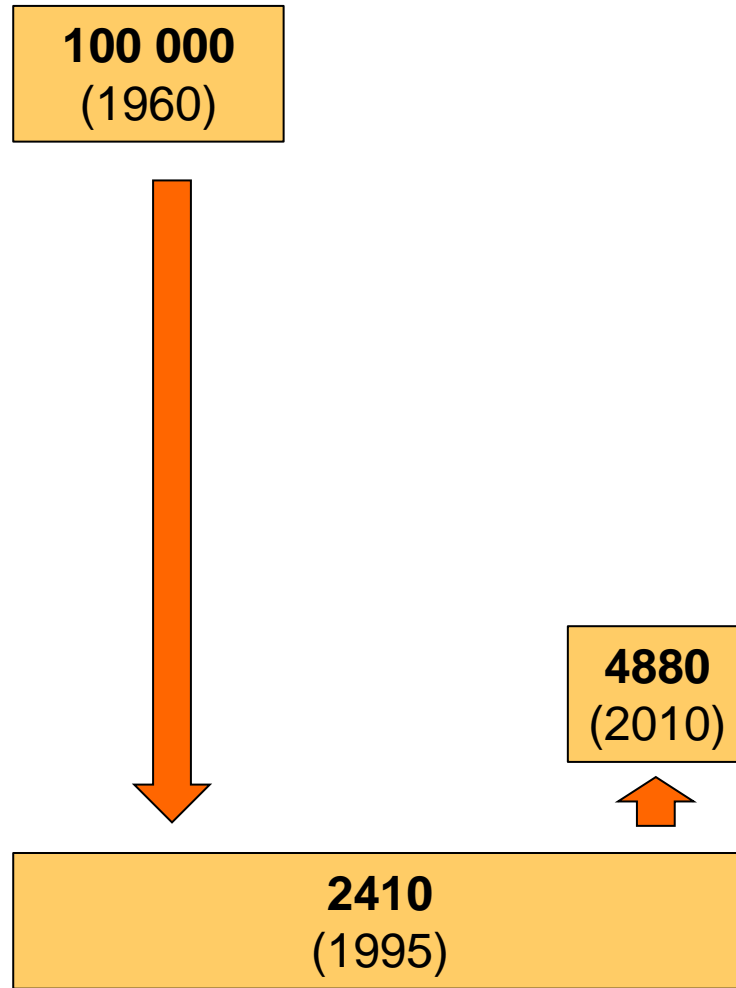


# Black Rhinoceros: Harvesting For Growth

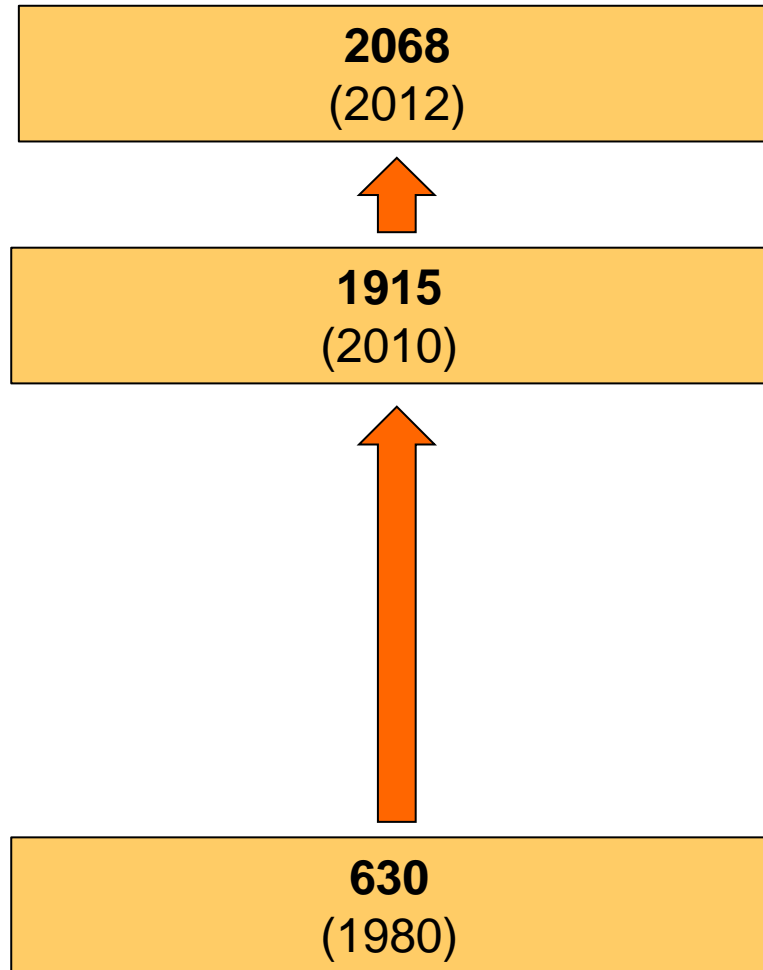
**ADVENTURE PROVINCE**  
*Eastern Cape*  
PARKS & TOURISM AGENCY



