

1st Round Discussions

RHINO CONSERVATION ISSUES: MONITORING

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African rhino range state reps, RMG chair, TRAFFIC, specialists, RESG/INTERPOL, private land owners, donors



Rhino & Elephant Security Group/ INTERPOL Environmental Crime Working Group



DEA, SANParks, Provincial conservation agencies, Namibia, Swaziland, Zimbabwe, Private land owners, WRSA, specialists, plans for Botswana, Malawi, Zambia & Tanzania

National conservation authorities, DEA, Private landowners

WHY MONITOR?

- “Audit” of rhino populations to check that none are missing because of illegal off-takes or other demographic impacts. Can act as a deterrent to would-be poachers.
- Can provide information on the health and condition of individual animals.
- Adaptive management decisions to maximize growth rates for rhinos are based on population estimates and indices of population performance.
- Secure, healthy, growing rhino populations.

FOR MANAGEMENT

- assess progress in meeting metapopulation goals (growth rates and population sizes)
- estimates of population sizes and densities can be used to estimate recommended removals (to maximise growth rates)
- compare performance of the different populations in different places and under different management regimes
- insights into factors affecting rhino population performance



Strategy Outcome 4

Developing an integrated and coordinated national information management system for all information related to rhino species in order to adequately inform security related decisions;

Strategies / activities

- Collect applied scientific research data, including rhino population census statistics and estimates for public and private land, surveys, monitoring reports or other data related to rhino population, horns or associated derivatives;
- Efforts should also be coordinated to dovetail with existing efforts for black rhino and white rhino on state land (under SADC RMG and IUCN AfRSG).
- There is a definite need to also routinely monitor white rhinos and horn stocks on private and community land;



Rhino numbers:

1. An updated SADC Rhino Management Group (RMG) status report for regional populations of black rhinos *Diceros bicornis* for the period 2007 – 2011.
2. A population assessment of the white rhino *Ceratotherium simum simum* population on private land within South Africa for 2009 - 2011.
3. The development of a secure user-friendly web-based data collection tool to facilitate the collation and analysis of both the black and white rhino population data in future.



Rhino Horn stockpiles: software to register and audit horn stocks

SADC RMG black rhino (*Diceros bicornis*) Status Reports



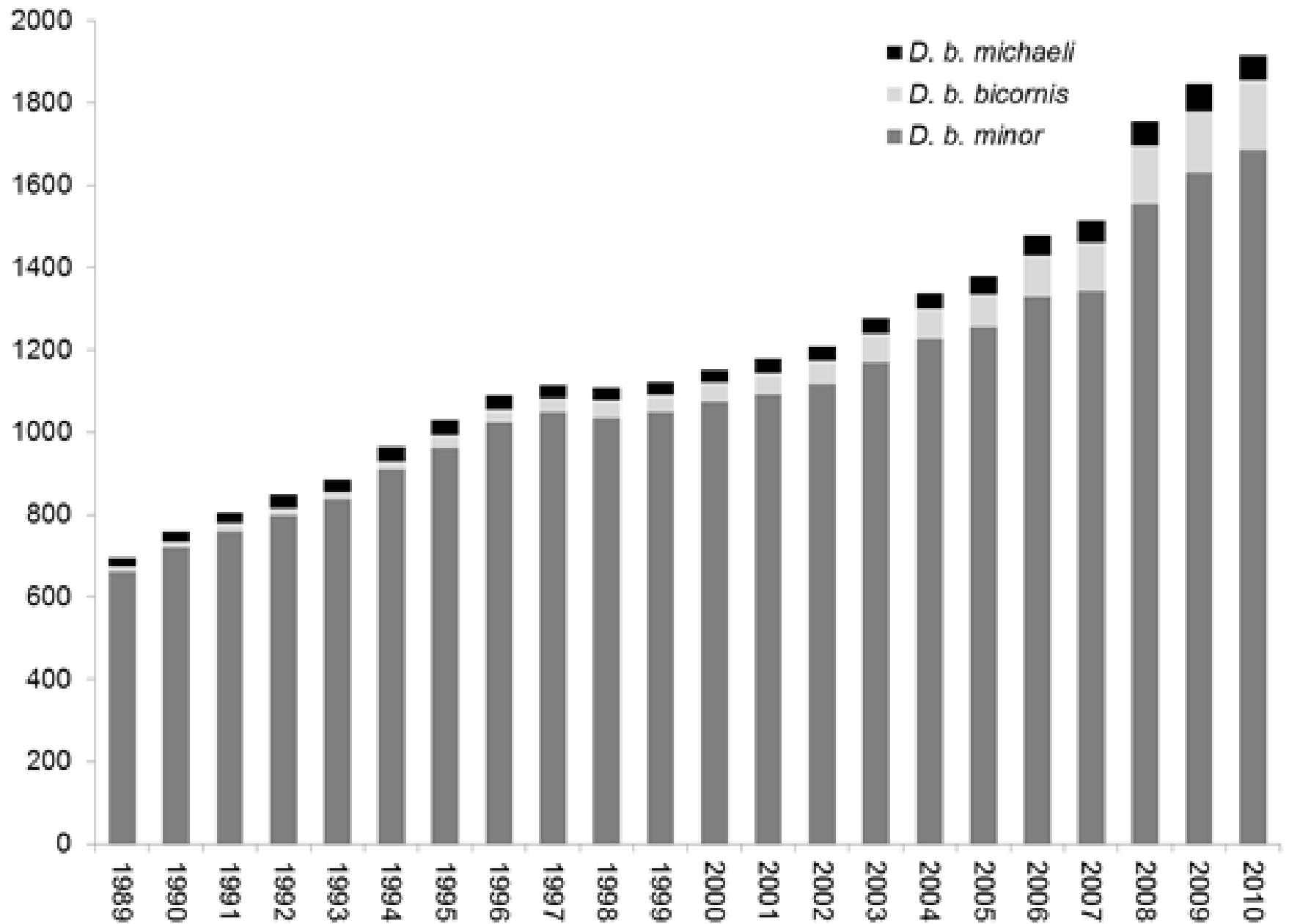
Reporting since 1989, so 18 years of individual black rhino history data from more than 100 populations in SADC.

