

# Raptor declines in Kenya over the past 45 years



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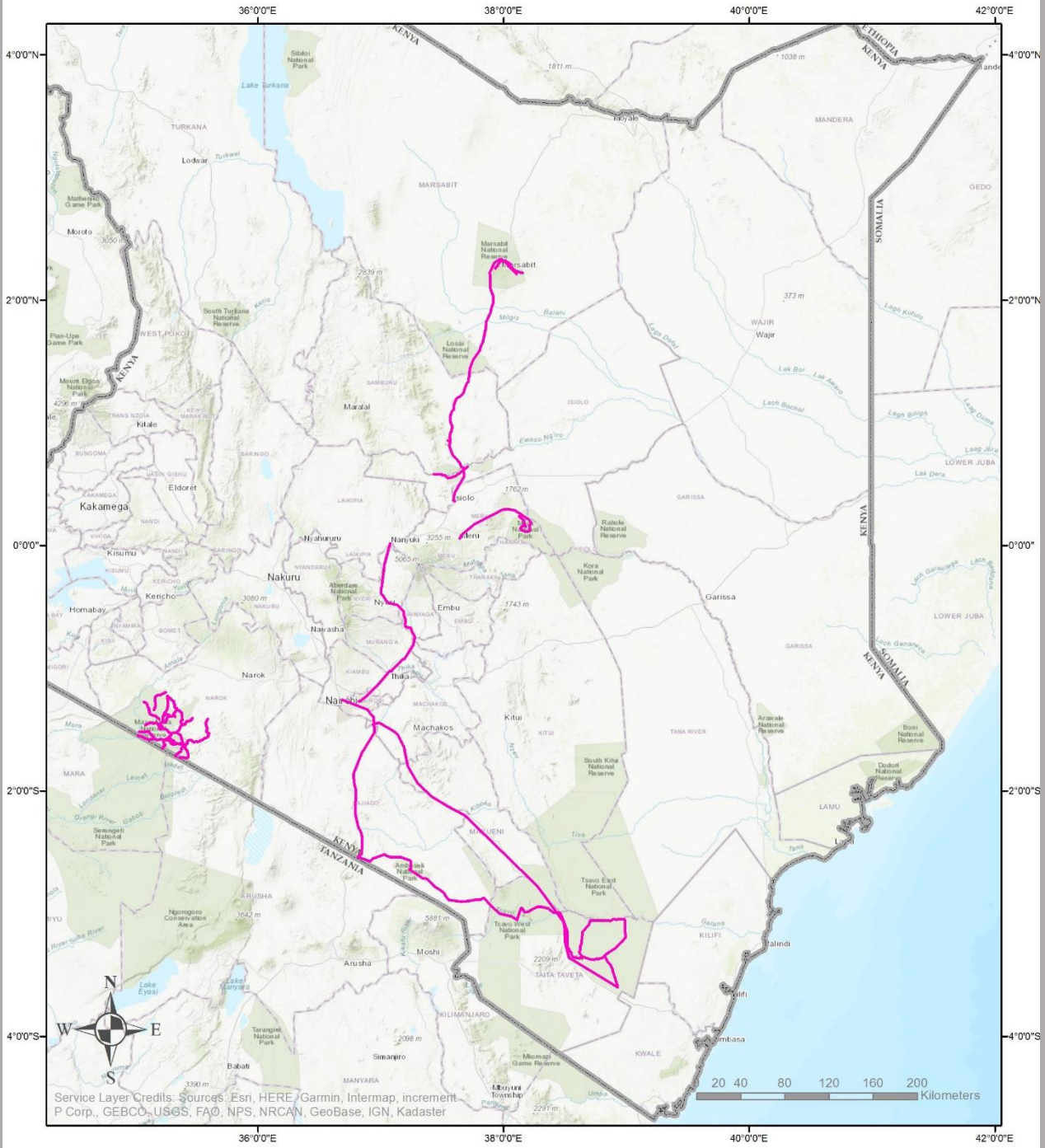
- Annual road surveys 2010-2018
- 3-4 observers
- Same routes surveyed, with few exceptions
- Conducted in dry season during migratory period (January-early April)
- Covered >9000 kms



Smeenk (1974), Thiollay (unpub)

- 1970-72 and 1976-77
- Followed same or partial routes as recent surveys
- 2 observers
- Conducted in migratory season (Sep-Apr)
- National parks and unprotected areas in S & N Kenya
- Covered >6000 kms