# Black Rhino Population Trends in Africa



# Recent Black Rhino Population Trends in South Africa



# Eastern Cape Parks and Tourism Agency

## Population 1

*D. b. minor*  
Continental Significance  
Donor Population

## Population 2

*D. b. bicornis*



## Population 3

*D. b. minor*  
Outside of province  
Custodianship Site



## GOVERNMENT NOTICE

## DEPARTMENT OF ENVIRONMENTAL AFFAIRS

No. 49

25 January 2013

## NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT NO. 10 OF 2004)

BIODIVERSITY MANAGEMENT PLAN FOR THE BLACK RHINOCEROS (*DICEROS BICORNIS*) IN SOUTH AFRICA 2011-2020

I, Bomo Edith Edna Molewa, Minister of Water and Environmental Affairs acting under section 43(1)(b), read with section 43(3) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), hereby publish the Biodiversity Management Plan for the Black Rhinoceros (*Diceros bicornis*) in South Africa for 2011-2020, as contained in the Schedule hereto.



**BOMO EDITH EDNA MOLEWA**  
MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

## SCHEDULE

**BIODIVERSITY MANAGEMENT PLAN  
FOR THE  
BLACK RHINOCEROS (*Diceros bicornis*)  
IN SOUTH AFRICA  
2011-2020**

(2011)

Jointly developed by South African members of the  
SADC Rhino Management Group (RMG)

Knight MH<sup>1</sup>, D Balfour<sup>2</sup> & RH Emslie<sup>3</sup>

<sup>1</sup>Park Planning & Development, Conservation Services, South African National Parks, & Centre for African Conservation Ecology, Department of Zoology, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa

<sup>2</sup> Eastern Cape Parks & Tourism Agency, East London, South Africa.

<sup>3</sup> IUCN African Rhino Specialist Group, Hilton, South Africa

## Longer Term Vision

Contribute to the recovery and long-term persistence of the global population by having viable populations of the indigenous subspecies in natural habitat throughout their former range within SA and managed as a regional meta-population

## Shorter Term Vision

An average SA meta-population growth rate for both of the two indigenous subspecies of black rhino of at least 5% per annum, and meta-population sizes in SA of at Least 2800 *D. b. minor* and 260 *D. b. bicornis* by the end of 2020

Biological  
Management

Protection

Human  
Resources

Co-ordination  
of  
Conservation  
Management

Economic and  
Social  
Sustainability

Population Monitoring



## Biological Management Objective

To Manage black rhino populations:

A: To achieve sustained meta-population growth through harvesting at a 5% per annum rate where required