Data submitted to the RMG are part of larger Black rhino metapopulation monitoring database.

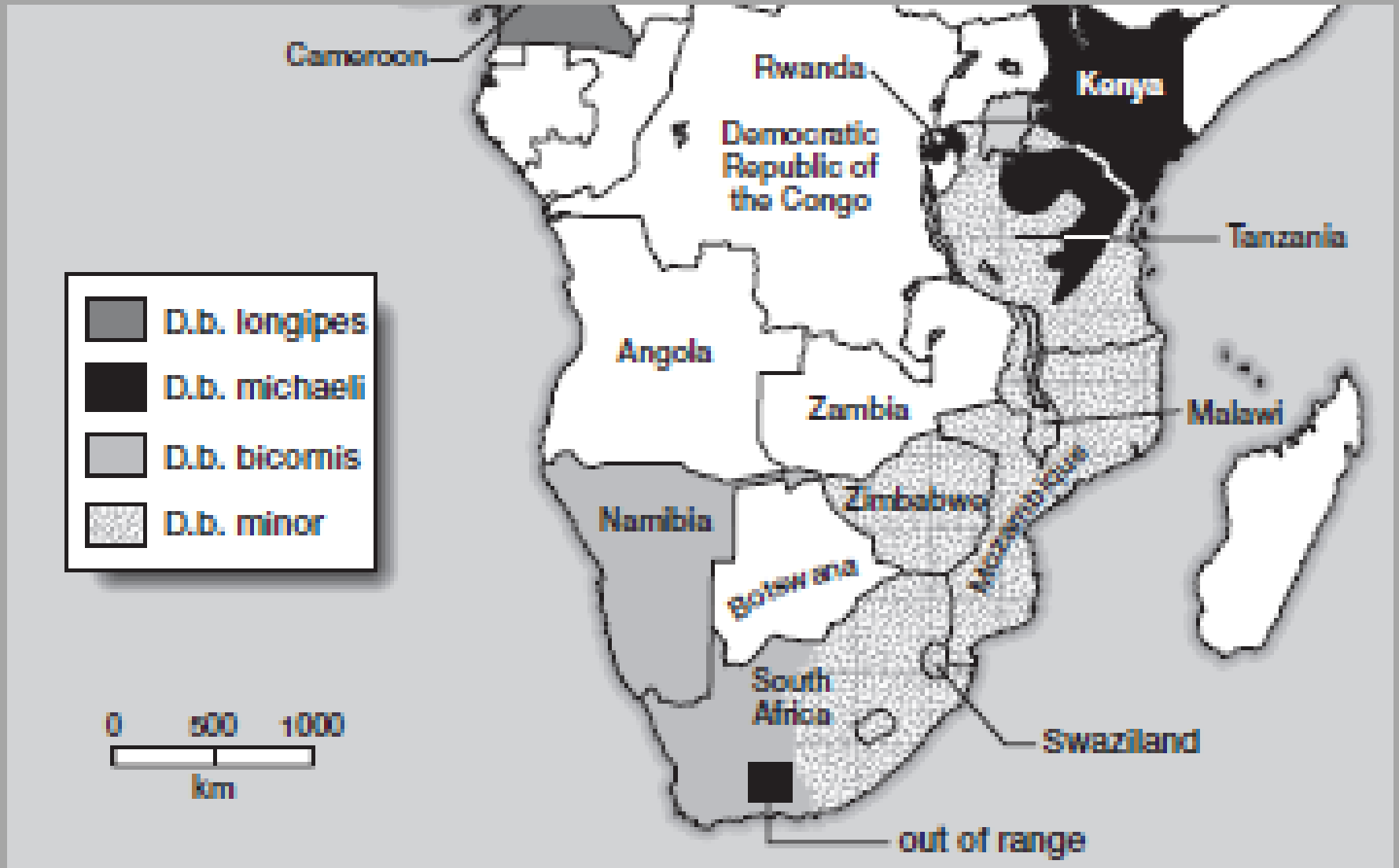
Enabling RMG to track INDIVIDUAL rhino *across their lifetimes between areas and across the sub-continent*

