LANDMARK FOUNDATION - ANNUAL REPORT

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This is a report on the activities by Landmark Foundation between March 2023 and February 2024. Landmark Foundation Trustees and Staff are grateful for the donor support to do this work

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Objective, Purposes and Outputs

Core organisational objective	
Conservation custodianship promoted so that Southern Africa's natural landscapes and biodiversity can be effectively conserved.	
Core organisational purposes	
1. Restorative and regenerative conservation actions supported to maintain naturally occurring patterns and processes of biodiversity. **2. Conservation actions undertaken, focusing on top trophic-level species and the landscape impacts of production agriculture, and specialising in the last free-roaming top carnivore, leopards, and landscape biodiversity conservation efforts.** **3. Intrinsic value of natural systems and life forms promoted and supported.** **4. Recognise the interconnectedness of life, and the fact that humans are members of the ecological whole, promoted and supported in conservation actions.** **5. Sentience of life, and our obligation to respect it, promoted.** **6. Governance and accountability supported for the conservation of biodiversity patterns and processes.**	
Core 0utputs executed through the following projects and programmes: • **Leopard and Predator Project** • **Wetland, Riparian and Landscape Restoration and Rewilding** • **Environmental Education Programme** • **Biodiversity and Law Project**	
1. Advocacy for leopard, top trophic species and conservation land uses on agricultural production landscapes	- Damage-causing animal (DCA) conservation - Leopard conservation on agricultural production landscapes - Opposing commoditisation of biodiversity assets - Social media campaigns and raising awareness for conservation action, - Shepherding Back Biodiversity project rescue, - Litigation on public policy matters, administrative accountability, and public accountability in terms of core purposes
2. Education	- Youth Environmental Education through Early Childhood development interventions, Green Clubs in Schools and other youth interventions - Community gardens - Youth in Conservation - Public information and mobilisation
3. Research	- Identifying leopard habitat distribution and corridors, - Understanding leopard metapopulation dynamics and connectivity,

	- Quantify livestock losses caused by leopard and identify high conflict areas, - Test the efficacy of conflict mitigation tools including financial compensation, translocation efficacy, - Genetic vitality of remaining leopard populations, - Carnivores as a surrogate for broader ecosystem conservation, - Mesopredator conservation - Caracal conservation - How various land use zones impact species, and borader 4cosystem conservation, - Restoration ecology on production landscapes e.g. rewilding. -
4. Direct action	- Extension work with government conservation structures, - Human-wildlife conflict (HWC) mitigation, - Leopard and other carnivore rescues, Wetland & landscape restoration
5. Market mechanisms	- Fair Game Wildlife-Friendly Products
6. Habitat expansion	- Vette-Korente Wetland Project, - Leopard habitat and connectivity, - Wildlife friendly farming



Organisational Mandate

Established in 2004, Landmark Foundation is a conservation Non-Governmental Organisation based in South Africa that implements practical, economical, and ecologically viable land use management approaches that ensure sustainable conservation goals at a large scale. We promote evidence-led, ethics-driven management tools that create effective conservation custodianship so that Southern African landscapes can effectively be conserved.

Our implementation focus is on top-trophic species conservation efforts (with a special interest in leopard conservation), landscape conservation and rewilding, ecological restoration, ecological governance, and human-wildlife coexistence in production landscapes.

The **organisational philosophy** is guided by a set of ethical principles that embrace the primacy of respecting life, the interrelatedness of life, the sentience of all living things and maintaining a healthy environment for a sustainable future for all forms of life.

Landmark Foundation believes that the environment has intrinsic value. Humans are merely parts of the ecological whole, and we have a duty of care towards all other members of that community. By dominating the extraction of resources from the entire ecosystem and the commoditisation of life and resources, humans have become a destructive species.

Aldo Leopold argues that we ought to regard the environment and its communities as morally considerable in our actions. *'A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise*.'



Leopard and Predator Project

Background

Carnivore populations play an important role in maintaining healthy ecosystems. Due to their high trophic status, top predators regulate prey numbers and pathogens, control meso-predator populations (such as jackal and caracal) through competition, and maintenance of a functional balance of biodiversity in the local community.

Since the mid-1600's, leopards, and other carnivores, were considered as pests and hunted extensively. All other large carnivores were exterminated, and the leopard was, and still is, the only remaining free-roaming top carnivore in South Africa. Only since around the 1960s were important provincial and national actions were taken to conserve species, such as ending state-funded bounties on leopard culling in 1968 and stopping subsidized vermin hunting clubs by the mid-1990s.

Thanks to these efforts by state and NGO's playing a critical role in advocating for conservation efforts, leopards began recolonizing areas where they were previously absent. However, challenges persist, with ongoing persecution of leopards in some regions despite conservation gains in others, notably in the western part of the Western Cape.

Historically, leopards were considered as 'vermin' and were extensively and persistently hunted from the mid-1600s in the Cape Colony. Thanks to important provincial and national actions taking place from the 1960s (like the termination of state funded vermin bounties on leopard culling in 1968, and ending of the subsidised vermin hunting clubs by the mid-1990s, together with the repeated modification of the 'problem' animal laws and regulations), leopards started to recolonize areas where they have been previously extirpated. These gains have not been universal across the landscapes and in areas the age-old assault on carnivores have seen the persecution of leopards and wildlife generally ongoing. It would appear that the state actions are a critical component to seeing the reverse of this, and NGOs play a critical role in the agitation and advocacy of this. There have been evident conservation gains for leopards in some areas, notably in the western part of the Western Cape. This seems to correlate with functional state extension services, while in other areas, such as the Eastern Cape and elsewhere, the reverse trend is evident and persecution practices persist and are supported by archaic state management practices.

Predator conservation has to date operated primarily within the boundaries of protected areas with historical predator persecution being widespread in livestock production landscapes, but there are grave limitations in relying solely upon this approach. This has seen most top predators being extirpated from their former ranges, with the leopard perilously hanging on as the last free-ranging top predator, even though at much reduced numbers, distribution and population densities. In South Africa only around 12% of leopard habitat exists within formally protected areas, and with only ~10% of the country is formally protected. These areas are often isolated from one another and in many cases small, making them insufficient to conserve viable populations. Furthermore, parks and reserves are often enveloped by highly modified landscapes, with hostile attitudes to predators, making it impossible (even for wide-ranging species such as leopard) to reach one another, resulting in genetic isolation and inbreeding, as noted in genetic analysis of leopard populations in the Cape Provinces.

These challenges highlight the importance of expanding wildlife-friendly practices on production landscapes.

The effective conservation of species hinges on their protection over vast areas, and across various land use zones, and the management of conservation-compatible and carnivore-human conflict reduction strategies on human-dominated land outside the existing protected area network will be crucial. This is critical for wide-ranging species, such as leopard and remains the focus of Landmark Foundation's conservation actions. By reducing losses caused by leopards and other carnivores, and promoting alternative, non-lethal predator management tools on production landscape, these areas become key conservation areas.

This strategy creates 'corridors' of available habitat and enables linkages between protected areas, with important implications for gene flow, dispersal and long-term persistence of previously fragmented large carnivore populations. Our research and conservation action are combined and operate areas that are diverse and widespread. This is to ensure we promote evidence-based conservation actions across all land use zones that can be adopted and upscaled elsewhere.

Landmark Foundation has over the years contributed significantly to the body of peer-reviewed scientific knowledge related to leopard ecology and management imperatives, and other land management actions, as detailed in this table:

REASEARCH QUESTION	PEER REVIEWED SCIENTIFIC PUBLICATION
What are the Leopard Population Dynamics in various research sites in Western, Eastern and Northern Capes?	McManus, J.S. 2009. The spatial ecology and activity patterns of leopard (Panthera pardus) in the Eastern Cape, South Africa. Rhodes University, Grahamstown, South Africa. Masters of Science Dissertation. Population dynamics in various areas: Research underway
What are the Resource Requirements and Use of Leopards, specifically investigating Land Use, Connectivity and Gene Flow?	McManus, J.S. 2018. The conservation of leopards (Panthera pardus) in the Eastern and Western Cape, South Africa: Investigating the effect of Land Use, Gene Flow and Connectivity. Witwatersrand University, Johannesburg. PhD dissertation. McManus, J., Marshal, J.P., Keith, M., Tshabalala, T., Smuts, B. and Treves, A., 2021. Factors predicting habitat use by leopards in human-altered landscapes. Journal of Mammalogy, 102(6), pp.1473-1483. Jandova, K., 2019. Does resource dispersion drive leopard habitat selection? Czech University of Life Sciences, Prague. Faculty of Tropical AgriSciences. Masters of Science Dissertation.
What is the Profit and Loss Accounting of Carnivore Impacts in lethal and non-lethal controls?	McManus J.S., Dickman, A., Gaynor, D., Smuts, B. and Macdonald. D.W. 2014. Dead or alive? Comparing costs and benefits of lethal and non-lethal human-wildlife conflict mitigation on livestock farms. Oryx. doi:10.1017/S0030605313001610.
What are the priorities in human-wildlife conflicts in the field of the Science of Carnivore Ecology?	van Eeden. L., Eklund, A., Miller, J., López-Bao, J., Chapron, G., Cejtin, M., Crowther, M., Dickman, C., Frank, J., Krofel, M., Macdonald, D., McManus, J., Meyer, T., Middleton, D., Newsome, T., Ripple, W., Ritchie, E., Schmitz, O., Stoner, K., Tourani, M and Treves, A. 2018. Carnivore conservation needs