B: To maintain optimal levels of genetic diversity

Harvest  
for Growth

Establish New  
Populations

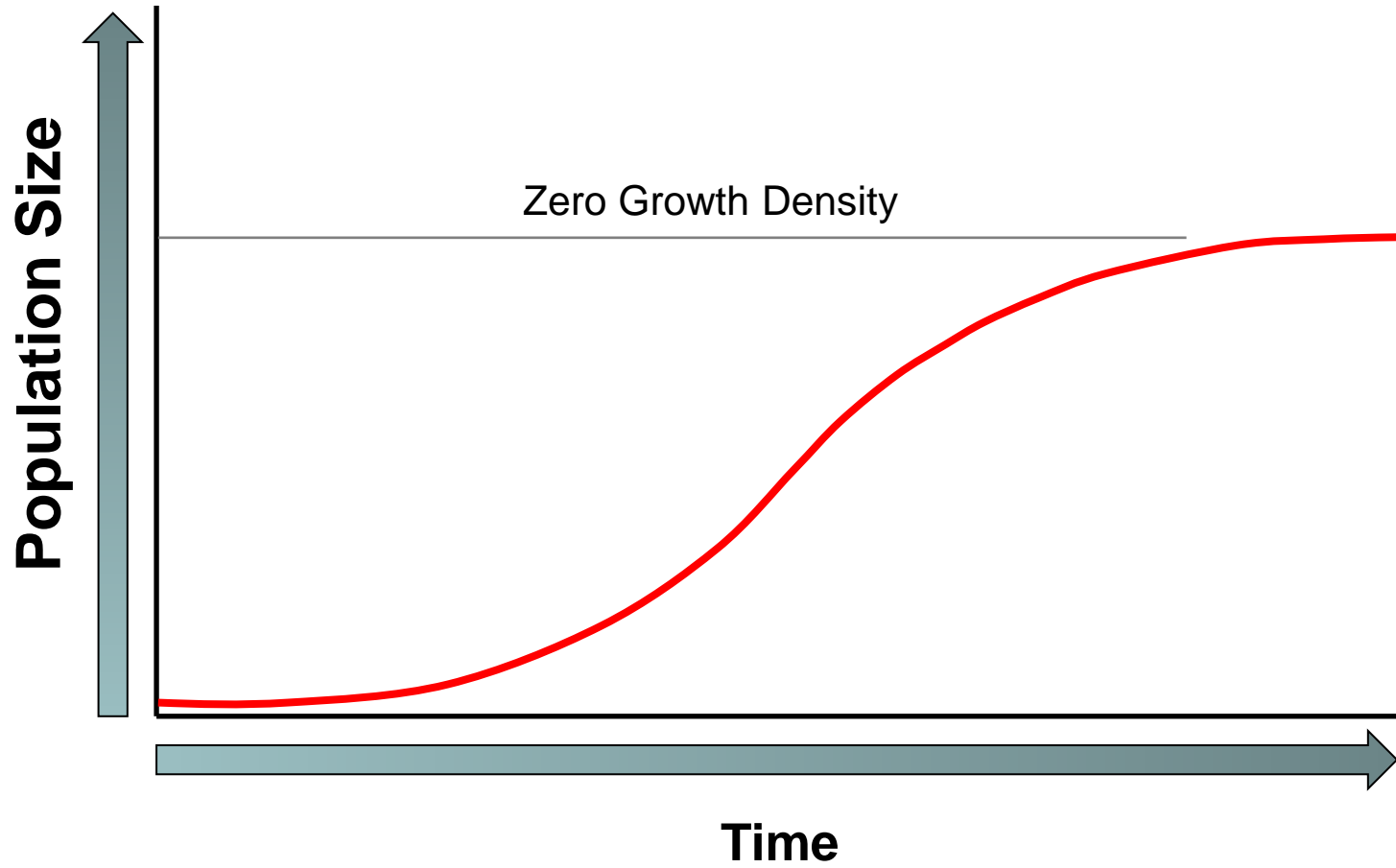
Range and  
subspecies  