Now being updated 2007 to 2011 – adding another 5 years

This kind of data set is almost unprecedented *in any wild animal species in the world.*



Estimated numbers of subspecies of black rhino in South Africa, 1989-2010 (Data from M. Knight, 2011)



Distribution of black rhino subspecies (Emslie and Brooks, 1999)



Knowledge gained from RMG status reporting records :

- The negative of high adult male- to adult female- sex ratios have on *female* reproductive success.
- Male bias in birth sex ratios and the degree of birth sex bias variation over time and location.
- Significant effect of translocation stress on delaying fertility onset in females who have not yet bred.
- Reproductive and mortality cost of translocations and how they can be compensated by good breeding rates in the translocated rhino.

- Increases rates of calf loss / missed births with female age in different populations / habitats.
- Male rhinos killing calves and possible patterns linked to changes in male dominance within populations.
- Effect of habitat capacity (mainly average annual rainfall and food vegetation density and quality) on average rhino home range sizes.
- *Being able to analyse a sub-continental dataset allows insights that are not possible when dealing with one or a few populations.*

RMG information assists the IUCN AfRSG to compile South Africa's reporting statistics and information to CITES.

Helps maintain the **INTERNATIONAL CREDIBILITY** of South Africa's black rhino conservation efforts at CITES and other international fora.

Other African rhino range states have found the RMG Status Reports to be useful to justify the demands of black rhino conservation efforts to their own Government.

The RMG Database will now link the **GENETIC IDENTITY** numbers of rhino individuals obtained from RhoDIS.

But in addition, this means that with time, we can start to link rhino genetic characteristics with individual black rhino life history information, allowing the possibility of understanding genetic issues in black rhino performance and long term conservation.

It is also valuable for RMG to keep detailed information on the black rhino because, on rare occasions, individual private and even state parks have been known to lose some or much of their own data records:

There can be office fires, staff changes, computer crashes and so on that destroy or disrupt data integrity.

The online system acts as a useful **LONG TERM BACKUP** for much of the essential data.

2007-2011 SADC RMG black rhino survey

Information on black rhino from:

- South Africa; *SANParks, EKZNW, NWPTB, ECPTA, private owners*
- Namibia
- Zimbabwe
- Zambia
- Malawi
- Botswana