	evidence-based livestock protection. PLoS biology, 16(9), p.e 2005577. Treves, A., Krofel, M. and McManus, J., 2016. Predator control should not be a shot in the dark. Frontiers in Ecology and the Environment 14, 380-388.
What are the Impacts on Veldt Condition using High Density Short Duration Grazing Kraaling? (A tool in managing human-wildlife conflicts.)	McManus, J., Goets, S, Milton, S, Bond, W., Henschel, J and Smuts, B. 2018. Trampling recovery of plants on temporary Karoo kraal sites. African Journal of Range and Forage Science. https://doi.org/10.2989/10220119.2018.1529706
Is Leopard a Presence in a Landscape a Biodiversity Indicator?	Tshabalala, T., McManus, J., Treves, A., Masocha, V., Faulconbridge, S., Schurch, M., Goets, S. and Smuts, B., 2021. Leopards and mesopredators as indicators of mammalian species richness across diverse landscapes of South Africa. Ecological Indicators, 121, p.107201.
What are the Leopard Densities in Western and Eastern Cape?	Devens, C., Tshabalala, T., McManus, J. and Smuts, B. 2018. Counting the spots: The use of a spatially explicit capture–recapture technique and GPS data to estimate leopard (Panthera pardus) density in the Eastern and Western Cape, South Africa. African Journal of Ecology. https://doi.org/10.1111/aje.12512. Devens, C.H., Hayward, M.W., Tshabalala, T., Dickman, A., McManus, J.S., Smuts, B. and Somers, M.J., 2019. Estimating leopard density across the highly modified human-dominated landscape of the Western Cape, South Africa. Oryx, pp.1-12.
What is the Leopard Population Genetic Viability Presently and What Does it Tell Us About the Conservation Status of the Species?	McManus. J.S., Dalton, D., Kotze, A., Smuts, B., Marshal, J. and Keith, M. 2015. Genetic structure of a solitary carnivore in a human dominated landscape. Ecology and evolution 5(2): 335–344. McManus, J., Smuts, B. 2016 Low microsatellites used to investigate leopard genetic structure severely restricts the results by Ropiquet et al. (2015) to infer population structure for managers. Comptes Rendus Biologies 339: 378–379 Leopard genome analysis – Research underway
What are the Predicted and Functionality of Habitat Corridors for Leopard?	McManus, J., Schurch, M.P., Goets, S., Faraut, L., Couldridge, V. and Smuts, B., 2022. Delineating Functional Corridors Linking Leopard Habitat in the Eastern and Western Cape, South Africa. Conservation, 2(1), pp.99-121.
How Effective are Human-Wildlife Conflict Mitigations?	Dickman, A., Potgieter, G., Horgan, J., Stoner, K., Klein, R., McManus., J.S. and Marker, L. 2018. Use of Livestock Guarding Dogs to reduce human-cheetah conflict. In: Cheetahs: Biology and Conservation (Eds Marker, L, Boast, L and Schmidt-Kuntzel, A). AP, Namibia.
Are Compensation Mechanisms Effective conservation tool?	Research underway
What Evidence is there of Leopard Rewilding and Natural Recolonizations?	Research underway
What is the Effectiveness of Translocations as a Management Tool in Human Wildlife Conflicts?	McManus, J., Faraut, L., Couldridge, V., Van Deventer, J., Samuels, I., Cilliers, D., Devens, C., Vorster, P. and Smuts, B., 2022. Assessment of leopard translocations in South Africa. Frontiers in Conservation Science, p.63. https://doi.org/10.3389/fcosc.2022.943078

What is the Leopard Presence and likelihood of survival among Isolated Habitat Patches?	Research underway
Are there Specific Conflict Hotspots of Conflicts in Leopard Habitats, and are there Determinants of Such?	Research underway
What would an Ideal Regional Leopard Management Plan look like?	Research underway
What are the Pathways to Coexistence with Carnivores?	Boronyak, L., Jacobs, B., Wallach, A., McManus, J., Stone, S., Stevenson, S., Smuts, B. and Zaranek, H., 2021. Pathways towards coexistence with large carnivores in production systems. Agriculture and Human Values, pp.1-18. Boronyak, L., Jacobs, B., McManus, J., Stone, S., Smuts, B., Submitted. Barriers to Preventive Innovations in the US and South Africa
What are the Ecological Impacts of Wildlife Friendly Farming and Rewilding?	Hasselerharm, C.D., Yanco, E., McManus, J.S., Smuts, B.H. and Ramp, D., 2021. Wildlife-friendly farming recouples grazing regimes to stimulate recovery in semi-arid rangelands. Science of The Total Environment, 788, p.147602. Hasselerharm, C.D., Wooster, E.I.F., Zawada, K.J.A., Yanco, E., Julliard L., McEvoy, T., McManus, J.S., Smuts, B.H., Lungren, E.J, Middleton, O.S, and Ramp, D. Submitted. Wildlife-friendly Farming Promotes Functional Richness and Trophic Complexity. Schurch, M.P., McManus, J., Goets, S., Pardo, L.E., Gaynor, D., Samuels, I., Cupido, C., Couldridge, V. and Smuts, B., 2021. Wildlife-friendly livestock management promotes mammalian biodiversity recovery on a semi-arid Karoo farm in South Africa. Frontiers in Conservation Science, 2, p.6. Yanco, E. 2021 Shifts in human well-being and attitudes towards nature following livestock herder training and implementation. University of Technology, Sydney, Australia, Dissertation towards a Doctorate in Philosophy.
How do Caracal Respond to Wildlife Friendly Farming?	Jooste, E., McManus, J.S., and Couldridge, V. Submitted. Diet of caracal on lethal and non-lethal carnivore treatment farms in the Karoo, South Africa. Jooste, E., McManus, J.S., and Couldridge, V. Submitted. Caracal habitat selection and activity patterns on a predator-friendly farm in the Karoo, South Africa Jooste, E. 2020 The spatial and dietary requirements of Caracal (Caracal caracal) in lethal and non-lethal predator control landscapes. University of the Western Cape. Masters of Science Dissertation passed with Distinction 2020.

In 2023, our continued conservation efforts spread further throughout the Eastern, Western and Northern Cape.

Current Project Areas in 2023/2024:

- Cockscomb Mountains, Eastern Cape

- Gondwana Game Reserve, Western Cape
- Gouritzmond-Witsand, Western Cape
- West Coast, Western Cape
- Langeberg – Riviersonderend - Montague, Western Cape
- Niewoudtville & Springbok, Northern Cape
- Overberg, Western Cape
- Piketberg, Western Cape
- Nature's Valley-Stormsriver-Oysterbay, Eastern Cape
- Voor Paardeberg, Western Cape
- Wittedrift/De Vlugt, Western Cape

Major outputs from the project over the last 12 months:

1 Predict suitable leopard habitat, delineate corridors and connectivity, evaluate newly recolonised areas,
2 Mitigate human-leopard conflict in high leopard persecution areas,
3 Assess the functionality of predicted corridors through extensive camera trapping monitoring,
4 Extraction of leopard DNA samples and commence the leopard genome analysis to assess population genetic vitality and connectedness,
5 Reduce human-caused mortality by employing a financial compensation scheme for verifiable livestock losses caused by leopards for farmers participating in non-lethal predator management,
6 Submitted four scientific publications to peer-reviewed journals,
7 Draft a species management plan for leopards in the Cape Provinces.

Leopard Conflict Mitigation

Since human-wildlife conflict and resultant human-caused mortalities is the one of the largest contributors to leopard mortality in our focal areas, a main component of the leopard project work is mitigating conflicts. Conflict results due to real or perceived livestock losses that occur as a result of carnivores. These can become conflict hotspots when continued and sustained losses occur over many months to years and where producers feel unsupported in facing the challenges of farming with predators. Our conflict mitigation efforts for 2023 were focussed in the Piketberg mountains, Voor-Paardeberg, Riebeeck West, Riversdale, Clanwilliam, McGregor, Blombos, Springbok, and Wittedrift where livestock were reportedly killed by carnivores across several properties.

In conjunction with camera-trapping, we deployed cages aimed to capture, collar and release leopards implicated in livestock loss areas, to mitigate losses though our compensation scheme. Over the last 12 months, our leopard cages were active for 60 cage-trap nights. During these operational nights, animals were caught on seven occasions (caracal, Guineafowl, leopard and porcupine). All by-catch captures resulted in releases on site with animals being unharmed.



Cage deployed in response to livestock depredation.

The Piketberg case

The financial compensation scheme was developed and has been operational in the Piketberg since 2019, and since 2006 in other areas. A legal agreement was developed between Landmark Foundation and the participating landowners. This agreement requires framers to develop non-lethal predator mitigation actions in their production practices and report all livestock losses presumed to be caused by carnivores. Compensation is linked temporally and spatially to the collared leopards that are released *in situ*, and with it we have assisted farmers in developing protocols and non-lethal mitigation tools to deter predators and protect their livestock (such as guarding animals, kraaling and aversion and deterrent devices), at the time of the identified conflict and where those tagged leopards are located. If these leopards cause livestock losses, the farmers are compensated at abattoir market rates of the time of the livestock losses, that correlate in place and time with those leopards' movements on the GPS tracking collars. Only livestock are compensated for. Our current work has focused on a consolidated area of the Piketberg. Seven farmers have formally engaged with this since the outset of the project in the Piketberg and this has resulted in the collaring of 8 leopards (6 males and 2 females) in the area to date.

These farmers were engaged in areas where leopards caused conflicts, and this intervention convinced the local farmers to tolerate the leopards *in situ* in exchange for the compensation agreements and improve livestock production as effective non-lethal carnivore tools are employed. This also allowed the gathering of data of leopard behaviour and quantification of the conflict financial impacts. The compensation program allows: 1) an accurate evaluation of leopard-caused livestock depredation, 2) an accurate accounting of livestock losses, 3) the accurate identification of culprits that are indeed problem-causing animals, or if killings were opportunistic, 4) direct and effective human-leopard conflict mitigation by means of non-lethal deterrents to reduce losses, 5) appears to increase tolerance of co-existing with leopards and other wildlife, and 6) demystification of folklores around perceived depredation caused by leopards.

Preliminary Results: To date we have been able to collect details on the number of losses that have been reported by farmers (Table 1). The compensation has resulted farmers *not* killing the animals, as financial compensation was available, and we were able to target efforts of capturing the implicated

animal. Without such intervention farmers take to lethal controls to kill leopards often killing the wrong animal and suffering continued losses. This compensation scheme of Landmark Foundation has effectively saved 13 leopards from otherwise certain death in the last 36 months. (Some farmers declined compensation but provided data.)

This compensation program has helped Landmark Foundation to rescue 71 leopards in the broader area of our operations and have resulted in them being released into free-range habitat, the majority on-site of their capture, and a few translocated into appropriate habitats.