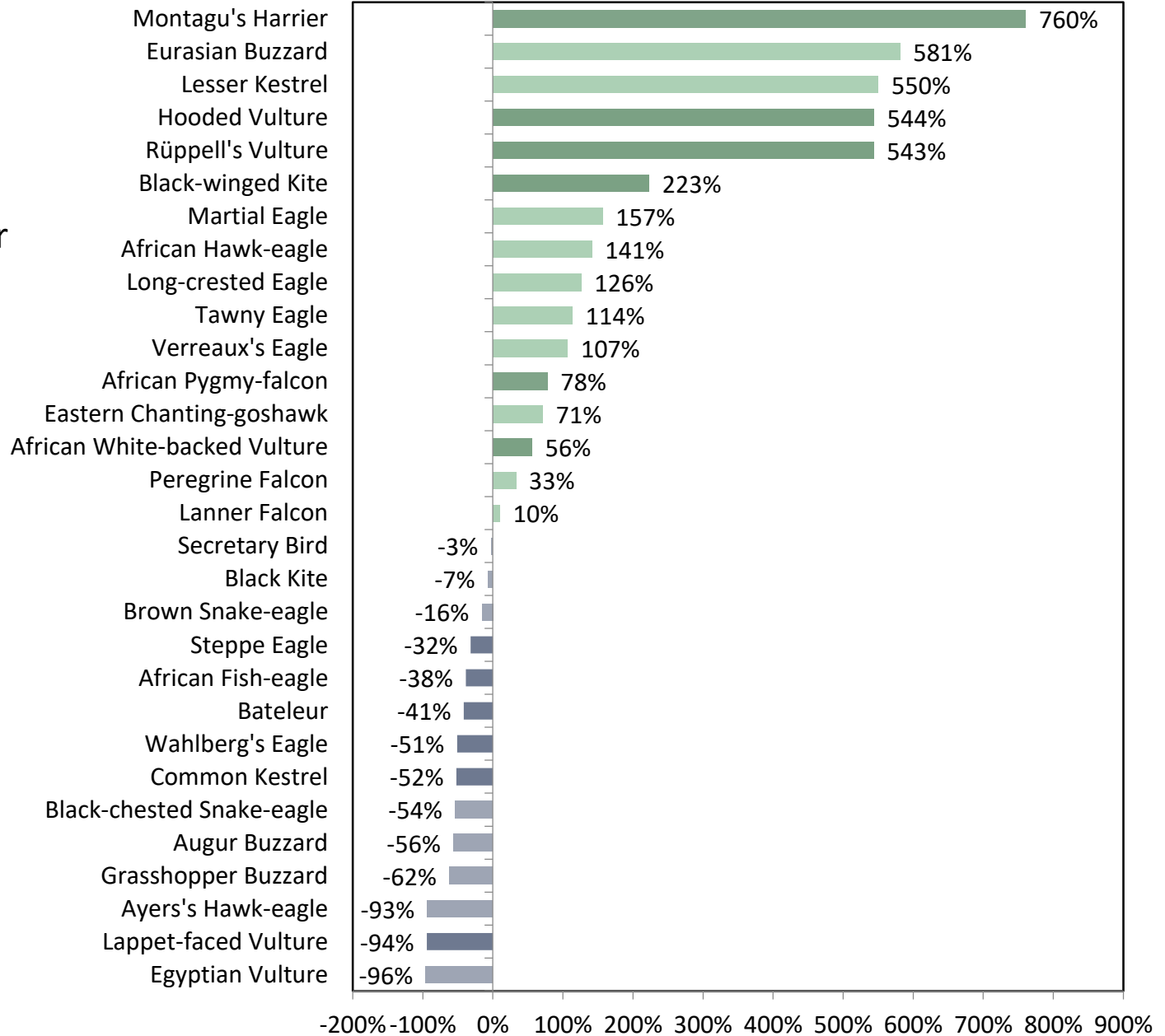
# Changes: protected areas

■ Significant    ■ NS

Percentage  
change in the  
number of birds  
encountered per  
100 km

1970s to 2010s

Minimum of  
10 individuals  
per species  
for inclusion



