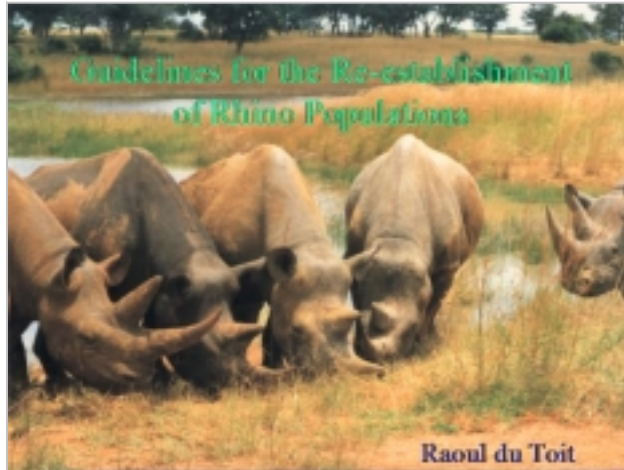


## 2 PRESENTATIONS

### (a) Presentations by SADC Rhino Consortium Members

#### 2.1 Rhino Reintroduction Guidelines: Part II (Raoul du Toit)



### INTRODUCTION

Looking at **strategic planning** issues

- Not translocation and release procedures
- Recommendations are made on the **ideal scenario**
- This is rarely, if ever, achievable.
- Compromises and variations are inevitable, **within limits**

### VIABILITY/SUSTAINABILITY

- Biological**
  - Genetic
  - Demographic
  - Ecological
- Economic**
  - Government support
  - Donor support – from general or specific sources (trust arrangements?)
  - Land-use
- Socio-political**
  - Policy and legal framework
  - Conducive social environment (cultural attitudes, standards of living, law enforcement, external influences, general stability)

### GENETIC ISSUES

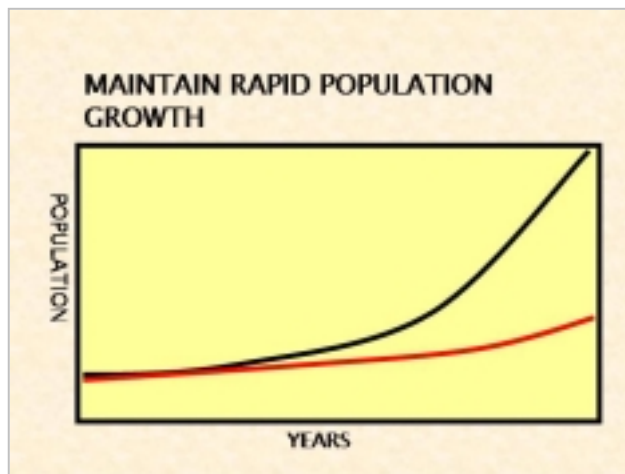
- Need an adequate number of **founder animals**
  - i.e. unrelated
  - effective breeders
- 20** is the currently recommended **minimum**
- Build up to a total population of **over 100**
- So need adequate area of suitable habitat
- Or manage within a **metapopulation** that has at least one other subpopulation of over 100

### METAPOPULATION

Is not just the various populations within a region

There has to be a degree of **managed gene flow** between **subpopulations**

One effective breeder per generation (every 5–10 years)



### WHY IS POPULATION GROWTH IMPORTANT, GENETICALLY?

The **founder population** has a genetic pool (alphabet soup of genes).

### SAMPLING OF GENE POOL DURING REPRODUCTION

Random selection of founder genes to comprise the gene pool of the next generation

### A few samples (births) is only a few ladles of soup

Purple: founder rhinos

Blueish calves

### A few samples (births) is only a few ladles of soup

Purple: founder rhinos

Pinker calves

### Rapid sampling scoops out more letters in the same period of time

Purple: founder rhinos

### Founders die so the gene pool diminishes if it hasn't been fully sampled = genetic drift

Purple: founder rhinos

Births

Blueish calves

Deaths

### Planning for maximum rate of population growth

Need to **plan ahead** – be pro-active, not reactive, because rhino breeding problems take a while to become apparent, are complicated by the introduction scenario, and cannot be quickly rectified

ICI = 2 to 3 years

AFC = 6 to 8 years

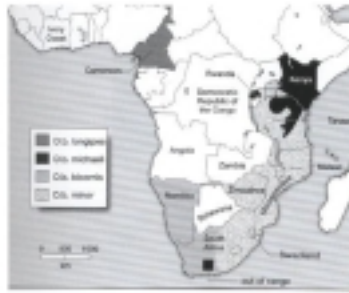
Sex ratio generally 1:1



### Sources of rhinos

Theoretically better to get founders from more than one donor population but this is probably not a major concern for rhinos at present (Addo?)