With time and data will reveal the true extent of livestock losses caused by leopards and as is evident in the current trends, leopards contribute only to few losses that can be managed with non-lethal interventions. Leopards have historically been blamed for losses that were not their doing and our work is part of this demystification of the issue.

Additional benefits of such a monitoring effort are that the individual causing the damage can be accurately identified and informed management decisions can be made. Last year, two livestock kills took place 4 km apart within a few days of each other. With the quick responses of placing camera traps by Cape Nature and Landmark Foundation, it was possible to confirm the individuals were not the same, and that there isn't one leopard causing the losses. Rather, both farmers put efforts to protect their vulnerable livestock (kraal, and electrified strands) and conflict could be more easily mitigated. Without such interventions, management could easily have assumed it one damage causing animal (DCA) and targeted to remove the leopard, and even the wrong leopard at times.



Two different male leopards caused damage to livestock within 3- 4 days of each other approximately 4 km apart. With the rapid deployment of cameras, it was possible to see which leopards were responsible and that they were different individuals, thereby allowing more information in mitigating conflict and managing the problem. Photo © Landmark Foundation (left) & CapeNature (right)

Table 1. Value of livestock losses (in Rands) reported between 2019 – 2023 that were confirmed to be caused by leopard.

	2019	2020	2021	2022	2023	Total
Farmer A		1500		10800	1800	14100
Farmer B				1800		1800
Farmer C				2500		2500
Farmer D	10000	27511,2	7200	3600		48311,2
Farmer E				3000	6000	9000

Average costs per year per farmer	**2000**	**5802,24**	**1440**	**4340**	**1560**	

Since 2019, we paid out a total of R73 011,2 (Table 2) to the farmers who joined the compensation agreement. This resulted in ensuring 8 leopards were able to remain part of the landscape and those causing continuous damaged could be managed directly, rather than disrupting the population by removing / killing leopards broadly in retaliation or desperation to reduce the damage. This has proven to work in other areas as well and is a tool that requires serious conservation consideration.

Table 2. Compensation paid for livestock losses caused by leopards in the Piketberg between 2019 – 2023 (in Rands).

	2019	**2020**	**2021**	**2022**	**2023**	**Total**
Farmer A				3600	9200	**12800**
Farmer C				2500		**2500**
Farmer D		10000	28711,2			**38711,2**
Farmer E				10000	9000	**19000**
Total		**10000**	**28711,2**	**16100**	**18200**	**73011,2**

Table 3. Each leopard's cost (in Rands) based on livestock each individual was implicated in killing between 2019 – 2023.

Leopard ID	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
PL01				1800		**1800**
PL07		2000				**2000**
PL08		4000		2500		**6500**
PL09	2000	13000	5400			**20400**
PL09 or PL08		2000				**2000**
PL10		1511				**1511,2**
PL11		2500				**2500**
PM06				13800	7800	**21600**
Unknown	8000	4000	1800	3600		**17400**

Leopard Rescue Events

We report on five leopard rescue incidences over the last 12 months in the North-West and Western Cape provinces (Table 4). Of these, one female leopard was captured in one of our cages (setup in response to high human-leopard conflict) and was fitted with collar and released on site, and monitored post release as part of the population dynamics study, financial compensation and

mitigation effort. We were also notified of two leopard captures in the Western Cape and North-West provinces (Table 4), the latter being near the Northern Cape boundary.

Table 4. Leopard incidences between January and February 2024.

Date	Sex	Age	Location	Province	Status	Notes
30 January	Male	Adult	Vryburg	NW	Translocated	Livestock losses – Unknown translocated site
23 May	Female	Adult	Voor Paardeberg	WC	Collared	Compensation program
Unspecified date	Male	Adult	Voor Paardeberg	WC	Released	Accidental capture
14 Feb 2024	Female	Adult	Riebeeck Mountain	WC	Collared	Illegal Capture
24 Feb 2024	Male	Adult	Agterkliphoogte	WC	Collared	Bushmeat capture

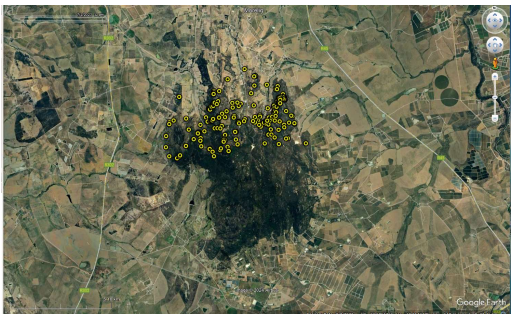
Vryburg male: A healthy male was captured in the North-West province. The cage was setup, supposedly, by the farmer in response to livestock depredation. The Landmark Foundation was prepared to collar the individual but the male was translocated to an unknown facility in the North-West, after an illegal translocation was prevented by our intervention that was planned to the Eastern Cape. Landmark Foundation facilitated the intervention of the local regulatory authority intervention, who then refused to cooperate.

Voor Paardeberg Female 01: In March 2022, our team set a cage in the Voor Paardeberg mountains in response to reported livestock losses. On the 23rd of May 2023, a mature female was captured, weighing 31 kg and in excellent condition. After taking the morphological data, the female was fitted with a satellite tracking collar and was released on site in agreement with the farm owner as part of the financial compensation program. This technology allows us to closely track her movements and gather essential data on leopard ecology and behaviours. These endeavours contribute significantly to the species management plan in the area.





Capture of the Voor Paardeberg F01.



GPS track of the Voor Paardeberg F01 leopard.

In June, this female was photographed with two young cub. The collar successfully dropped off the 17th October allowing us to get insight into her daily movements for almost six months. The field cameras placed in the region has continued to monitor the well being of these leopards.



Camera trap images of the Voor Paardeberg F01 with a Cape Spurfowl (left) and with one of her cubs (right).

Voor Paardeberg Male: While starting our camera trap survey in the Voor Paardeberg, one of the landowners reported that an adult male leopard was captured in a caracal cage and immediately released. Releasing without veterinarian intervention is extremely dangerous and we highly recommend to contact CapeNature, ourselves or another governmental entity in this situation.



Accidental capture of a leopard in the Voor Paardeberg. Photo © RT van der Merwe

Piketberg male 06: As described in our Annual Report 2022, the Landmark Foundation successfully captured a healthy adult male leopard at the end of October 2022, fitted him with a GPS collar and release him on site in agreement with the landowner, as part of our human-leopard conflict mitigation efforts in the Piketberg. Monitoring his movements helped us mitigate losses on two farms (Table 3), provided valuable data on leopard ecology on productive landscape, and contribute to broader meta-population dynamics of leopards in the Eastern, Western and Northern Cape.



Last camera trap photograph of the Piketberg M06 leopard (left) and area occupied by this male (right).

Despite the increased tolerance on the farmers' part of the compensation scheme, the reception of the daily GPS signal stopped on the 15th of April 2023, and the adult male leopard disappeared (and did not appear on our camera survey again thereafter). The team went to look for the potential collar at the last GPS location and used the radio telemetry signal. However, neither the collar nor a signal was detected. Therefore, we assume that this male was unfortunately killed and the GPS collar destroyed by a non-participant party.

Piketberg male 05: During the second phase of the Piketberg survey, we noticed that another mature male leopard disappeared in February 2023. He was previously captured by our team in response to livestock depredation in May 2021, but occupied the Piketberg since August 2020. Using GPS collar data, we deployed several camera traps in strategic locations of his home rage to confirm his disappearance. He never did reappear and the assumption is that he too was killed.

Despite the remarkable results from our Piketberg survey over the last four years it is clear that there are still significant threats to this recently recolonised population, despite the generally increased tolerance to the species in the region.



Piketberg M05 capture (left) and last camera trap photograph of the Piketberg M06 leopard (right).

Recent Leopard Captures in 2024

On February 14th, around 17:00, we received a call from Cape Nature reporting a leopard trapped in a cage near Riebeek West, Western Cape. As is the norm, we dropped everything, grabbed the capture kit, and hit the road from Riversdale, a 3.5-hour journey. The vet was already on site with Cape Nature, and while the official wanted to euthanize the leopard, we put pressure on to allow us access and time to contribute to the assessment of the leopard's condition. The leopard was caught in a cage set by a hostile farmer; however, he set the cage without the required permits, making the capture illegal.

There is a fine balance in having cages only set under permit, and farmers reporting unintended captures to authorities rather than going underground due to fear of consequences. However, the law must be abided by, and Cape Nature handled the situation as well as possible by balancing farmer, NGO, public, and, most importantly, leopard best interests. The hostile farmer refused to release the leopard on site, and she was relocated approximately 8km from the site of capture.

We arrived in time to assess and collect genetic morphological data, and place the collar on the leopard. This was an important capture. Females, in general, are shyer and harder to capture data from. She is an old female with yellow teeth and some scars on her face. Nonetheless, she is in excellent body condition, weighing 32 kg, one of the heaviest females we have interacted with in all our 20 years of leopard rescue work. She contributes to the 72 leopards rescued at the time, and 53 collared as part of the Landmark Foundation leopard and predator project.



Female Leopard Rescued and Translocated over a Short Distance in Riebeeck West

Merely 10 days later, on the 24th, another call from Cape Nature came in, reporting another leopard trapped in a cage, this time near McGregor. The details of the situation were ambiguous as Cape Nature told us the call came from the farm workers, not the farmer. We arrived at the farm by 14:30, having arranged for the vet from Worcester to meet us there. We all met in Robertson as a central point and made our way to the farm. First, we spoke to the farm workers who informed us that the farmer is not a 'leopard-friendly' farmer and would want it removed. Having spoken to them, we insisted that the farmer, being the landowner, must be contacted as setting a cage without a permit is illegal, and leopards are protected in the region.

