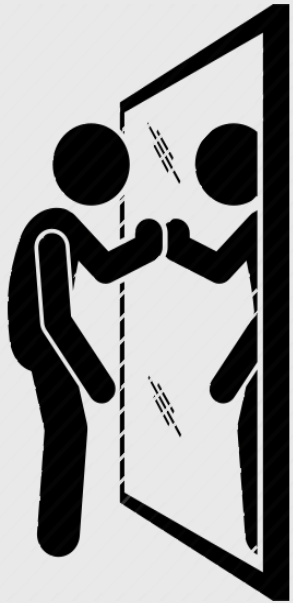


***Mirror Mirror On  
The Wall***

***Reflecting on  
30 Years of  
Avian  
Monitoring  
and Research  
in Kruger  
National Park***



*Sharon Thompson  
Avian Research Coordinator*

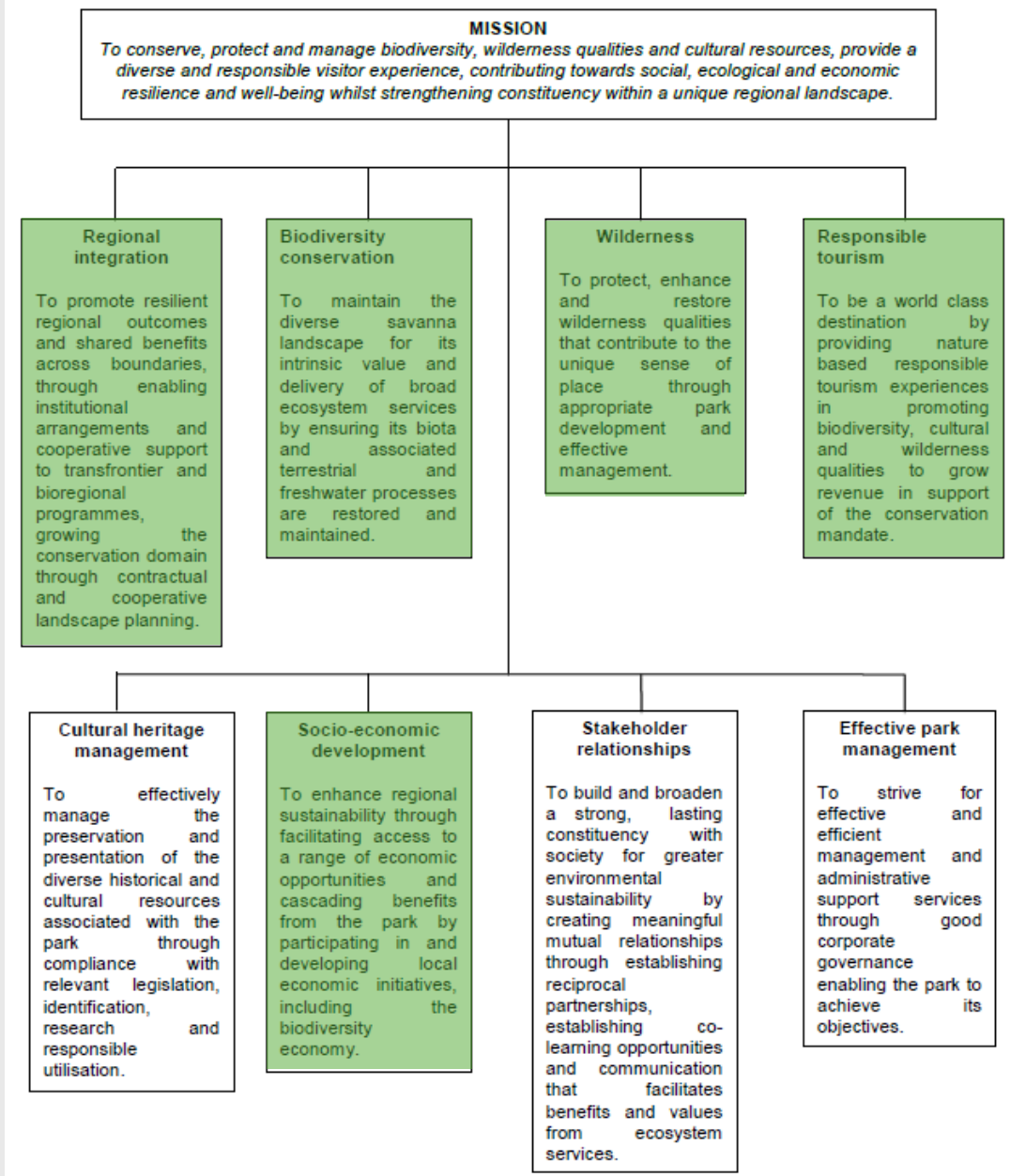


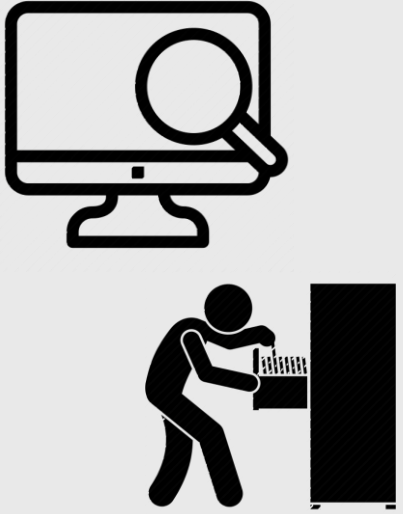
- Birds good bio-indicators for conservation management - respond to changes in habitat structure, land-use and climate.
- KNP supports close to 60% of bird species in southern African subregion ( >490 bird species).
- Given diverse bird list – tempting to assume substantial research accompanies this.