separation

Promote long  
term genetic  
viability

Surplus Males



# Harvesting for Growth



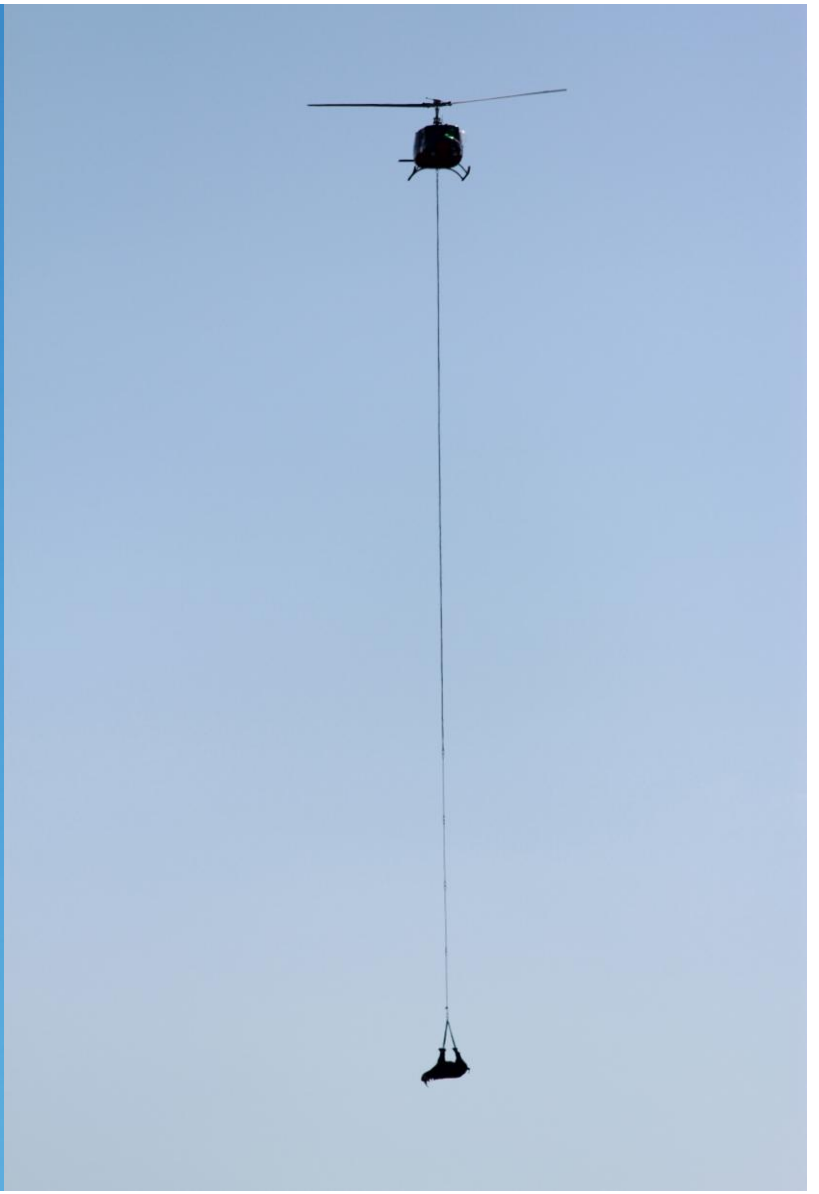
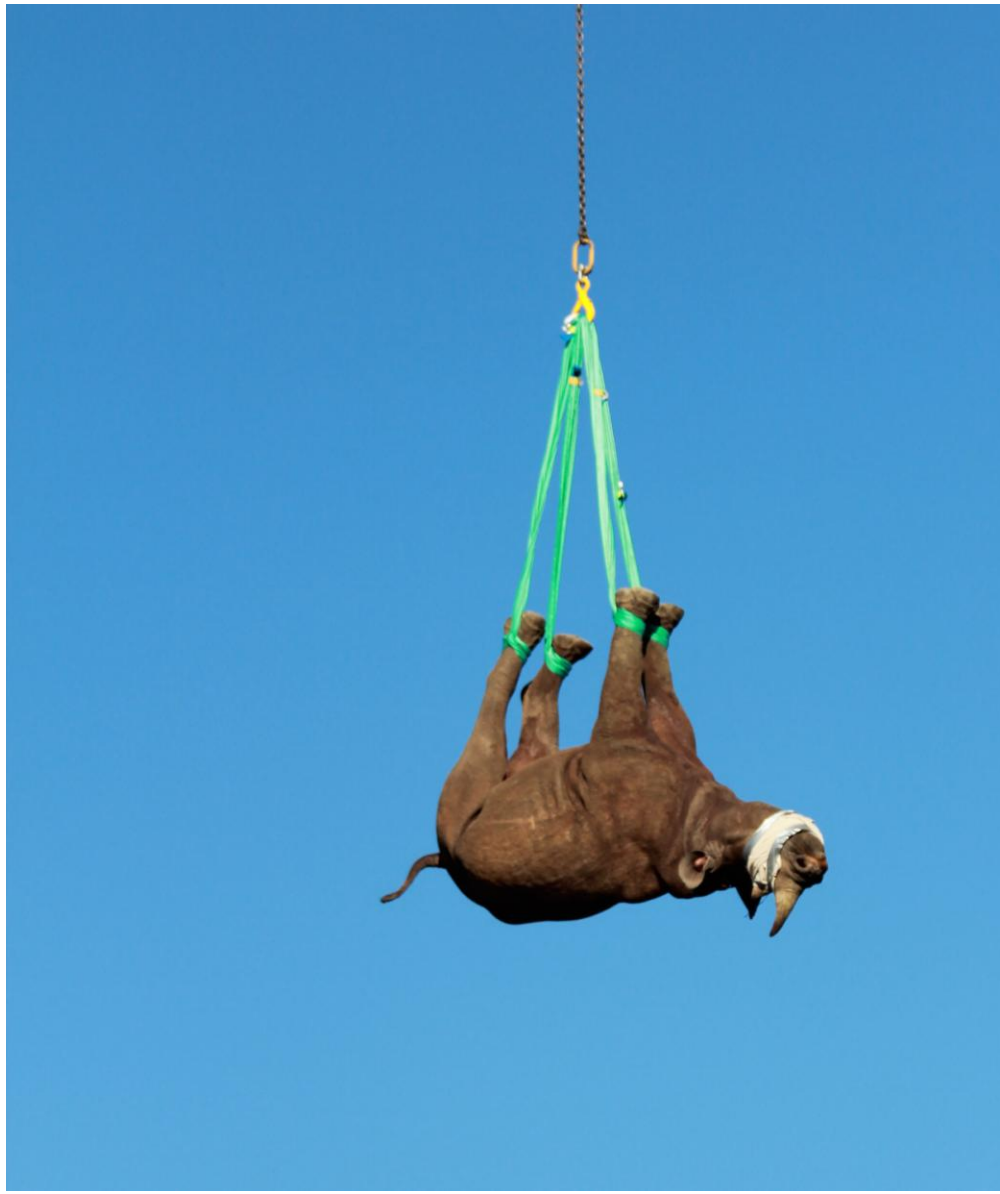