We were taken to where the cage was, on the banks of a riverbed. While we assessed the leopard and prepared the drugs to immobilize the animal, the farmer arrived. He was extremely accommodating and had no idea the cage was set. It seems it was set without his knowledge by staff, probably to capture food such as porcupine and other small mammals. Fortunately, the leopard was in excellent

condition. The vet handled the situation extremely well, and the animal was darted, and the morphological data and veterinary assessment were undertaken. He was a stunning male with perfect teeth and condition, weighing 33 kg and 62cm in shoulder height. This is not unusual for the smaller leopards along the mountains in the Eastern and Western Cape, and he is a young adult, but fully grown.



Male Leopard Rescued from a Bushmeat Trap Near Robertson

We fitted the collar, and the farmer was more than happy to have the leopard released on his farm. He does not farm livestock and has no conflict with these creatures. He says he hadn't seen their spoor in a long time and is relieved to see they are still around. This situation could have been bad had the staff not contacted the authorities, and working together, we were able to assist in rescuing this male. This marks the 73rd rescue and 54th research cat! A remarkable feat and one of the largest ongoing leopard conservation and research projects.

Working together, these efforts are effective. The government is often restricted in funds to collar and rescue imperilled leopards and cannot offer compensations.

Caracal Rescues

Throughout the year we have assisted in assisting with rescuing 4 caracals. As the knowledge of our work with leopards has grown, we have been called upon to assist with caracals captured in cages. It is never desirable to remove these animals from their natal ranges, but with the only alternative of death at the hands of the capturer, we do assist with this. In April 2023, January 2024 and February 2024 we successfully released these cats.

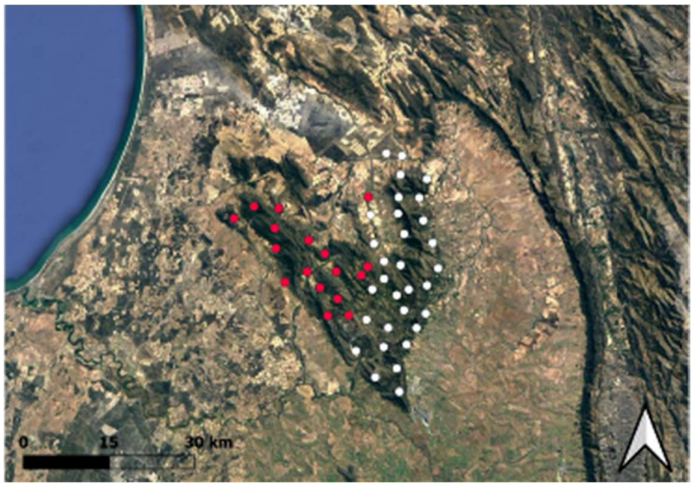
Research Leopard Density Surveys

Piketberg survey (phase 2)

The Piketberg holds immense conservation value, serving as a vital refuge for wildlife in the region, including the protected leopard. Situated amidst a highly transformed landscape (e.g., wheat, pastures, vineyards and orchards), the mountain acts as an island of remnant natural habitat. However, the surrounding landscape poses significant challenges to wildlife connectivity, acting as a barrier to adjacent natural habitat patches. Natural habitat corridors are present on the northern side of the Piketberg mountain, providing some opportunities for movement with the Cederberg mountains populations. However, these corridors are narrow and limited to the northern region of the mountain, resulting in restricted connectivity among leopard populations. These vital corridors

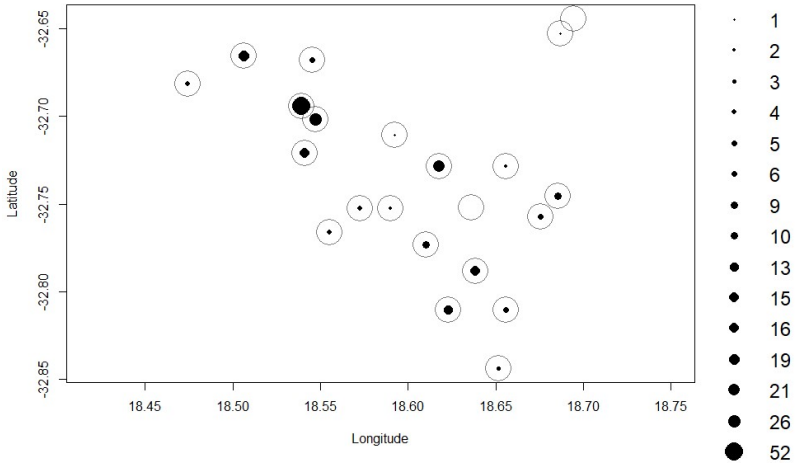
have recently again been threatened by proposed mining activity in the Mouton's Hoek Valley (see the "Landmark Foundation Public Activism" section).

Landmark Foundation set up a comprehensive camera trap survey, in two distinct phases, throughout the Piketberg mountains, covering an approximate area of 1100km2 from Aurora to the R366. This survey aimed to estimate leopard density and better understand the broader metapopulation dynamics in the area, as well as assessing potential prey availability.



Camera station setting of the Piketberg Mountains: phase 1 in white (Feb 2020 to Aug 2021) and phase 2 in red (July 2022 to August 2023).

Between July 2022 and August 2023, we ran the second phase of the leopard density assessment and prey diversity in the Western side of the Piketberg mountains. The camera traps operated for over 6854 camera nights (number of camera traps x 24 hours each camera is active), and captured 12866 footages, including 28 mammalian-, 11 avian- and one reptilian-species.



Number of leopard images according to the camera station setup in phase 2 of the Piketberg survey.

In the second phase cameras we collected 218 leopard photographs making up 1.7% of all images, capturing leopard at 20 of the 21 stations. We identified 15 adults from those images, including seven males and seven females, and one individual we were unable to reliably sex. Surprisingly, no juvenile leopard was observed throughout our survey period (except report from a farmer who observed three cubs on his property). Like lions or baboons, infanticide by leopard males have been reported in

previous studies and the high leopard density on the mountains might promote competitions between conspecifics.



Newly identified individuals during the second phase of the Piketberg survey.

Understanding the ecological dynamics of the Piketberg and its leopard population is crucial for effective conservation management. By combining historical data (e.g., leopard destruction permits) and conducting camera trap surveys, we gained valuable insights into leopard density, population distribution, movement patterns and recolonisation of previously extirpated population. This information allows us to identify potential conservation interventions, such as establishing wider corridors or implementing human-wildlife conflict mitigation strategies.

Stormsriver-Tsitsikamma survey

The Tsitsikamma area hosts important leopard habitat that is fragmented and exists under different land uses, including national parks (Garden Route National Park), forestry and dairy farming. This leopard population has not yet been intensively monitored, and density estimates and prey abundance indices are not well understood.

Additionally, the population faces threats of habitat fragmentation, transformation and poaching via snaring. These snares are generally set to capture bushmeat such as bushpigs or small-medium ungulates (e.g., duiker, bushbuck). However, this indiscriminate hunting method is a threat to many species, and a leopard was snared near the Langbos area and consequently died in 2020.



Current camera trap placements of the Stormsriver survey.

At the end of June 2023, the final camera grid setup of phase 1 of this survey was completed with a total of 12 paired camera trap and one single camera station. So far, we captured 5320 photographs including 14 mammalian- and 4 avian-species. Phase 1 of the survey concluded in January 2024.



One of the leopards frequently captured on the Stormsriver survey.

Since end of March 2023, 27 independent leopard events were captured on 8 of the 12 camera stations. Based on their unique fur patterns, we were able to identify three adult leopards. The preliminary results of this survey were presented to the SANPark team in November 2023. In January 2024 phase two (of three) camera survey was set up.

Voor Paardeberg survey

The Voor Paardeberg is an essential area for leopards and other wildlife in the Western Cape, as there are only a handful of these natural areas or mountains along the west coast that host remnant habitat for wildlife, acting as islands surrounded by vast transformed landscapes (e.g., Piketberg, Riebeeck etc), particularly in the western part of the south-western Western Cape. These patches are crucial to the remaining South African wildlife and ecosystems, and it is essential to conserve them and reduce human-wildlife conflict. These areas are critical habitats to allow for rewilding of the region. The main aims of the ongoing camera trap survey are to 1) estimate the leopard density, 2) determine the prey abundance and general wildlife species richness present in the Voor Paardeberg mountain, and 3) to understand the drivers of recolonisation and connectivity to extant leopard populations.



Current camera trap placements on the Voor Paardeberg mountains.

Following our human-leopard conflict mitigation intervention, we set up camera traps throughout the Voor Paardeberg in August 2023. In November, we downloaded the first set of camera traps' footage. From the 2268 photographs (excluding false triggers and undefinable species), a total of 19 mammalian, 6 avian and 1 reptilian species were captured.

Between August and November 2023, we captured 67 leopard events (3% of all images) at 11 of 14 camera stations. During this timeframe, we clearly differentiated four adult females, one unsexed adult, one subadult female, and two cubs. At this stage, no male was photographed within the formal survey but two have been captured on cameras prior to the current survey period.



One of the Voor Paardeberg leopard.

Prior to this survey, we were also received leopard photographs from landowners. In February 2023, a young cub was photographed with its mother on the southern section of the Voor Paarderberg. This cub survived and is now an independent subadult.

In the last few days of Dec 2023, a massive uncontrolled fire engulfed the mountain. We lost 3 camera stations and the early post-fire survey indicated, save for one of the cubs (that was not again seen on the cameras), that all the leopards seem to have survived. It is unknown what happened to other faunal species. In January 2024 we reviewed all the stations and elected to continue a post-fire monitoring period.



Voorpaardeberg fire of 29 Dec 2023.



Cub photographed by a landowner in May 2023 (left; photo by Martin Molenaar) and during our camera survey in August 2023 (right).

Leopard Corridors

Gouritzmond & Gondwana Game Reserve

Landmark Foundation undertook a two-year-long survey using 294 camera traps (147 stations) set up on four rivers (Breede, Duiwenhoks, Gouritz, and Goukou), to determine if there were any corridors used by leopards to connect the nascent populations along the coastline with the Langberg populations. During this effort, only two leopards passed by our camera traps: one on the Breede river and the other on the Duiwenhoks river. This is a concerning result considering those rivers represent the only potential wildlife corridors between the coast and the Langeberg/Outeniqua mountain range (McManus et al. 2022). These findings support the genetic work, indicating that this southern population is not showing signs of immigration and emigration and requires conservation effort.