- Kruger’s avifauna have somewhat been overlooked.
  - Seldom systematically surveyed.
  - Rough census figures are available for only a fraction of the supported species.
  - Functional diversity changing over time.
  - Limited knowledge about bird communities.

# The value of birds to KNP



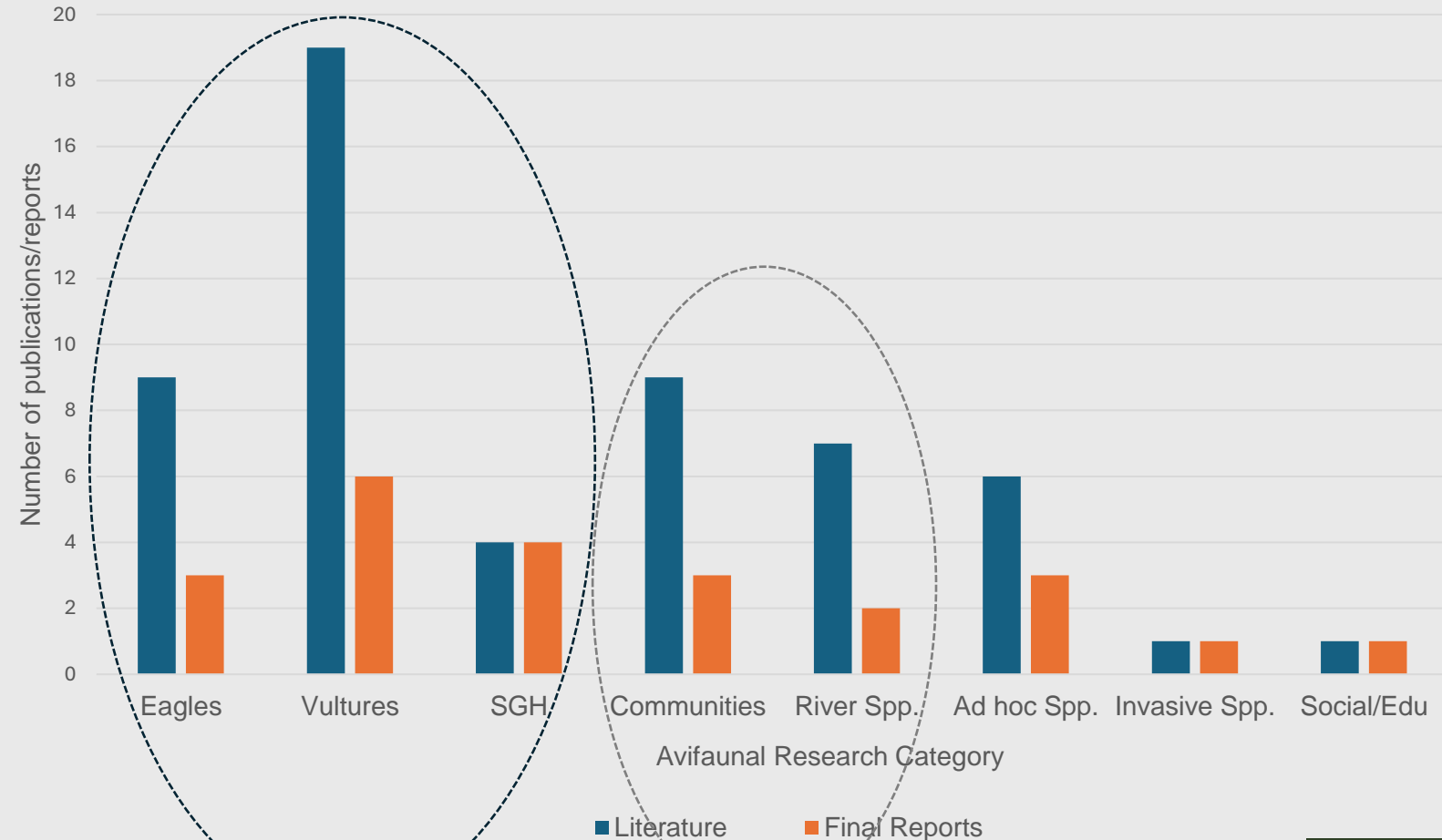
- Play a key role in supporting SANParks Mission.
- Contribute to five high-level management objectives for KNP - shaded green.
- Both socio-economic and ecological management objectives.
- Why have birds been overlooked? Reality or Misconception?





