



# Nuusbrief / Newsletter

# OKTOBER / OCTOBER 2024

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## Witkruisarend skuldig aan veeverliese in die Noord-Kaap

Die Noord-Kaapse Rooivleis Produsente Organisasie (RPO) het PMSA genader vir inligting en wetenskaplike feite om boere te help om oordeelkundige besluite te neem in terme van verliese wat hulle ervaar. Die RPO wil reageer op die vele gerugte van die witkruisarend wat skade aanrig met die jag van lammers in die Noord-Kaap, maar spesifiek op die oostelike grens van die provinsie.

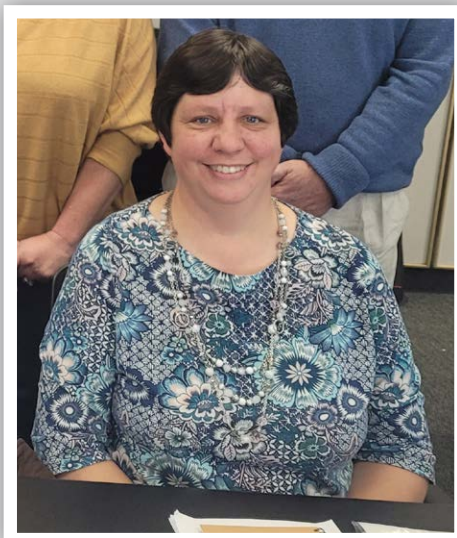
Die Noord-Kaapse Predation Management Forum (PMF) vergader aan die einde van Oktober en hulle beplan om 'n kompakte inligtingstuk vir boere saam te stel.



## Technology in predation management

The Centre for Environmental Management at the University of the Free State presented a conference with the theme “Sustainable horizons – navigating the future with environmental innovation”.

The topic, “Technological approaches used for predation management and environmental monitoring” was presented by Dr Beanelri Janecke from the Predation Management Centre (PMC).



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## Leopard research

At the Eastern Cape predation management meeting, Christina Hiller shared her insights from her PhD research on conserving leopards amidst social conflicts related to wildlife management, particularly in the Eastern Cape.

She elaborated on her research, which examines the complexities of human-wildlife conflict and the various stakeholder perspectives involved. She identified three levels of conflict: direct human-wildlife interactions, human-human stakeholder disputes, and broader societal issues tied to wildlife conservation values.

Through extensive interviews with community members and officials, she gained valuable insight into the challenges faced in the region. She emphasised the importance of understanding different worldviews on sustainable-use conservation and their impact on wildlife management practices.

A question was raised by the chairman, who primarily represents landowners outside protected areas, whether they accommodate and manage leopards. She said that farmers, wildlife ranchers, and community members she had talked to had a clear understanding of collective views and shared benefits extending beyond individual property boundaries. Whereas this approach had potential, it remained largely unnoticed and needed more attention and discussion.



# The impact of water management on african carnivore communities

by Beanelri Janecke

In dry and semi-arid regions of Africa, water is a crucial resource for large herbivores. To support these animals, wildlife managers often create artificial water sources. A study by Morin et al. (2024) explores how these water sources influence the behaviour and relationships among different carnivore species. They recorded 22 carnivore species and 24 prey species over 7 896 camera trap days across 165 sites in Hwange National Park, Zimbabwe.

## KEY FINDINGS:

- 1. Water's role in animal distribution:** In dry environments, herbivores tend to gather around water sources making it easier for large carnivores to hunt. In general, larger carnivore species dominate over smaller carnivores. Changes in behaviour of smaller carnivores in response to the fear of encounters with dominant species are widespread. This, combined with the killing (lethal effects) by larger carnivores may lead to the suppression of smaller carnivores. Therefore, the presence of water where larger carnivores (lions, hyenas) usually occur can create a competitive environment affecting smaller carnivores (cheetahs, leopards). This leads to a shift in their behaviour and habitat use.
- 2. Carnivore rankings:** The carnivores were categorised into four ranks based on their body size and dominance:
  - Rank 1: Largest, most dominant species – African lions, spotted hyenas.
  - Rank 2: Mid-sized carnivores – leopards, wild dogs, cheetahs.
  - Rank 3: Smaller carnivores – civets, jackals, caracals.
  - Rank 4: The smallest species – wildcats and various mongoose species.



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- 3. Distance to water:** The results from this study show species in Ranks 1 and 3 to be more likely to be found near water sources. Those in Ranks 2 and 4 preferred areas further away. Specifically, the large carnivores showed a high occupancy rate close to water (about 90%), whereas smaller carnivores displayed lower occupancy rates as they distanced themselves from these high-risk areas. This pattern suggests that whereas water is beneficial for larger carnivores, it can create challenges for smaller ones.
- 4. Interactions between predator ranks:** Interactions among these different ranks are not only competitive but also complex and delicate. Larger carnivores (Rank 1) can exert significant pressure on smaller species (Ranks 2, 3, and 4) through predation and competition for resources. However, in some instances of complex interaction, subordinate carnivores benefit from the presence of larger ones. For example, smaller carnivores often take advantage of leftover prey from larger carnivores. This scavenging can provide crucial food sources, especially when hunting opportunities are limited.
- 5. Activity patterns:** Some smaller carnivores adjusted their activity times to avoid larger predators, indicating a behavioural response driven by fear instead of a direct relationship with water. Smaller species might be more active during either the cooler or warmer times of the day when larger carnivores are less active.

## MANAGEMENT IMPLICATIONS

This research highlights the significant impact of artificial water sources on the structure of carnivore communities. To promote a diverse range of species, wildlife managers should consider varying distances among waterholes in the landscape. Maintaining areas at intermediate to long distances from water sources could help sustain specific populations of mid-sized carnivores. These include cheetah and wild dog, which are threatened increasingly in their natural habitats. By carefully planning the placement and number of artificial waterholes, healthier and more diverse carnivore communities can be supported in Africa's arid landscapes.

### Reference:

Morin, A. *et al.* (2024) Response of a carnivore community to water management in a semi-arid savanna. *Biological Conservation*, 299:11077.

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