# Changes: unprotected land

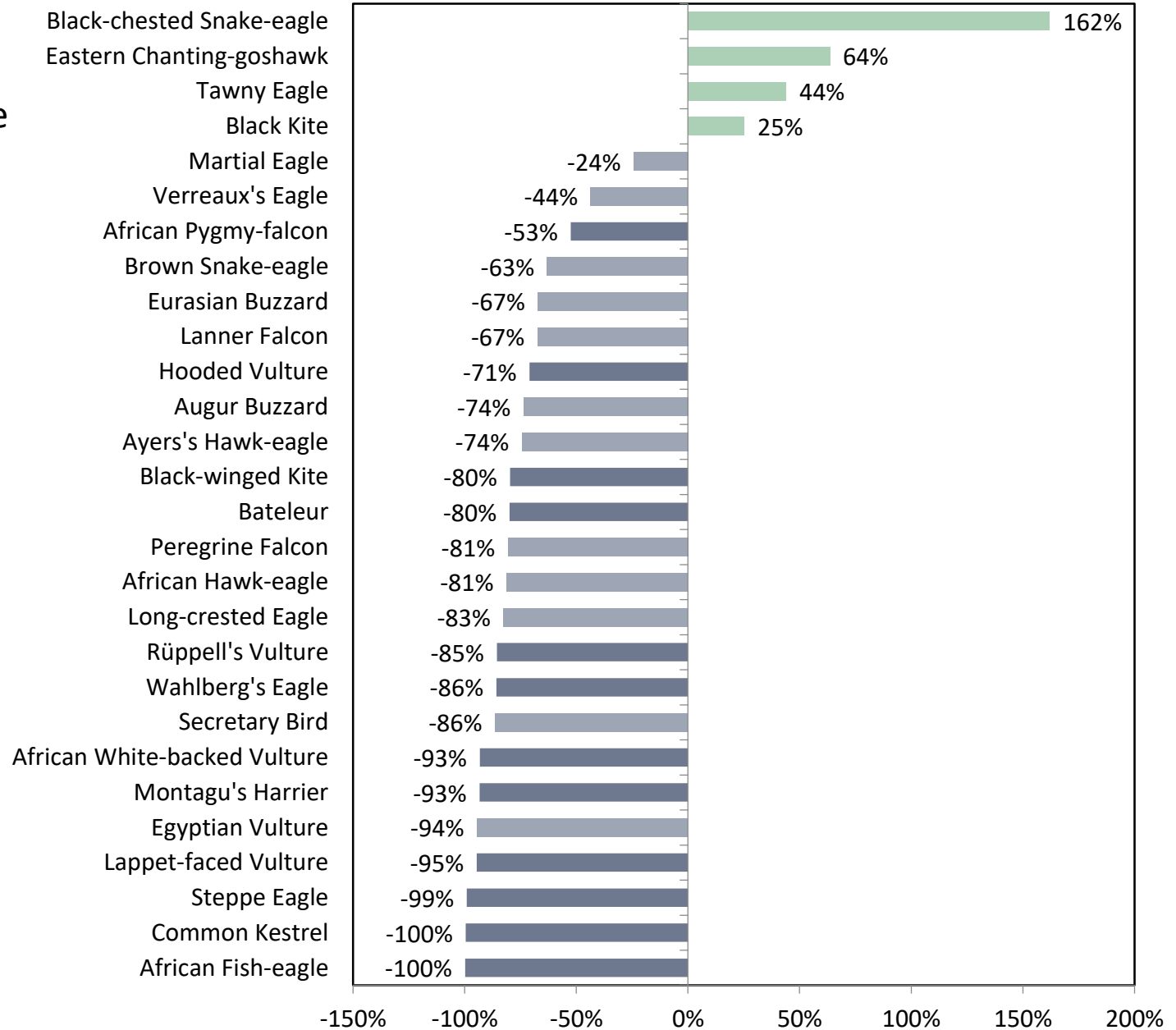
■ Significant

■ NS

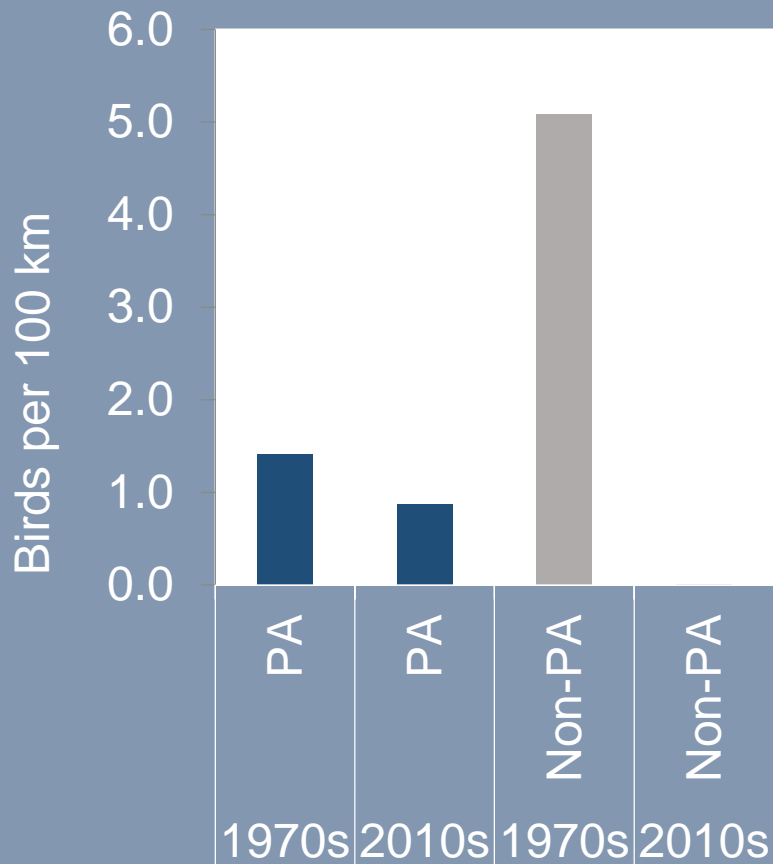
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# African Fish Eagle



# Vulture Research & Monitoring

## Aerial Surveys

### Objectives

- Quantifying Rüppell's Vultures at active and extinct breeding cliffs throughout Kenya
- Estimating total population size of Rüppell's Vultures in Kenya
- Monitoring annual breeding success at three large colonies in Samburu County