It was in this context that the Landmark Foundation team decided to survey the Western coastline of the Gouritzmond and the Gondwana Game Reserve at the foothills of the Langeberg mountains. The main goal of those surveys was to investigate whether leopards used those areas as a functional corridor, or whether a resident leopard population exists. We also intend to estimate prey abundance in those two areas, as well as mitigate any carnivore-human conflicts if required.



In January 2024 we assist with the release of caracal in the region where they are still subject to intense persecution.

The **Gouritzmond survey**, includes a total of 18 camera stations (36 cameras) set up private properties and the adjacent Gourikwa Game Reserve. This one-year survey (May 2022 – June 2023) ran over 6479 active camera nights and captured total of 10403 pictures (after removing empty pictures/ false triggers), including 24 mammalian and 16 avian species. As only one leopard was photographed (October 2022) throughout the survey period, we concluded that leopards use the area as a corridor. This assists us in developing an accurate picture of leopard habitat and corridors that can guide management action in the area. In December, the Landmark Foundation team presented the results of this Gouritzmond survey at the public. Consideration is being given to the area possibly being a suitable site for leopard translocation release. We have also commenced a recent survey on the coast near the Duivenhoks River mouth in recent months.



Camera trap survey (left) and single leopard event (right) captured during the Gouritzmond survey.

In parallel, we set up 24 camera stations (48 cameras) across the **Gondwana Game Reserve** from June 2022 to July 2023. In addition of assessing leopard presence and general mammalian diversity, we aimed to determine if the reserve could be suitable as a release location for translocated leopards, if

such situations arise. Indeed, a recent publication highlighted the importance of pre-translocation monitoring to increase leopard translocation success (McManus et al., 2022). Despite that elephant and other herbivores knocked down camera traps, we succeed to collect 5090 camera trap nights during which time 20280 images were captured (after removing empty pictures/ false triggers). Including the "Big Five" present on the property, we captured 45 wildlife species and 17 avian species. Like the Gouritzmond survey, only one leopard event was recorded last year (August 2022), meaning that the area does not host a resident leopard population, but is used as a corridor between the Langeberg mountains and the coast. Therefore, our survey confirms that Gondwana Game Reserve (and other conservation areas in the immediate vicinity) offer the perfect release for imperilled leopard (translocation) with suitable prey availability and habitat, and no resident leopard or human-wildlife conflict. Importantly, this reserve could play a vital role in leopard population dynamics linking populations genetically.



Camera trap survey (left) and single leopard event captured (right) during the Gondwana survey.

West Coast

In May 2023, we started a new corridor survey on the West Coast and placed 5 camera stations (10 cameras) so far. This is a repeat survey. The area hosts important natural habitat, and is one of the few places in the region where ungulates (such as springbok and eland) are part of the system. Leopard activity was reported on several occasion throughout the years, and sporadic camera monitoring has taken place since, confirming their presence. The west coast region is under threat due to the rapidly expansion of human developments, transforming remnant natural habitat patches. Understanding how leopards are interacting with the transforming landscape and the remaining natural patches can contribute to better management of the species in the face of these major threats. It is entirely feasible that the presence of leopard along the West Coast is part of a wider recolonisation after the state lead extermination practices finally stopped in the early 1990s.

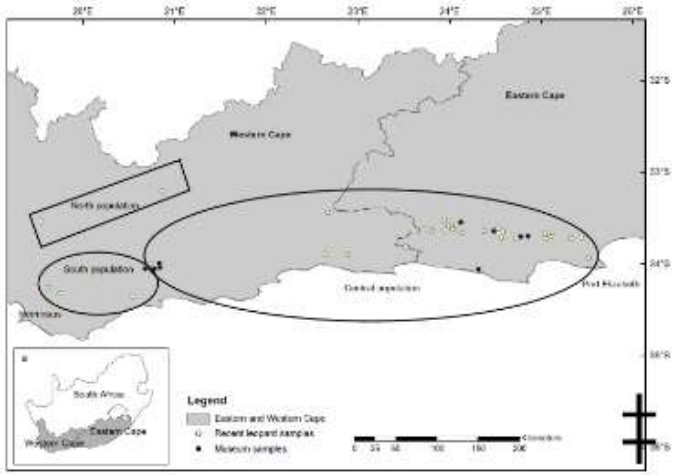


Leopard spoor on the West Coast. Poor image of leopard along the West Coast.

Leopard DNA Project

Human-caused mortality, loss of suitable habitat and connectivity between isolated populations cause major threats to leopard populations in the Southern African region. Indeed, DNA analysis from leopards in the Eastern and Western Cape provinces showed that the gene flow of the coastal George-Hermanus leopard population ("South population") seems low compared (relatively) to the "Central" and "North" populations (McManus et al. 2015). The increased isolation (from habitat destruction and human caused mortalities), reduced gene flow and low-density estimates (Devens et al., 2018, 2019) raise serious concern over the species survival in the region. Together with ongoing human caused mortality, and nascent areas where natural recolonisations are taking place, has spawned the need to do genome analysis of the regional leopard populations.

Our main objective is to apply next-generation sequencing technologies to investigate population structure and connectivity of African leopards at local scales across South Africa, with our particular focus on the leopard populations of the Eastern, Northern and Western Cape Provinces. This work will enable focused management in genetic connectivity of fragmented populations in a region where populations are low and species decline has been documented.



Three leopard populations based on DNA samples collected from museum, captured, rescued, or deceased individuals (from McManus et al. 2015).

At this stage, the University of Pretoria extracted the DNA from more than 33 samples collected over 5 provinces (Eastern, Northern and Western Cape, Mpumalanga and Limpopo) and the CITES approved the DNA exportation to the United-Kingdom, where next generation sequencing will be conducted. The outputs of this international project (collaboration between South African, British and Danish Universities) will translate into the leopard management plan in South Africa and will significantly guide management policy based on rigorous data and analysis. This study will unfold in the coming months in 2024.

Policy and Standard Operating Procedure

Our research aims to contribute to an evidence-based best practice approach to species and biodiversity management. Having rigorous research is key to making informed decisions and our work is focused at contributing to laws, regulations, policy and standard operating procedures that is appropriate and effective. During 2023, the National Department continued efforts to develop standards and policies relative to leopard management with new drafts: 1) Policy on the Conservation and Sustainable Use of Lion, Elephant, Leopard and Rhinos and 2) National Threatened or Protected Species Regulations – TOPS regulations, 3) Western Cape Biodiversity Act and related regulations, and 4) Development Permit applications (Mouton's Hoek, Cederberg Hospitality Efforts & Garden Route Dam).

There are currently no national or cohesive provincial policies on leopard translocations or management plans. The various provinces operate on changing approaches to translocations, damage-causing animals, trophy hunting and some of their management practices that are based on whim and not often rationally or scientifically developed or justified.

We have presented to the various departments and offered all of our support and research to assist in contributing to our shared vision and goal and we are currently drafting a draft species management plan to promote leopard conservation at a local and national scale.

Knowledge Exchange

In February and March 2024, we have a one-month knowledge exchange with a team of leopard researchers from Sri Lankan Sabaragamuwa University, led by Professor Enoka Kudavidanage. We will focus on field methods, data capture and analysis and developing a partnership with these researchers, University of the Western Cape and Landmark Foundation. The Sri Lankan leopard population face similar threats and we seek to learn from each other about methods that could bolster our local efforts.



Professor Enoka Kudavidanage

Plans for future and ongoing work of Landmark Foundation in Leopard conservation

a. Leopard population DNA analysis.
b. Identify high human-leopard conflict and leopard mortality areas to promote efforts.
c. Continue and expand the camera trap surveys throughout the Northern, Eastern and Western Cape to develop understanding of the leopard population dynamics and agency for those supporting coexistence with the species.
d. Expand the conflict mitigation work, compensation scheme and development of co-existence and expand our efforts in the Northern Cape Leopard work in collaboration with private landowners and Northern Cape Conservation Department.
e. Submit the draft management plan and organise a workshop with different stakeholders to discuss it at a provincial and national scale.
f. Publish our data on coexistence, species recolonisation and effectiveness of translocation and compensation efforts.

Scientific literature relevant to leopard and biodiversity conservation by Landmark Foundation and collaborators

Articles:

- McManus J. & Faraut L., Couldrige V., van Devender J., Samuels I., Cilliers D., Voster P. & Smuts B. (2022). Assessment of leopard translocations in South Africa. *Frontiers in Conservation Science section Animal Conservation: 63.* https://doi.org/10.3389/fcosc.2022.943078
- McManus J., Schurch M., Goets S., Faraut L., Couldrige V. & Smuts B. (2022). Delineating functional corridors linking leopard habitat in the Eastern and Western Cape, South Africa. *Conservation* 2: 99-122. https://doi.org/10.3390/conservation2010009
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- McManus, J.S. (2018). The conservation of Leopards (*Panthera pardus*) in the Eastern and Western Cape, South Africa: Investigating the effect of Land Use, Gene Flow and Connectivity. Witwatersrand University, Johannesburg. PhD dissertation.
- van Eeden. L., Eklund, A., Miller, J., López-Bao, J., Chapron, G., Cejtin, M., Crowther, M., Dickman, C., Frank, J., Krofel, M., Macdonald, D., McManus, J., Meyer, T., Middleton, D., Newsome, T., Ripple, W., Ritchie, E., Schmitz, O., Stoner, K., Tourani, M & Treves, A. (2018). Carnivore conservation needs evidence-based livestock protection. *PLoS biology* 16(9): 2005577. https://doi.org/10.1371/journal.pbio.2005577
- McManus, J., Goets, S, Milton, S, Bond, W., Henschel, J and Smuts, B. (2018). Trampling recovery of plants on temporary Karoo kraal sites. *African Journal of Range and Forage Science* 35(3-4): 311-318. https://doi.org/10.2989/10220119.2018.1529706
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- Jooste, E., McManus, J.S., and Couldridge, V. Diet of caracal on lethal and non-lethal carnivore treatment farms in the Karoo, South Africa. Submitted.