Draw from the subspecies that historically occurred at the re-introduction site



### The main constraint on population growth will be habitat/area

Need an adequate area of suitable habitat



### Carrying capacity

Ecological carrying capacity

Maximum production stocking rate (75% of ecc?)

In most southern African range states, black rhino maximum production stocking rates are generally one rhino per 10-15 sq km



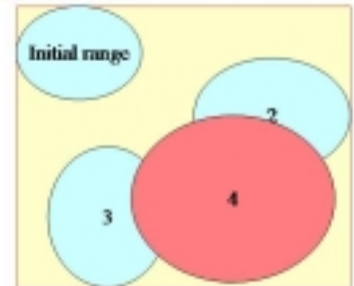
Needs professional assessment

Taking seasonality into account

### Social carrying capacity

Increasing a population through introductions is not the same as increasing a population through natural population growth, in terms of social interactions

For black rhinos, around 1 bull per 25 sq km



### Area required

If 20 founders @ 1 rhino/10 sq km  
= 200 sq km  
If 50% (10) are bulls @ 1 bull/25 sq km  
= 250 sq km  
Need to allow for population expansion  
So we need something around  
250-300 sq km

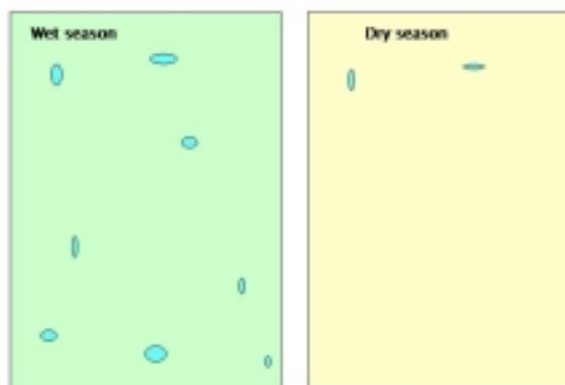


### Waterpoint distribution

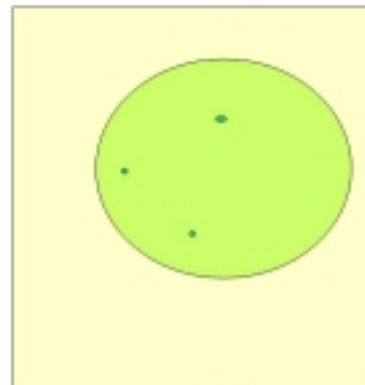


Relates to social organization  
And poaching patterns

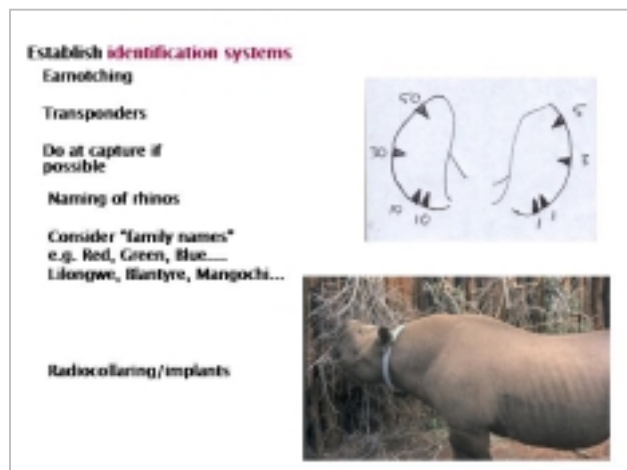
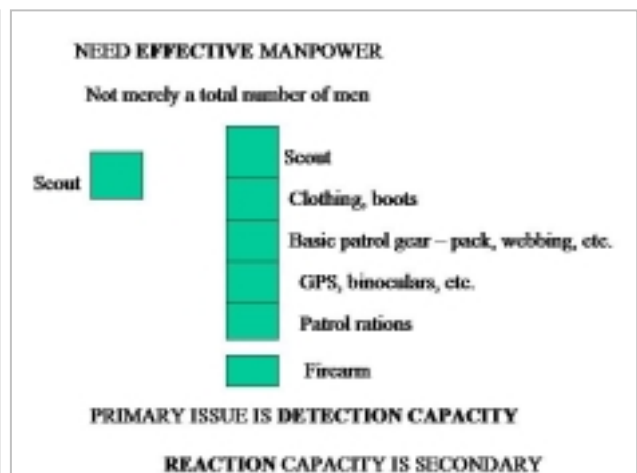
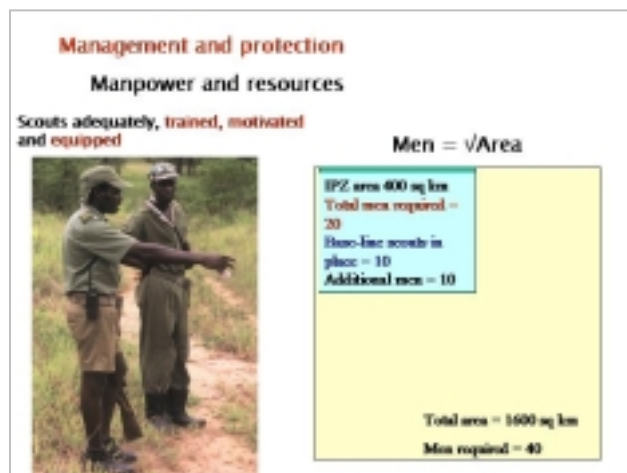
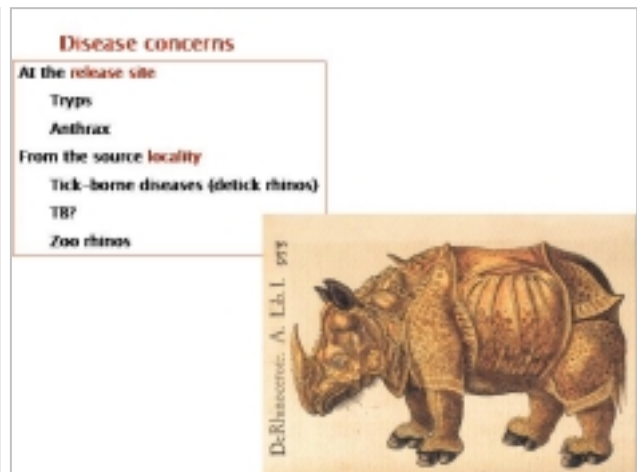
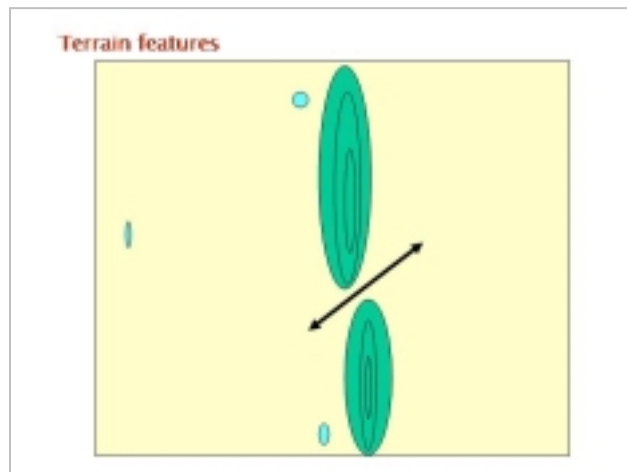
### Distribution of permanent versus seasonal water



### "Holding effect" of waterpoints



Similarly, patches of habitat (thickets) can "hold" rhinos





**Ensure effective informer systems**



**Sensitization of prosecutors and magistrates**

**Reward systems**

**Fencing**

Consider purpose and cost-effectiveness



**EIA of impacts on other species – and manpower drain**

**Funding**

Sustainability...for long-term projects – government support?

Partnerships – with NGOs  
international  
local – “Friends of ...”



**With private sector**

Incentives?  
Ownership  
Custodianship  
Conservancies (don't preclude cattle ranching)  
Long-term concessions on state land

**Avoid pet projects and piecemeal commitments**

**Policies, plans, coordination**

Strategy – framework of policy, goals, objectives and rhino management principles





**Responsibilities, resources, timing**

**Action plans**






**Planned introductions**

Incremental introductions via compartments

## Discussion

- Mr Theophilus stressed the need for inclusion of guidelines on reward schemes, disincentives and deterrence of poaching, and information on prosecution and securing convictions.
- Mr Kingengo asked that the costs of rhino re-establishment be addressed and if possible estimated
- Dr Emslie said that detection of illegal activity, including detection of carcasses and the deterrent effects of tourists and roads was a very important factor in rhino security.