# Aerial Surveys

## Ololokwe

Average 248 roosting individuals  
0 breeding individuals  
248 Total



# Aerial Surveys

## Maralal

Average 104 roosting individuals  
97 breeding individuals  
202 total



# Aerial Surveys

Poi

Average 353 roosting individuals  
96 breeding individuals  
450 total



# Vulture Tagging

Tagged a total of 30 critically endangered vultures

17 White-backed

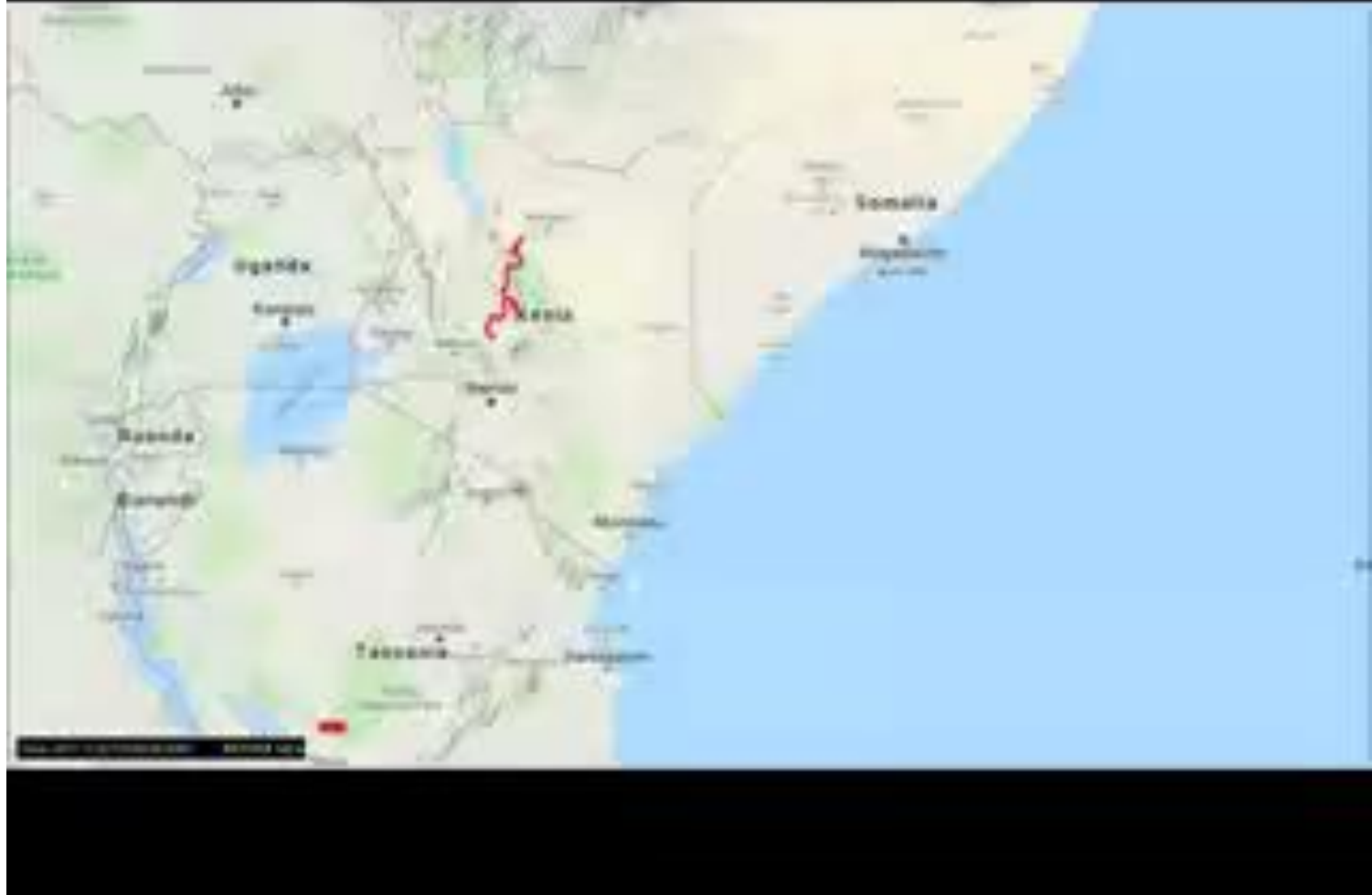
11 Rüppell's

2 Hooded



Currently following twelve individuals

# Vulture movement over 40 days



# Collaring for Coexistence

- Monitoring real-time lion movements via a mobile phone app, allowing herders to keep livestock safe from lions
- Virtual fences that warn when lions enter areas where there is high risk of conflict
- Alarms that detect the approach of collared lions and warn livestock guards
- Devices that scare away large carnivores using noise & flashing lights



# Building Wildlife Toxicology Capacity in E. Africa

## Objectives

- Improve collection, storage and transport of suspected poisoned wildlife samples
- Improve analytical methodology for testing samples using various equipment, primarily GC-MS and LC-MS
- Improve interpretation of lab test results and explore options for field-based test kits

Target laboratories: Two Kenyan universities, KWS, Government Chemist, also one lab each from Uganda, Tanzania and Ethiopia

