Is there a light at the end of the tunnel for our rhinos?

Dr Mike Knight
Dr Richard Emslie
Cross-cutting. The need to investigate innovative options for rhino conservation and adaptively manage is recognised. Applied research should also be undertaken as needed to inform decision and policy making. It is also essential to have enabling policy and legislative frameworks in place.
The hierarchy of plans
Where have we come from?

**Black rhinos:**
94% reduction from 1970s to mid 1990s
Doubled last 2 decades.

**White rhinos:**
SWR: From near extinction to 17,300
NWR: From 2,200 to 2 since 1960!

**History:**
Rhinos lost from 75% range states
Have been re-establishment.
Only 12 countries, with bulk in the Big 4

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**Estimated number of African rhinos 1973-2017**

- **Rhinos total**
- **Africa W rhinos**
- **Africa B rhinos**

- **Numbers:** 0, 5000, 10000, 15000, 20000, 25000, 30000, 35000, 40000, 45000
White Rhinos Ceratotherium simum

Northern white rhinos
*C. s. cottoni*

Southern white rhinos
*C. s. simum*

IUCN Red List

- NT: Near Threatened
- Introduced
- Possibly extinct
- Resident
- Re-introduced

Map showing distribution of white rhinos in Africa.
Africa's white rhinos

In 2017 = 18,067

DOWN: 20,378 in 2015

Big 4 (9 range states):
- S Africa 86%
- Namibia 6%
- Kenya 3%
- Zimbabwe 2%

Where are they?
- State=65%
- Private= 34%
- Communal=<1%
Africa’s black rhinos

UP:
5,250 in 2015

In 2017 = 5,495

Big 4:
- S Africa 32%
- Namibia 34%
- Kenya 14%
- Zimbabwe 10%

Africa's Big 4 RHINO countries:
- S Africa 17,671 (74%) DOWN
- Namibia 2,832 (12%) UP
- Kenya 1,258 (6%) UP
- Zimbabwe 887 (4%) UP
- Botswana 502 (2%) (Inc 215)
- 7 other countries 404 (2%)

Where are they?
- State=67%
- Private= 27%
- Communal=6%

94% in S’n Africa!
African and Asian Rhinoceroses – Status, Conservation and Trade

A report from the IUCN Species Survival Commission (IUCN SSC) African and Asian Rhino Specialist Groups and TRAFFIC to the CITES Secretariat pursuant to Resolution Conf. 9.14 (Rev. CoP17)

Richard H Emslie\textsuperscript{1,2}, Tom Milliken\textsuperscript{3,1}, Bibhab Talukdar\textsuperscript{2,1}, Gayle Burgess\textsuperscript{3}, Keryn Adcock\textsuperscript{1}, David Balfour\textsuperscript{1,4} and Michael H Knight\textsuperscript{1,4} (compilers)

\textsuperscript{1}IUCN SSC African Rhino Specialist Group (AfRSG), \textsuperscript{2}IUCN SSC Asian Rhino Specialist Group (AsRSG), \textsuperscript{3}TRAFFIC, \textsuperscript{4}Nelson Mandela University, South Africa
Poaching of Africa’s rhinos

8,413 (compounded > 10,400)!
Proportionally WR>BR

3.7 rhino/day to 3.1 /day
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<th>Country</th>
<th>White</th>
<th>Black</th>
<th>Total</th>
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<td>502</td>
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<td>Côte d’Ivoire</td>
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<td><strong>Total</strong></td>
<td>18146</td>
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</table>

**Continental rhino numbers**

Kruger NP
2015: 8,875
2017: 5,142
40% reduction
Drought & poaching
Increasing role of private sector

2018: Namibian black rhino

- Private: 26-50%

2018: Kenyan black rhino population

- Private sector dominance

Pvt sector: 26-50%
Rhino conservation is expensive

- **Kruger NP**
  - $800/yr/km\(^2\) (Total: $16m)
  - $74m/5 yrs (ie $1,600/rhino/yr)
- **Other PAs** ($1,210-$10,620/rhino/yr)
- **Security costs escalating by ~75%/yr**

- **Largest private rhino population**
  - $357,000/month (60% sec.)
  - =$2677/rhino/yr
Sustainable funding

• Incentivised conservation
• Rhino impact investment
• Wildlife credits
• Need upscale to PAs or landscapes
Other costs

• Human lives: Rangers, communities
• Emotional/social: Psychological
• Opportunity:
  o Conservation - <5% conservation
  o Infrastructure degradation
  o Crime
• Reputation:
  o Green militarisation
  o Corruption disease
• Messaging:
  o Poacher advertising
  o War of elite on poor
• Loss in sales price 67%
• Asset value loss = $397 m
• Poaching loss of 6735 WR = $253 m
• Breeding loss = $60 m

SUM=$711m (ie $105,300/rhino)

• + security costs (348%)
• Fine of $70k/animal!!!!!
Targeted messages to RHINO poachers?

What's written
- Producers
  - On the ground poachers
- Consumers
  - Asian horn users
- Supply chain
  - Number of rhinos
  - Number poached
  - Price of horn high
  - Millions of users
  - Rhino going extinct

What's heard?
- Producers
  - Well managed rhino pops
- On the ground poachers
  - There is a product
  - It's easy to get horn
- Consumers
  - Poachers caught, killed, sentenced,
  - Rhino will not go extinct
  - Do not use illegal medicine

What should be written?
- Producers
  - High risks, technology, dogs, we're listening
  - Poachers, caught, killed, sentenced,
  - Rhino will not go extinct
  - Do not use illegal medicine

What we want to be heard?
- Producers
  - Its not easy to get horn
  - Not worth the risk
  - Stay out Life at risk
- Consumers
  - Its not easy to get horn
  - Not a good illegal investment
  - Not worth the investment
  - Sustainable legal medicine
GAME CHANGING INTERVENTIONS
CHANGING INCENTIVES TO POACH

Many Rhino Producers & poachers

Future efforts should focus here - need multi-lateral collaboration

Few criminal horn distributors

Regional

Many Horn Consumers

International

Reduce demand
Provide supply

Present response options

South Africa
Arrests : Levels of Threat 2011 -14

Proactive intelligence
Break govt silos
Incentivise communities

2018:
13% level 3&4 of ~160 arrests
530 rhino cases (750 accused)
70 trails – 93% successs

Arrests 2011
arrests 2012
Arrests 2013
Arrests 2014

Number arrests

Type of level

Poacher
Receiver / Courier
Courier / Buyer
Exporter
Buyer / Driver
Where should we put our effort?
eRhODIS®: Sampling apps (2014)

Sealed sampling kit photographed

Field data collected via app

Sample data uploaded directly to the database

Secure Pdf returned via email
Trends in rhinoceros horn use
Ensuring the future of rhinos?

- WHOLE government response
- Regional cooperation
- Priority crime = ECONOMIC
- Effective law enforcement - break crime networks
- Follow the money
- Enabling legislation
- Increase the value of rhinos
- Responsible & ethical use
- Translocations
- Greater social mandate
- Focused messaging
- Price data
- Innovate & experiment