Book Chapters:

- Dickman, A., Potgieter, G., Horgan, J., Stoner, K., Klein, R., McManus., J.S. & Marker, L. (2018). Use of Livestock Guarding Dogs to reduce human-cheetah conflict. In: Cheetahs: Biology and Conservation (Eds Marker, L, Boast, L and Schmidt-Kuntzel, A). AP, Namibia.

Supervision:

- Ms. Erin Jooste (Student number 3341069) at the University of the Western Cape (UWC), South Africa, for a MSc. The MSc. is titled: "The spatial and dietary requirements of Caracal (*Caracal caracal*) in lethal and non-lethal predator control landscapes". Passed with Distinction 2020.
- Ms. Etsy Yanco (Student number 12730343) at the University of Technology, Sydney, Australia, for the degree of PhD. The PhD. is titled: "Shifts in human well-being and attitudes towards nature following livestock herder training and implementation". Passed 2021.
- Ms. Kamila Jandova at the Czech University of Life Sciences, Prague. Faculty of Tropical AgriSciences. The thesis is titled: "Does resource dispersion drive Leopard habitat selection?" Passed 2019.



Current Publications in Preparation for Peer- Review Submission

The recolonization of the Piketberg Leopard Population: A Model for Human-Wildlife Coexistence in a Changing Landscape by McManus et al.

Abstract: Wildlife populations are impacted by various resources and threats which affect their behaviour, distribution, and population structure. When resources and interpopulation connectivity are high, and birth rates exceed deaths, a population can become a source population for other areas. In contrast, sink populations occur where deaths exceed birth rates, exposing the population to the risk of localised extinction. The ability to recolonize areas that experienced local extinction by individuals emigrating from a source population is crucial to the survival of species. However, these important metapopulation dynamics are disrupted by habitat loss, climate change, and human-induced mortality, leading to fragmented and isolated wildlife populations,

threatening species survival. Identifying and understanding factors driving population dynamics are crucial to mitigate such scenarios. The leopard is the last free-roaming apex predator in South Africa and plays an important ecological role. In the Eastern and Western Cape provinces in South Africa, leopard populations show signs of restricted gene flow, low densities, and fragmented population structure. We identified a leopard population that, after being locally extinct for a century, appeared to recolonize a small mountainous habitat. We aimed to identify and understand potential factors driving this recolonization. We estimated the density of this leopard population using spatially explicit capture-recapture methods (SECR) and investigated potential driving factors of leopard density. We found that the recently recolonized Piketberg population now exhibits some of the highest densities reported in the region (~1.9 leopards/100 km²; CI 0.4 – 2.5). Leopard density was negatively correlated with high livestock and human presence and facilitated by moderate elevation. The re-emergence of leopards in Piketberg coincided with the cessation of extensive state- sponsored and -enabled culling of the species, and the change of land use from livestock production to crop agriculture, which likely contributed to the recolonization. By understanding these factors, we can better comprehend leopard metapopulation dynamics and promote opportunities for recolonization in increasingly human-dominated and transformed landscapes, and the role of state agencies in the persistence and reemergence of the species.

Wildlife-friendly Farming Promotes Functional Richness and Trophic Complexity by Hasselerharm et al.

Abstract: Human-caused mortality and exclusion of wildlife in socio-ecological landscapes is common when there is a real or perceived threat to property or livestock. However, the loss of wild animals can degrade ecosystem function that benefits both humans and nature. Wildlife-friendly farming (WFF) is a cohabitation strategy that welcomes wildlife into agricultural socio-ecological landscapes. Recent research has highlighted that WFF benefits agriculturalists and wildlife species alike by restoring biodiversity and promoting resilience. Yet, how WFF can restore promote ecosystem function and complexity that can be eroded by traditional farming practices remains unknown. Using camera traps to document species presence and activity, we compared the functional diversity and trophic complexity of wildlife on two properties in Nama Karoo, South Africa, where one practiced WFF and the other practiced conventional rotational grazing farming (RGF) that involved the lethal control of wildlife. We found that the WFF property had a higher functional richness for both herbivore and carnivore species, indicating that WFF not only increases the number of species, but also the number of unique ecosystem functions. The WFF property showed a lower functional vulnerability for herbivores and featured a more complex trophic network, both of which suggest the WFF community is more resilient to disturbance and species loss. Combined, our results show that WFF practices can be a useful tool for restoring lost ecosystem function and trophic complexity. The inclusion of wildlife into socio-ecological landscapes benefits humans, wildlife, and ecosystems, and may prove important to conserving species in the Anthropocene.

Caracal habitat selection and activity patterns on a predator-friendly farm in the Karoo, South Africa by Adams et al.

Abstract: There is a great need to understand the ecology of animals involved in human-wildlife conflict in order to effectively mitigate conflict. The caracal (Caracal caracal) is highly persecuted on South African livestock farms as a result of this conflict, but due to their elusive nature, baseline information regarding their ecology is lacking. With the aim of evaluating the effects of non-lethal predator management on caracal habitat selection and activity patterns, a camera trap survey was conducted on a non-lethal predator control livestock farm in the Karoo, South Africa. The camera trap data was used to evaluate the drivers of caracal habitat selection and to assess the activity patterns of caracal, their main prey, competitors, humans, and livestock. Resource dispersion explained caracal habitat selection most strongly, while livestock had the weakest relationship to caracal presence. Scrub hare (Lepus saxatilis) presence, adequate vegetation cover, and rugged terrain provided optimal habitats for caracal on the predator-friendly farm. While caracal were historically persecuted on the farm and are still heavily persecuted on neighbouring farms, they did not display spatial human avoidance, but could instead be displaying temporal avoidance. The activity pattern analysis revealed that caracal were predominantly nocturnal throughout the year, shifting to crepuscular behaviour during winter months. Caracal activity patterns overlapped significantly with black-backed jackals (Canis mesomelas), lagomorphs, and common duikers (Sylvicapra grimmia). Surprisingly, caracal activity overlapped with rock hyraxes (Procavia capensis) the least, despite rock hyraxes making up a large component of caracal diet in the Karoo. Caracal activity patterns could therefore be attributed to human avoidance and temperature fluctuations. In addition, the presence of sufficient wild prey and natural habitats on farms appears to be a driving factor to reduce livestock losses and aid in human-caracal coexistence.

Barriers to Preventive Innovations in the US and South Africa by Boronyak et al.

Abstract: Preventive non-lethal tools and practices to reduce predation on livestock are increasingly advocated as a better way to align animal agriculture with wildlife conservation and animal welfare. Despite global case studies demonstrating the effectiveness of preventive innovations to mitigate human-carnivore conflicts and promote livestock production, their adoption by extensive livestock producers is yet to become mainstream. This paper aims to identify the most significant barriers to adoption of preventive innovations. These innovations aim to reduce human-wildlife conflict that are beneficial for both humans and wildlife. Drawing on interviews with 45 stakeholders (industry, government, researchers and environmental advocates) in South Africa and the US, I explored the factors that create barriers to a broader adoption of preventive innovations. We use thematic analysis to classify barriers to adoption across three spheres of influence: practical, political and personal. Livestock producers generally encountered barriers across all three spheres. A key finding is that barriers in the political sphere comprising of socio-cultural, institutional and economic factors reinforced lethal approaches among conventional producers regardless of the efficacy or economy of alternatives. However, a growing number of innovative producers have successfully overcome the myriad barriers. Insights from the personal sphere revealed five key areas where producers that had adopted preventive innovations (innovative producers) differ from producers that used lethal control of carnivores (conventional producers). Innovative producers: (1) had a more expansive or holistic worldview, (2) prioritised long-term ecological health over short-term economic gain, (3) had a greater capacity for self-reflection, (4) were able to tap into a supportive network, and (5) were more open to new ways of thinking and scientific information. These findings are critical for conservation programs that aim to conserve large carnivores in human dominated landscapes.

Wetland, Riparian and Landscape Restoration and Rewilding

Vette-Korente River Restoration Project – Western Cape

This is a rewilding project that is into its fourteenth year of rehabilitation. This past year we had to deal with three massive floods of which two were 1:100-year floods. The results have been very rewarding and encouraging, but yearly new challenges emerge as we continue this rewilding journey.



View of the rehabilitated wetlands

Our focus in the last year had been on alien clearing follow-ups, but with the last floods there was some gabion wear damage that will need to be repaired.





We continue to monitor the faunal response to the rewilding.

Like many river courses and riparian zones in South Africa, the Vette-Korente river (near Riversdale, Western Cape) was chocked up by dense alien forests which resulted in the area hosting very low biodiversity, with little sign of functioning natural ecosystem patterns. Most of those habitats were destroyed and converted to cattle pasture or croplands. The river was canalized in most places and today water extraction continues 24/7 to water kikuyu pastures for the dairy industry on farms around Riversdale. The rivers were overrun by infestations of Australian Black Wattle (*Acacia mearnsii*), Rooikrans (*A. cyclops*) and Port Jackson Willow (*A. saligna*) (not to mention Scottish Thistle, Castor Oil and Prickly Pear).



Astounding recovery of the Palmiet Wetlands





Massive soil erosion caused by Wattle infestation on neighbour's property was repaired and mitigated in late 2022.

Since 2012, the project focussed on eradicating the dense alien forests to promote indigenous species of palmiet (*Prionium serratum*) to return and establish the historical wetland that had since been drained due to the alien trees. By 2016 the majority of wattles were completely removed. Follow-up clearing of regrowth is undertaken on a 3 monthly basis to keep the area cleared of alien plant regrowth. The Palmiet wetlands were remnant in a few places but were deprived of water and sunlight by the wattle canopy, canalization and lowered water-table. Habitats were severely degraded by agricultural activity, but a few remnants semi-natural areas remained. The restoration efforts tried to work with these remnants. and annual alien plant clearing follow-ups were repeated (this continues to date), and steadily the indigenous species re-established. We also follow-up rehabilitation and monitoring of the faunal species throughout the wetland restoration. Since 2020, the donga erosion was addressed using cattle to shape the erosion galleys and have been able to raise, cumulatively, the water table by 8 m along the badly eroded riverbanks.