# Custodianship Programme

- 09 Dec 2010 – MOU WWF-SA
- MOA WWF-SA
- Identify potential sites
- Conduct site assessments
- Perform security assessments
- Obtained board and cabinet approval
- MOA with custodianship site & Black Rhino management plan
- Secure SANParks Assistance
- Obtained permits
- Planned Operation
- Capture started 26 Sep 2011







# Pachyderm

July–December 2011

Number 50



## NOTES

### A note about the cover photograph

*Dean Peinke, Brad Fike, Gavin Shaw and Dave Balfour*

Unit 14, Het Atelier, 5 Roodehek Street, Gardens, Cape Town, 8001, South Africa;  
email: info@greenrenaissance.co.za

The photograph shows an immobilized black rhinoceros (*Diceros bicornis minor*) being airlifted out of a remote part of a nature reserve in the Eastern Cape Province of South Africa. The animal is being translocated as part of a national conservation initiative, which aims to stimulate the growth of the national black rhino population by harvesting animals from those populations that are at, or approaching, ecological carrying capacity and translocating them to new state or privately held areas where the founder population has the potential to grow to at least 50 animals. The animal pictured on the cover is one of a group of 20 rhinos (one bull died en route) that were translocated to a reserve in the north of the country after WWF's Black Rhino Range Expansion Project brokered a custodianship agreement between the Eastern Cape Parks and Tourism Agency and private land owners. The agreement stipulates that the translocated rhinos remain the property of the Agency and that their progeny are shared equally between the two parties. In this way the national black rhino management plan's objective to increase the growth rate of the national herd can be achieved; both parties benefit

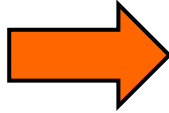
from the arrangement. This is the seventh site that the Black Rhino Range Expansion Project has helped to establish in this manner over the past nine years.

Due to the difficult terrain and inaccessibility of large parts of the donor reserve, a relatively new technique of airlifting rhinos was employed with the aid of an ankle harness and a Super-Huey helicopter. This technique was first developed by Dr Peter Morkel and has now become the method of choice for rhino recovery in difficult terrain. Prior to this, animals were recovered by vehicle or by manhandling them into a net and then airlifting the rhinos to accessible areas. Neither of these two methods is ideal as vehicle recovery usually involves a rough and fairly traumatic trip in a crate and nets are difficult to load animals into and can restrict breathing during transport. The ankle harness, on the other hand, can be fitted quickly and with minimal manipulation of the animal. The rhino is then gently airlifted to where a recovery team revives and loads the animal into a crate for transport to its final destination. The animals do not experience any ill effects from this method, likely because capture, transport and sedation time are significantly reduced.



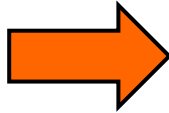


Harvest  
for Growth



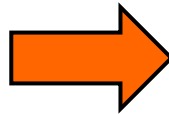
- Successfully concluded first major harvest (5% per annum)

Establish New  
Populations



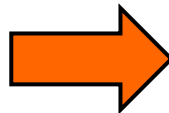
- Establish 2 new populations  
(both consisting of large founder groups and in area  
with potential to carry in excess 50 animals)

Range and  
subspecies  
separation



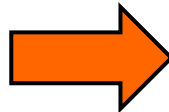
- Both new populations are within the defined range of  
the subspecies

Promote long  
term genetic  
viability



- Concerted effort made to translocate unrelated individuals

Surplus Males



- Not a problem for ECPTA at this stage.

<b>Population Performance indicators</b>	<b>Target</b>	<b>Actual 2012</b>
Population Growth Rate	>5%	8.6
Intercalving Interval	<2.5-3.0 years	2.5
Age at First Calving	<7.6%	7.1
% of adult females calving per year	>30%	30%
Mortality	<4%	0%
Male: Female Sex Ratio	1:1	1:1.5



## Research Projects

- Behavioural and long term demographic responses to harvesting.
- Looking at dispersal of males and females into the population
- Spatial distribution of animals in the landscape
- Paternity analyses – who's doing the breeding and what makes these individuals successful
- Heterozygosity in our populations
- Individual based modelling