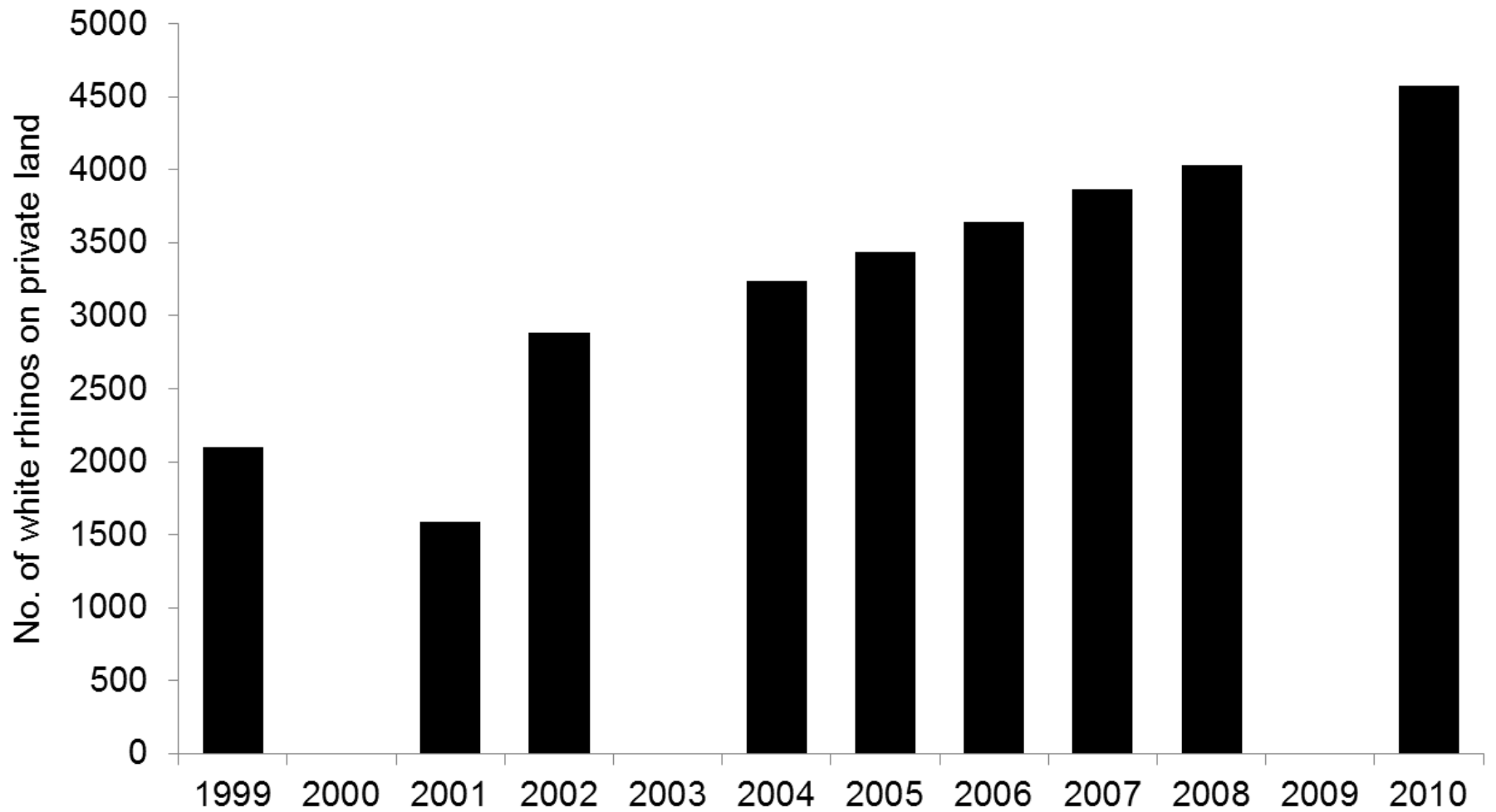
WHITE RHINO SURVEY 2011

SQUARE LIPPED (WHITE) RHINOCEROS

ON PRIVATE LAND



- Surveys of private sector white rhino populations began in 1987. Current survey from 2009 to 2011 is the ninth to be undertaken.
- The 2004 survey of white rhino populations on private property identified a total of 3,247 animals
- Study conducted in 2008 indicated that the number had increased to 4,033
- Preliminary analysis from the latest survey data suggest the current total may be more than 5,000.



Numbers of white rhino on private land (excluding zoos) in South Africa 1999-2010 (Data from M. Knight, 2011)

WHITE RHINO SURVEY ON PRIVATE LAND

Basic (optional) questions on;

Demographics - births and deaths

Movements - purchases, sales, hunts

Poaching incidents

Monitoring methods

Security and costs

Horn stockpiles

Management objectives

Legal trade

WHITE RHINO SURVEY ON PRIVATE LAND

To date more than 320 private rhino owners have been contacted, either via phone or e-mail.

Working off the 2008 WWF survey database and stoprhinopoaching.com database.

Thanks to WRSA, WTA, Provinces and rhino owners for encouraging participation.

CHALLENGES

- Apathy.
- Lack of monitoring information?
- *“When they let me trade I’ll tell you what I’ve got.”*
- Time taken to fill out the forms.
- A few security concerns – this has improved now that farm details are optional.
- Encourage submission of outstanding data.