In the past year we had an alarming situation where the neighbouring landowner, being the state, illegally canalised a wetland and this after making illegal pastures in the floodplain. We tried to engage the neighbour to no effect and then reported the action to the authorities. 5 months later nothing has been done about it.



Illegal canalisation taking place in the wetland flood plain.



Canalised river with the new illegally established lands.

The year also saw three floods rip through the area and we had significant damage to the gabion structures. These will need repairs in the next few months. However, the wetlands continue to function and we will continue to support the rewilding despite these challenges.



September 2023 flood.



Despite the gabion damage the wetlands still functions well.

Overall, the Landmark Foundation effort focuses on restoring the natural ecosystem patterns and processes by rewilding the landscape on along the river course and adjacent land, and the rejuvenation of the built heritage on the property has been undertaken privately. We continue with this work and our long-term vision is to establish this site as a learning site for rewilding.



We observed the first leopard in the valley floor about 4 km from Zeekoegat, which follows the Serval spotted in late 2022.

A self-sustaining, resilient natural landscape where trophic relationships are restored, is the project's objective, even though megafauna and top carnivores may be out of reach, at least for now. Although we had hoped for wider uptake across the landscape, it appears there is little appetite among landowners focussed on maximizing agricultural production. For initiatives like ours to succeed on a wider scale, collaboration across a myriad landholding is needed to connect habitats that support species. This collaboration and connectivity are critical in restoring ecological patterns and processes. Our efforts should be seen as establishment of a core area this rewilding project can broaden in the future.

This is now a learning site where heritage restoration (built and ecological) is showcased as the ethos of Landmark Foundation. Landmark Foundation focused on supporting the ecological restoration. The property was not ideal for farming, although about 60 cattle are run on it by a partner. However, the property presented itself as an ideal location to showcase extraordinary cultural, historic and natural assets.

Shepherding Back Biodiversity Project

This project was implemented between December 2014 and July 2021. The project was prematurely interrupted and subsequently destroyed. It is currently subject to a damages claim against erstwhile partners, being Timothy Allsop, Tamarisk Trust and Kromelboog Conservation Services PTY Ltd.

We are still working toward a redress of the damages suffered by the termination of this project.

Our focus is on ecologically regenerative management of production landscapes and we have long wanted to implement an alternative livestock husbandry model that addresses overgrazing, desertification and negative biodiversity impacts and excludes lethal predator control. To this end we developed a learning site in the Greater Karoo. Kromelboog was a productive livestock farm of 24 000 contiguous hectares near Beaufort West. In partnership with the National Department of Environmental Affairs, the UNEP, and funded by the Global Environmental Facility (GEF) and the Development Bank of South Africa's Green Fund as major funders, and a local landowner, Landmark Foundation set out to implement the Shepherding Back Biodiversity Project in 2014. This project was interrupted with the repudiation of the access agreement and is now subject to a damages claim.

This project reintroduced human herding in commercial agriculture and the related green employment (environmentally friendly employment through herding). It developed a monitoring and

evaluation programme and a brand providing payment for ecosystem services (*Fair Game Wildlife-Friendly Products*) and piloted them on commercial rangeland livestock farms. *Fair Game* is an audited, accredited certification scheme that warrants ethical land use incorporating biodiversity, welfare and socially responsible practices. It has set out to demonstrate that rearing livestock in the presence of predators is not only possible, but more successful when the focus is on correct grazing regimes and monitoring biodiversity. *Fair Game* follows fundamental principles to produce ethically reared, wildlife-friendly, rangeland lamb and beef, while simultaneously restoring vegetation and fostering biodiversity. The management experiment was to be conducted over a 25-year period.



24/7 human herding and livestock management.

The project has trained shepherds and employed them full-time to manage sheep flocks and cattle herds. This is a husbandry approach that mitigates stock losses from predation (mainly by Black-backed Jackal and Caracal). The programme used the traditional knowledge of the herders and their communities, recruiting them as additional custodians of our environment. The project focused on ethical care of the environment, the livestock and the human capital invested in the project.

Using shepherds and kraaling at night for 48 months, despite a severe regional drought, the livestock increased from 1000 ewes to 2600 sheep and from 170 to 440 head of cattle. Within this period there were no recorded stock losses attributed to predators, meaning human/wildlife/predator conflict was effectively eliminated. Despite the harsh drought, we never required supplementary feeding.

A biodiversity consequence of non-lethal predator management and husbandry using shepherds has been that free-roaming predators have established territories on the Fair Game farms and hunt their natural prey species without targeting livestock. Wildlife coexists with livestock and, where possible, fences have been removed to allow migration. An additional management and flock-health benefit of shepherding is a daily audit and monitoring of livestock, which permits early diagnosis of injury and disease. These can be attended to before becoming life-threatening or endemic, resulting in an increase in overall livestock health.

Transitioning from baseline carrying capacity stocking rates to veld condition evaluation, shepherding allows high-density, short-duration grazing. Remaining with the livestock, shepherds constantly evaluate the condition of the veld and manage the density and duration of grazing. The benefits of the shepherding programme to the veld have been twofold: it prevents veld degradation and increases drought resistance. This has allowed the Fair Game farms to not only increase their livestock numbers during the drought, but also to sell lambs and cattle to the meat industry at premium standards of fat

grading without feed supplementation. The project produced important results that have been published in peer reviewed scientific journals, inclusive demonstration of an increase of mammalian species diversity by 24% in the establishment period, improved landcover and a 2.6-fold increase in livestock numbers.

This project was an internationally significant project that has now been destroyed as a result of the joint-venture repudiation. We continue to try to get redress on it and pursue our damages claim. We also continue to publish from the results of the project.



Environmental Education Programme

The need for environmental education is greater than ever as environmental crises escalate. Landmark Foundation continued our education efforts having interacted with 1139 scholars and 402 educators during 2023.

We continue to engage learners through our four objectives of environmental education: **developing values, attitudes, knowledge and skills** to address environmental challenges and ecological wellbeing. To promote sustainable communities through education, we must transfer ecology-sustaining skills, impart relevant knowledge, change people's attitudes, and instil much-needed values that promote a more caring world. These four objectives contribute to proper development of a less-entitled human consciousness.

Our environmental education programme remains focused on specific developmental stages: early childhood development and intermediate phase where we inspire interest in nature and ignite environmental activism, and the grade R to 12 phase where we convert knowledge into action by means of projects, outings and campaigns. Within the school sector, we focus on introducing Green Clubs, Green Schools, and environmental programmes at Early Childhood Development Centres.

We also are actively involved in mentoring youth and increasingly have seen the need to become more involved in adult education. Our interventions of youth in conservation has been predominantly based on training youth in developing skills for the education sector.



We have established specific projects that are integrated with conservation efforts and have partnered with several conservation organisations, NGOs, government and parastatal entities, enabling us to share resources and providing more effective results. Conservation education efforts seemingly are not easily funded. Despite our limited resources, we were still able to achieve significant impact through these partnerships.

We developed and sustained existing partnerships, particularly the Western Cape Education Department on crèche and food-garden programmes for more sustained implementation, and greater reach. Existing partnerships in education were maintained with SANBI, Department of Forestry, Fisheries and Environment (DFFE), Breede-Gouritz Catchment Management Agency, Cape Nature, SANParks, Garden Route Botanical Garden, Nelson Mandela University-Saasveld, George Herald,

WESSA (Eden Branch), George Municipality, Garden Route District Municipality, and recycling agent LGE Waste.

Focus on social media

During 2021 and 2022, Landmark Foundation developed a hands-on environmental app. This app was launched in April 2023 and can be download for free. Following the global drive to engage with communities on the major contributors to biodiversity loss and the effects on climate change, this app is based on mitigating climate change. The aim of the app is to engage families to reduce their footprint and become more sustainable in their way of life. This app can be done from the comfort of their homes by anchoring the key notes of change: Reduce – Reuse – Recycle (3Rs).

The App can be downloaded and viewed at: https://app.letschange.earth/pledge

The App Icon

Landmark Foundation maintains a strong presence on the social media platform, and our different actions are showcased through short videos, stories, reels and visual posts on Instagram and Facebook.

Instagram.com/landmarkfoundationsa/

https://web.facebook.com/LandmarkFoundation/

Schools Programme

Landmark Foundation run several environmental programmes within various schools of the Western Cape. These are designed to target the individuals in schools with a flair and passion for leadership and interest in the environment. It is intensive and dedicated to a small group of learners within a specific school structure, although the impacts reach the entire school community.

Green Clubs

The key components of the Green Club programmes are to develop environmental leaders, to ignite a drive for activism, to bring awareness of global issues, to promote science-based knowledge, to spread awareness to the parent community, to transfer the skills of running campaigns, to manage projects, and to inspire a deeper love for nature.



Pupils in the school garden

The Green Club programme is entirely reliant on internal champions to sustain itself, especially teacher champions. The weakness in the programme is the lack of enthusiasm in the teacher groups, and thus sustained champion action. This resulted in our efforts with the Western Cape Education Department in 2023 in focusing on training educators.

Several attempts to establish these clubs in a range of schools seem to fail due to teacher changes and pervasive apathy towards environmental concerns. However, Glenwood House has been an enthusiastic partner for almost 15 years.

There is a real need for willing teachers/head teachers to continue to register new schools and follow through with the program.



We have two very active Green Clubs presently through Glenwood House school:

- Glenwood Greens – 26 learners at Glenwood House Preparatory (Grade 5, 6 and 7's) – influence 380 scholars.
- Glenwood Environment Society (GWES) – 23 learners at Glenwood House College (Grade 8 to 12) – Influence 460 scholars.

Landmark Foundation is also developing a Green Clubs manual to assist schools with establishing and implementing these.

Green Schools – A recycling program

Run in collaboration with George municipality, LGE Waste (Waste-recycling agents in George) and Garden Route District Municipality, this project aims to introduce waste management to the respective schools by implementing a simple recycling system that is easy for learners and educators to use and can render financial rewards for the school, thus promoting the green circular economy.

LGE Waste facilitates the compensation system where the school is paid for their paper and tin collections.



