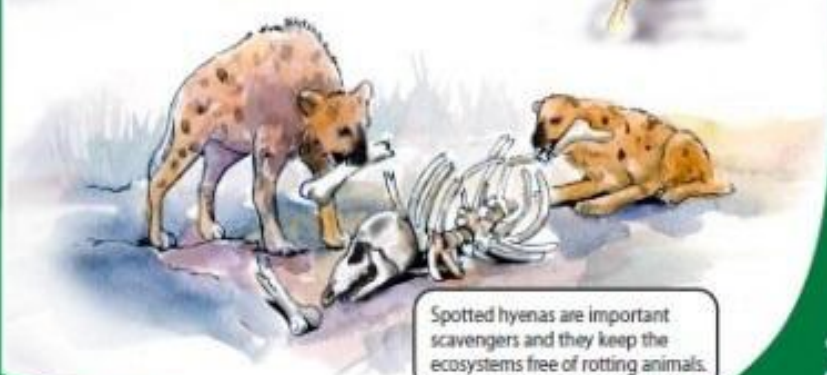


Lions act as managers in the African bush. They control the number of grazing animals in the ecosystem.



Lions, as well as leopards, cheetahs, hyenas and wild dogs prefer to eat wild animals such as zebra and wildebeest rather than livestock.

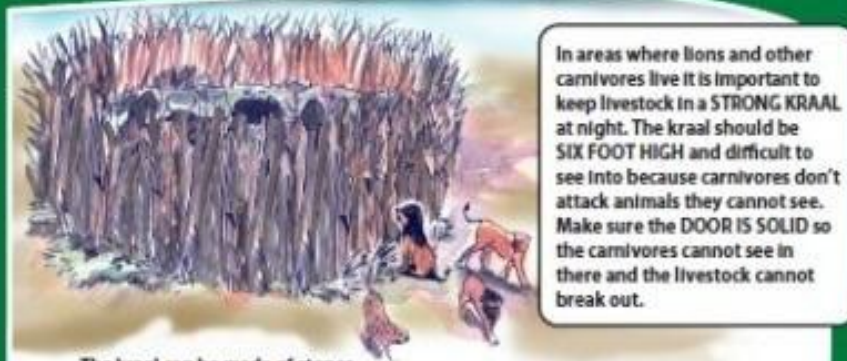
It is important to maintain good numbers of wild animals so that the carnivores can eat their preferred prey and not livestock.



Spotted hyenas are important scavengers and they keep the ecosystems free of rotting animals.

Carnivores in the Ecosystem

3a 3b



In areas where lions and other carnivores live it is important to keep livestock in a STRONG KRAAL at night. The kraal should be SIX FOOT HIGH and difficult to see into because carnivores don't attack animals they cannot see. Make sure the DOOR IS SOLID so the carnivores cannot see in there and the livestock cannot break out.

The kraal can be made of stones, bricks, strong trees or thorn bushes, but must be solid.



ADULT herders need to stay with the livestock during the day. Dogs can also be used to protect the herd.

Keeping donkeys with the herd helps to warn you if carnivores are nearby.



Herders need to sleep near the livestock in order to scare the carnivores away by making noises.