- Google Scholar search using various combinations of keywords including ‘bird or avian or ‘birds of prey or raptor’ or ‘bird diversity’ or ‘bird community’ and ‘Kruger National Park’.
- Independent search of Scientific Services repository for peer-reviewed publications submitted by researchers to SANParks, internal reports and final project reports.
- Retrieved a total of 54 peer-reviewed articles & 21 final project reports – grouped into research categories.

- Focus in KNP: Large birds of prey. Output rich.
- Studies address population status, breeding success, habitat/nesting requirements; movements inside and outside PAs.
- Bird communities & river-dependent species – fair amount of research, but fragmented.
- Last 3 categories: limited information.





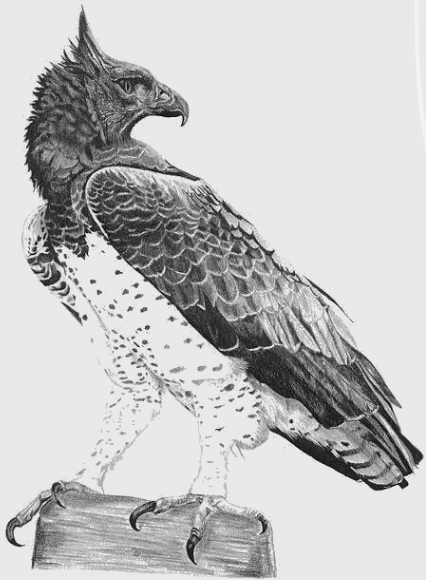
### **Current State:**

- White-backed and White-headed Vulture populations appear stable. Active nests similar to those recorded in late 90s - early 2000s (~1025 and 50-60 active nests, respectively)
- Lappet-faced Vultures – only 32 active nests recorded in 2023 (late 90's - early 2000s ~ 60-100 nests).
- Hooded Vultures – 77 active nests recorded between 2017 and 2023

**Drivers/Threats:** Impacts of wildlife poisoning; loss of suitable habitat and nesting sites.

**KNP's Critical Role:** KNP and surrounding areas host majority of breeding vultures – vital for their conservation.

**Recommendations:** Continue monitoring to determine trends in response to ever-increasing threats and environmental change; impact of higher temperatures on fecundity and survival; Movement ecology limited.