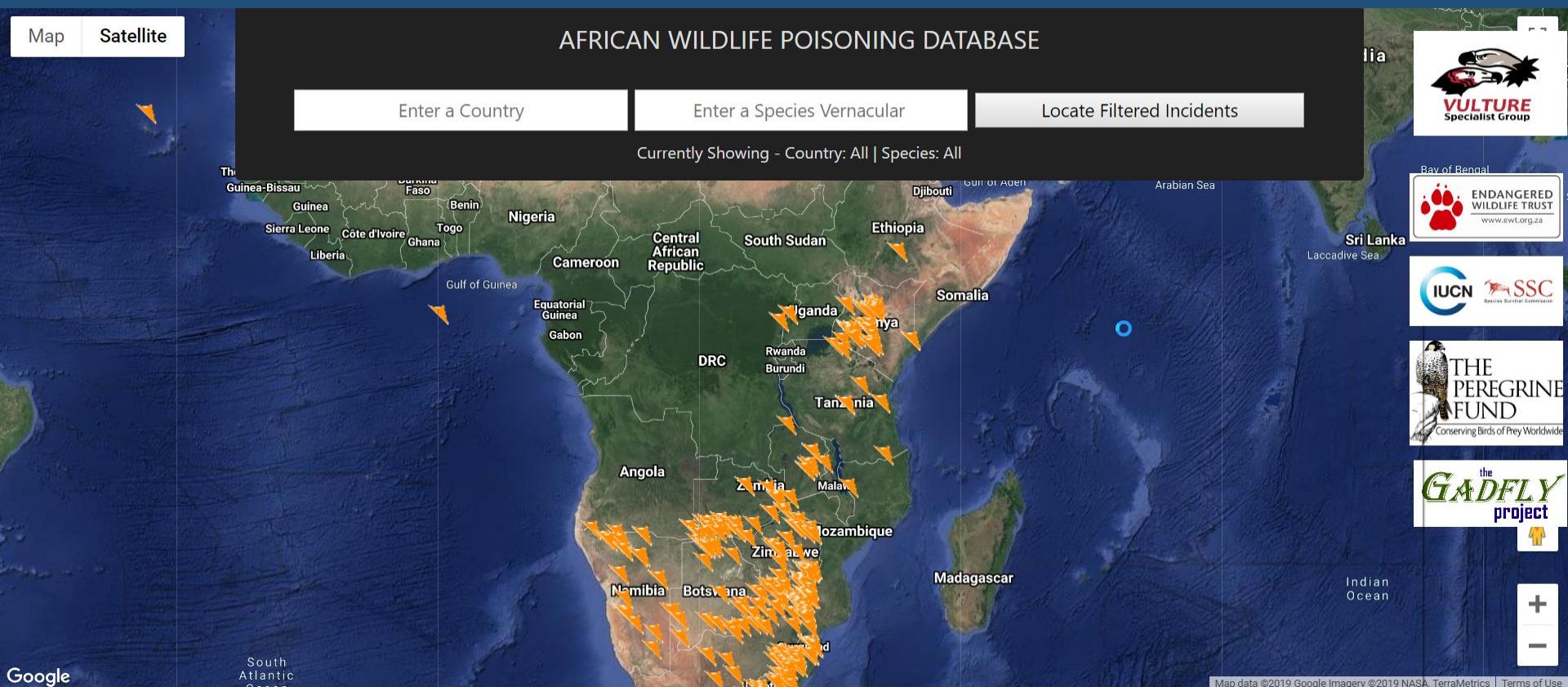
Trainers: Dr. Raphael Mateo, Institute for Game and Wildlife Research, Spain

Dr. Ngaio Richards, Working Dogs for Conservation, Montana



# African Wildlife Poisoning Database

africanwildlifepoisoning.org



- Contains records of 451 poisoning incidents involving 15085 mortalities of 59 wildlife and 4 domestic species
- Majority of mortalities were in East Africa (n = 7636), closely followed by southern Africa (n = 7399)
- Largest number of mortalities for a single species have been recorded for White-backed Vultures (n = 4763)



# Developing Capacity

**Martin Odino Msc. University of Exeter, U.K.**

Identifying poisoning hotspots and key conservation areas for critically endangered vultures in northern Kenya



**Sidney Shema Msc. Wageningen University, The Netherlands (likely)**

Breeding success and population trends of raptors in the Athi Plains, Kenya



**Harry Taylor, PhD., Massey University, New Zealand**

Blood lead concentrations and their conservation consequences in Kenya's Vulture populations

# Collaborative Projects

**Exposure of vultures to anthrax in Kenya, and their role as sentinels for a lethal bacterial zoonosis in endangered wildlife, livestock and humans**

Dr. James Hassell, Global Health Program, Smithsonian Conservation Biology Institute



**KAPs (knowledge, attitudes, practices) study to evaluate poisoning trainings as part of the Laikipia Rabies Vaccination Campaign 2019**

Dr. Adam Ferguson, Chicago Field Museum and Dr. James Hassell

**Strategic Environmental Assessment for Wind Power and Biodiversity in Kenya**

The Biodiversity Consultancy, Nature Kenya, The Peregrine Fund, and BirdLife International



# Thank you!

## Current supporters and local partners

National Geographic  
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Detroit Zoological Society  
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SeaWorld-Busch Gardens  
Lion Recovery Fund  
Ol Pejeta Conservancy  
Loisaba Conservancy  
Northern Rangelands Trust  
Lewa Conservancy  
Suiyan, Mugie and Sosian Ranches  
Kenya Choppers  
Ewaso Lions  
Kenya Wildlife Service  
National Museums of Kenya  
University of Oxford WildCRU  
Savannah Tracking  
Save The Elephants  
Will's Africa Trust  
Tusk Trust  
The Nature Conservancy

## Key organizational collaborators

San Diego Zoo Global  
Living with Lions



Photo S. Kapila