DVD Program



10/01/2013



11/01/2013



10/01/2013

School Field Trips







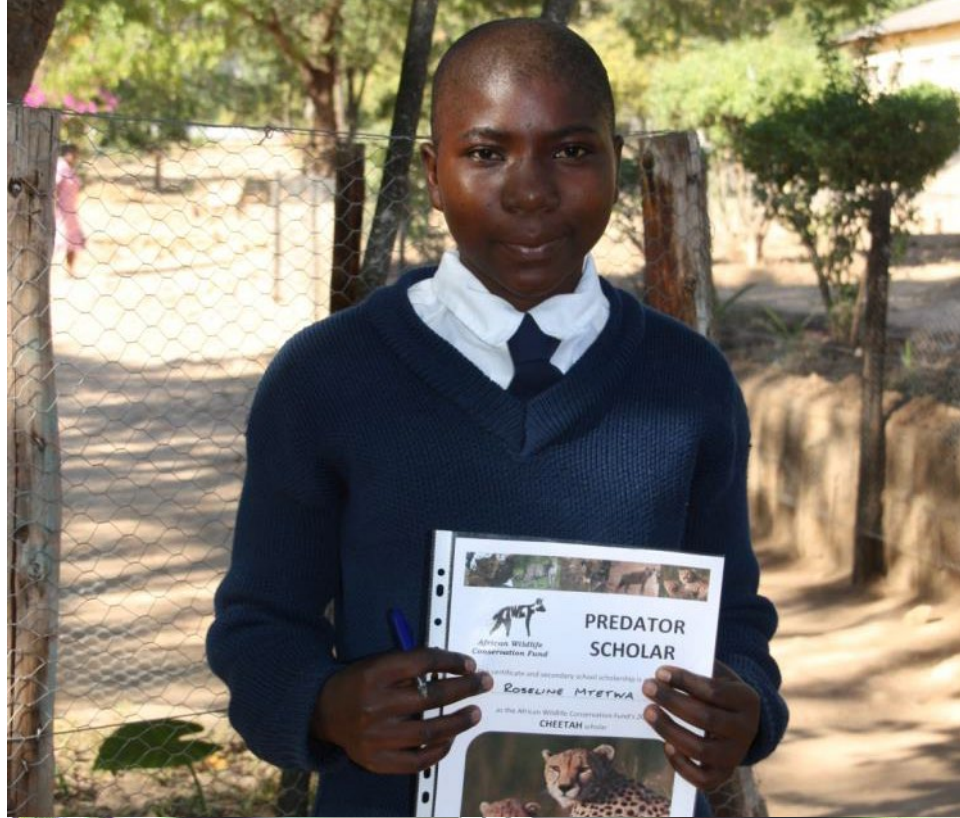


Education Days



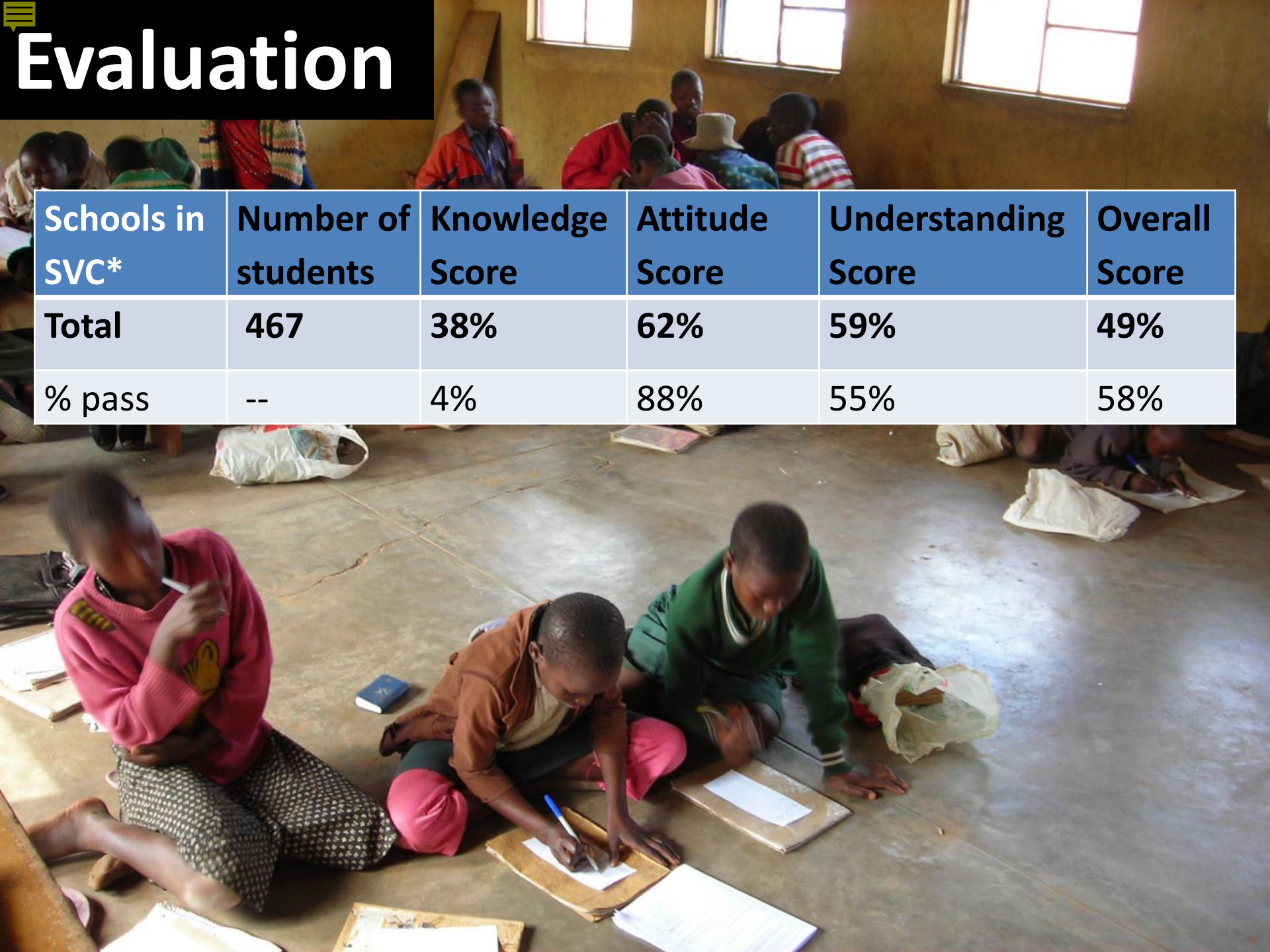


Scholarships



Evaluation

Schools in SVC*	Number of students	Knowledge Score	Attitude Score	Understanding Score	Overall Score
Total	467	38%	62%	59%	49%
% pass	--	4%	88%	55%	58%





The Rufford Small Grants Foundation
www.ruffordsmallgrants.org



WHEEL DRIVE



RESULTS.....