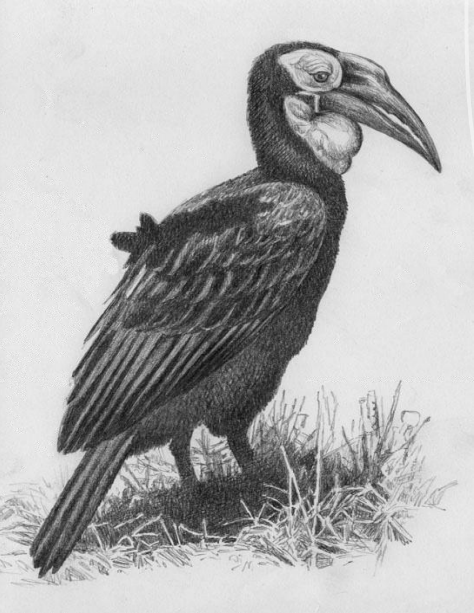
### **Current State:**

- KNP focus on Martial Eagles
- Between 60 – 120 breeding pairs in KNP.
- Low and unpredictable breeding rates - maximum of one chick every two years.

**Drivers/Threats:** change in habitat structure/quality - loss of nesting sites and reduced prey abundance; power lines electrocutions of concern.

**KNP's Critical Role:** Only sufficiently large park in region to provide suitable habitat. Many large eagles rely on PA networks - vulnerable if the network is inadequate for future range shifts.

**Recommendations:** Extend monitoring to other large eagles (e.g Bateleurs, Tawny Eagles, Wahlberg's Eagle); potential elephant impact on eagle nesting sites; impact of power lines.



**Current State:**

- KNP likely to be at full capacity – almost 90% of KNP has resident groups of ground-hornbills (263 groups, ~1454 individuals).
- Average group size increased from 1980s (3.6 to 5.53) – groups are breeding successfully and juveniles are surviving.

**Drivers/Threats:** Potential elephant impact on nesting sites; lead intoxication outside KNP.

**KNP's Critical Role:** KNP is the breeding stronghold for ground-hornbill population in SA. Source of dispersing birds to repopulate surrounding areas.

**Recommendations:** Continue population surveillance; lead poisoning needs serious attention.



### **Current State:**

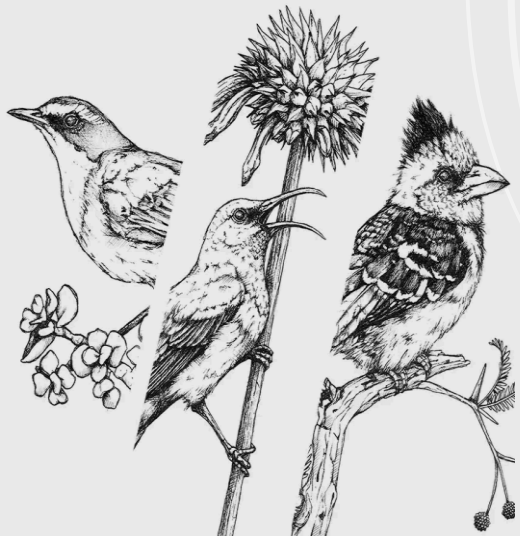
Difficult to compare and integrate results - each study focused on different aspects of the landscape, different drivers and methodologies.

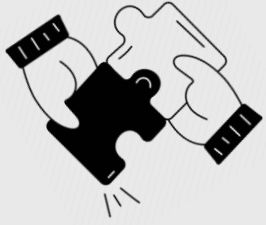
### **Threats/Drivers:** influencing bird communities

- land-use change (urbanization; subsistence agriculture)
- human infrastructure
- seasonal water sources
- structural changes to vegetation (fire, bush encroachment, loss of tree cover).

**KNP's Critical Role:** > 60% of bird species have smaller ranges outside the PA due to human activities – significant contribution to avian conservation.

**Recommendations:** Maintain habitat heterogeneity - promote functional and phylogenetic bird diversity.





- Knowledge gaps in avifaunal research are substantial.
- Birds somewhat overlooked relative to other wildlife groups.
- Significant potential to change this - leveraging existing datasets and addressing emerging challenges (e.g. shifting weather patterns, avian migration complexities, habitat loss, urbanization, pollution, and disease).
- Invitation to discuss key areas and explore how we can use existing data and collaborations to gain meaningful conservation insights.

**Call to Action:**  
**Can we change the overlooked status of birds?**