RMG ONLINE DATABASE

- A secure, non-public, encrypted and password controlled rhino database is currently being developed.
- Detailed fields for black rhino, less detailed for white rhino.
- Each reserve will have access to their data only for corrections and additions.
- Provides a monitoring tool for rhino in each reserve.
- Only the RMG Chairman and designated status report summary compilers will have access to all data.
- www.rhinoowners.org – donated by Jacaranda FM to RMG – awaiting input from role-players.



RhoDIS

Dr Cindy Harper and the Veterinary Genetics Lab of the University of Pretoria have pioneered a technique that enables analysis of nuclear DNA taken from rhino horn samples to identify individual rhinos.

Forensic tool to link individual rhinos and horns. Also potential for rhino population management.



**Rhino Horn Stockpile
Management: Minimum
standards and best
practices from east and
southern Africa**

Simon Millidge

TRAFFIC East/Southern Africa

TRAFFIC
the wildlife trade monitoring network

Key concepts for stockpile management

- Standardization (throughout east and southern Africa)
- Identification as unique specimen
- Registration for auditing
- Compatibility with existing systems
- Efficient use of available resources
- Security for management of stockpiles
- Compliance with minimum standards

File

Home

Create

External Data

Database Tools



View

Views



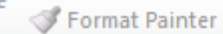
Paste



Cut



Copy



Format Painter

Clipboard



Filter

A-Z Ascending

Z-A Descending

A-Z Remove Sort

Selection

Advanced

Toggle Filter

Sort & Filter

Refresh
All

New

Save

Delete

Records

Totals

Spelling

More



Find

Replace

Go To

Select

Find

Size to
Fit FormSwitch
Windows

Window

B I U A

WILDLIFE STOCKPILE REGISTER DATABASE

RHINO HORNS

version 1.1



- Management Reports - Horn Recovery
- Management Reports - Stockpile Management
- Management Reports - Threat of Illegal Activities
- Stockpile Registers
- Searches and Queries
- ENTER / VIEW / EDIT RECORDS**
- View and Edit Menus

Ensure organisational
details are correct

Today's date: 12-Jul-12



Exit this database

Navigation Pane

Government Gazette Staatskoerant

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2. MARKING OF LIVE RHINOCEROS AND ANY RHINOCEROS HORN

- (1) All live rhinoceros sold and transported after the commencement of these norms and standards that have not been micro-chipped before, or where an inserted micro-chip is no longer detectable, must be micro-chipped with one micro-chip in front of the left shoulder and one micro-chip in each of the horns.
- (2) Rhinoceros mortalities must be reported to the issuing authority immediately after the death of the animal has been discovered.
- (3) The owner of a live rhinoceros who acquires rhinoceros horn from a legal dehorning procedure, or the natural mortality of the rhinoceros, or where the rhinoceros has lost its horn in any other natural manner, where the rhinoceros horn has not been micro-chipped before or where an inserted micro-chip is no longer detectable, must apply to the issuing authority to have the rhinoceros horn micro-chipped, within 5 working days of acquiring such rhinoceros horn.
- (4) When an application for the possession and/ or marking of any detached rhinoceros horn is submitted to the issuing authority, information on the base circumference, inner length (anterior) and outer length (posterior) of each individual horn, as well as the weight thereof, must be provided by the applicant. In addition to this information the applicant must submit a photograph of good quality, for easy identification, of each horn.
- (5) Before a possession permit is issued by the issuing authority, an official of the issuing authority must conduct an inspection of the horn and verify the information supplied by the applicant.
- (6) An official of the issuing authority must micro-chip the rhinoceros horn contemplated in subparagraphs (3) or (4). The official must also mark the rhinoceros horn with indelible ink or by means of punch die, using the formula: ZA/serial number/year/weight, if the rhinoceros horn or part thereof is 5cm or more in length. The owner of the rhinoceros horn is responsible for the costs incurred by the issuing authority to purchase the micro-chips.
- (7) The provincial issuing authorities must keep the above information on the TRAFFIC database and any changes resulting from, among others, translocation, export from a province, natural mortalities, or hunting must be reflected on such database. The Department must consolidate the information kept by the provincial issuing authorities, on the national TRAFFIC database.



Strategy Outcome 4

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Successful rhino conservation

- Secure, healthy rhino populations
- Adaptive biological management
- Sound demographic monitoring data
- Value of integrated system for rhino monitoring data
- Encourage compliance from all stakeholders



THANK YOU

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