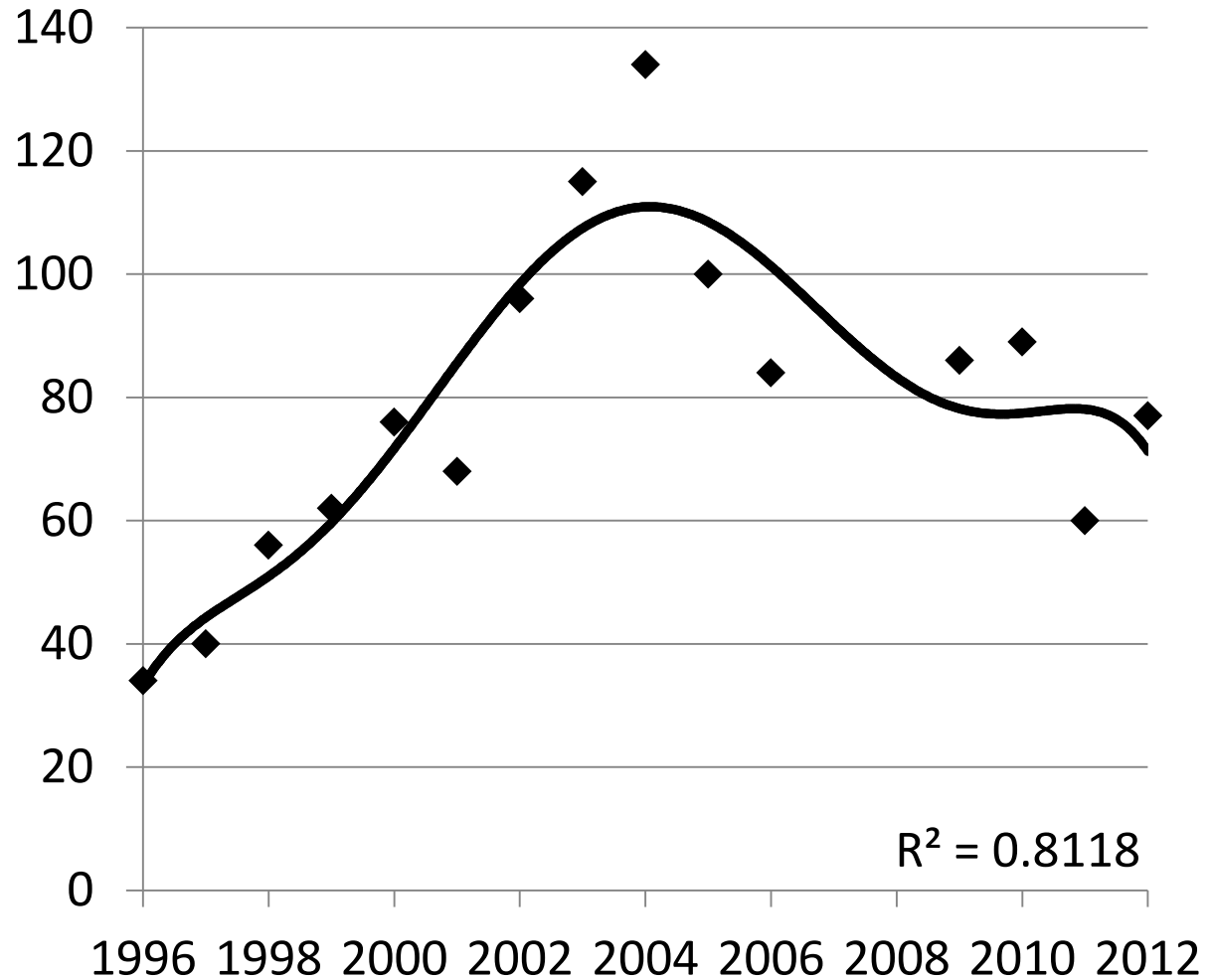
Gonarezhou National Park

- **At least eight breeding wild dog packs in the GNP**
- At least 47 adults and 49 pups
- Confirmed connectivity (by photographic matching) with Save Valley Conservancy





Savé Valley Conservancy



Savé Valley Conservancy

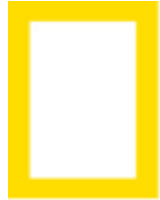
Scale is Important

We need to think big to conserve African wild dogs

By doing so, we conserve ecosystems and many other species



Acknowledgements



**NATIONAL
GEOGRAPHIC**

Conservation Trust



Thank you



www.AfricanWildlifeConservationFund.org

rosemary@africanwildlifeconservationfund.org