Youth at the LGE Waste centre

This project is a practical way of getting schools to recycle without the implementation of the Green Club programme, which can be intensive to run without a dedicated champion teacher. In the primary school sector, we focus on the grade 6 and 7 that manage the recycling program. In high school, the grade 8's in association with the grade 11's run and manage the recycling program. This allows a sense of ownership of the project and doesn't become a burden to teachers or the school. This program has been effective in reducing waste to landfill and it has a knock-on effect on the learners' families and households. At the end of every year the school receives a certificate of recognition for their environmental and social efforts during the year.

In 2023, Glenwood House Preparatory and College and Gracehill College are still on board and continue to maintain a recycling system in operation.

Creches Project – Early Childhood Development Centres

The Crèches Project is specific to the early childhood development (ECD). It aims to introduce environmental education to young pupils, by linking it up with the curriculum in a way that is simplistic and yet impactful. The key focus is to introduce the concept of "Reduce- Reuse and Recycle" at a very young age, to promote a modest simple way of living. The 3Rs concept encourages care, compassion and awareness of the living space around us.





In Phase 1, the learners are fully involved in setting up a waste separation system at the school. The separation process gives birth to the use of organic material and the value of composting at the school. In Phase 2, the learners used this compost in the creche food gardens, where they learn about seed planting, recycling, etc. We encourage the provision of one hearty meal to the ECD scholars from this produce , but this too requires commitment from educators and facilities for such that is resource

dependent. In addition, a valuable amount of plastic and paper brings a favourable income for the school. Therefore, the whole community gets involved in collecting and recycling. This program also aims to instil new habits, and influence families and communities.

We collaborate with the Department of Social Development ECD division, George Municipality, Eden District Municipality, as well as LGE Waste. Unfortunately, only 2 of the 12 registered creches of 2022 continue to be committed and have proven that the system works. However, we had a new registration this year: George Voorbereiding. They are the blueprint of how this program can be work and be effective. More resources will enable a more concerted and sustained capacity drive in this valuable programme. A school champion must lead this program and there must be a complete buy-in from principal and staff. Our drawback once again is staff capacity, so that we monitor and give the schools support on a regular basis. Landmark Foundation is also currently developing a cheches' manual, so that this model can be used for crèches willing to join the initiative. We also aim to engage with WCED in Garden Route in order to implemented this program at a higher level.

The reduction to landfill has been very impactful and the schools also have financial gain from projects, such as the TIN CAN PROJECT and the BOTTLE TOP PROJECT, as well as renumeration for paper – a project run in partnership with LGE Waste, George Municipality and Garden Route District Municipality.

Food Garden Community Project

We continue to be involved with "KOS en FYNBOS", a community-driven food garden initiated in 2015. Although it is goes through varying periods of activity based on the champions involvement, there is a large following on a WhatsApp group where members can share gardening information, and ask questions about environmental awareness, climate change issues, and so on. This is a groundswell movement, Landmark Foundation continues to facilitate the spreading of conservation awareness.

Following permaculture principles and the core value of the "No Dig Food Garden" method, as it is water retentive and promotes the regeneration of the soil through mulching. The method is cost effective and requires minimal resources to set it up. The materials needed are manure, dry grass, newspaper and cardboard.

We have one example of a sustained Food Garden. For the past four years, we have continuously supported one community garden situated in a very impoverished area of George. Inherited from his late brother, Rodwell run this garden, an is getting closer to achieve his dream: start a Saturday market and a coffee canteen where he can sell hot beverage and other home-made delicacies on site.





Other Youth Education Programmes

Oakdale Agricultural School

This partnership has deep value to us and has been running since 2012. Annually, this conservation project takes out the Life Sciences Grade 10's on a three-day long camp where the learners are exposed to ecology, zoology, sustainable production impacts and enjoying being in nature. In 2023, we returned to the Grootvadersbosch Nature Reserve along the Langberg Mountains. We get an opportunity to engage with learners who are in an agricultural environment and will likely enter a farming industry. The course is linked to the high school curriculum and includes leopard conservation, wildlife monitoring, climate change, ecosystems, biodiversity, soil and veld restoration, livestock husbandry, and sustainability. Learners receive a Conservation Certificate for this course.



Glenwood House Preparatory - Grade 2 Natural Science Curriculum Segment

We took all the Grade 2 pupils from Glenwood House over a period of three days on a explorative tour of the Garden Route Botanical Garden. We spent the day observing and discussing ecosystems, habitats, food chains, biomes and biodiversity, etc. The learners had an excellent knowledge base which was applied and understood in the natural world. This was a huge success, and Glenwood would like to make this part of their annual practical.

Gracehill College Environmental Program – Whole School – Grade 1 to 7

Gracehill College encourage outdoor experiential learning. We facilitate an environmental program for the school regularly. The Garden Route Botanical Garden is a perfect setting and space to bring learners closer to nature and expose them to the natural world. We link their outings to the curriculum and expand their knowledge and understanding of their environment and nature. This interaction will continue to grow as the school becomes more involved in green activities.



This year, we facilitated spring day with the pre-primary classes and their parents. Throughout the morning, we organised a seed planting event and encouraged the parents to instil the values of the 3Rs to their children and the value of igniting the ecological intelligence that exists innately in humans.

Garden Route Environmental Education Centre (GREEC) – Garden Route Botanical Garden (GRBG)

Landmark Foundation has over the past six years developed several education programs for the GREEC. The programs are designed to encourage learners to develop observation skills as well as critical thinking and problem-solving skills specifically focused on natural environments, something we call "ecological intelligence". The programs range from grades 1 to 12. One of the anchor programs Landmark Foundation developed is the Green Passports which encourage the learners to engage in observing the natural world and to enhance their ecological intelligence. Currently, there is no Environmental Officer at the GREEC to run these programs, so Landmark Foundation will continue to facilitate the groups for the EEC including green passports. The green passports have been completed by all the schools that visited the gardens this year.

Public (adult focused) Education and Awareness Projects

Waste is a major contributor to pollution and a growing factor in the combat against climate change. Landmark Foundation identified a crucial missing element to recycling in George. Most people have no idea what goes into recycling bags, it is confusing to most and it seems very complicated, so we developed a *recycling chart* (poster) for the recycling agent in George and for George Municipality. This will have a reach of 250 000 residents, businesses, schools etc with the distribution of this through the municipal communication system.



Plastic Recycling Chart Developed by Landmark Foundation in 2022 and distributed in 2023.

Recycling Project

TIN CAN collection project for schools in partnership with LGE Waste. Schools can sell their tins and cans and generate funds for the school. This project continues to run throughout George.

Bottle Tops and Bread Tags collection was also developed for schools and public. This project is done in collaboration with LGE waste and Sweatheart Foundation. Schools collect bottle tops and hand in for weighing at LGE waste. Once the target weight of 450kg is reached LGE waste donates a wheelchair to someone in the community. The schools can elect the recipient. In 2023/2024 year, we were able to facilitate the donation of two wheelchairs.



Arbor Week/Month

We facilitated a community tree planning event in Pacaltsdorp. The trees were donated by George Municipality. This event secured a partnership with the Pacaltsdorp community, and we look forward to continuing to work with them.

City Nature Challenge 2023

Together with The Eden branch of WESSA we facilitated walks through the Garden Route Dam during the four days of the CNC 2023. The aim was to encourage locals to participate in this global project run by Natural History Museum, California, and organized in South Africa by SANBI. We chose the Garden Route Dam to initiate data recording of fauna and flora for future references.



Touwsriver Revival – A rehabilitation and tree planting event

A section of land between two indigenous forests on the Touwsriver was identified for rehabilitation on the dune and connect the two forests owned by SANParks. Local groups, NGOs and interested parties joined in a massive collaboration to contribute to resources, knowledge, and expertise from the area. The partners included SANParks, DFFE, Kaalvoet Consulting, The Lady of the Herbs, Tree whisperer, Garden Roots, Into the Wilderness, Wilderness Ratepayers Association, Touwsriver Conservancy, FINREL, Indalo Harmony and Botanical Society of South Africa. Everyone in the community was invited to join in for a full planting day event. This rehabilitation of the Touws River is an ongoing project.



Natural Resource Users (NRU) Project – A skills development and capacity building project

In an attempt to find solutions to natural resource harvesting in indigenous forests (inclusive of bark stripping), we partnered up with Cape Nature and George Municipality to create an information-based education program. The aim of this project is to create awareness around the value of natural resources and the importance of a sustainable future for our vulnerable natural indigenous vegetation.




We engaged with the traditional healers, herbalists and medicine people of our area, to allow a dialogue and open discussions and invite them to be part of the solutions and empower them to be more ecologically informed about the impact of harvesting unsustainably.

Kids in the Park – A SANParks organised education program

Annually, SANParks run the Kids in the Park programme at one of their national parks. In 2023, Ebb and Flow was awarded the opportunity to host it once again. This is highly impactful education program where grade 6 and 7 learners spend 2 nights and 3 days immersed in nature. During their stay, the learners attend several workshops and courses presented by Cape Nature, NSRI, Working on Fire, SANParks and Landmark Foundation. Landmark Foundation takes them on a journey of exploration through the forest, enhancing observation skills and ecological intelligence, as well as teach them the 3Rs principle as a tool to mitigate climate change. During five consecutive weeks, this programme supervises 500 hundred learners and 20 educators.




Malgas Revival Project – Capacity building and skills development education program

Landmark was invited to collaborate in a capacity building and skills development program. The project initiated by SANBI and DFFE aims to engage with local schools for a day of environmental education. With the education structure provided by Landmark Foundation, the learners received information about basic alien tree identification and removal, basic indigenous tree identification, and river health assessment by members of the Garden Roots, Kaalvoet Consulting, Tree whisperer, Lady of the Herbs, and Breede-Gouritz CMA.

Umkhondo Big 5 Wildlife Education & Wildlife Forensics Academy Programme for Young Professionals

We have participated in an educational programme for aspirant wildlife professionals and veterinarians in training. At least 70 participants have been exposed to this training that involved human wildlife management aspects, ecological research and rewilding efforts.



Umkhondo Big 5 Wildlife Education Students from Denmark





Table 5. Summary of the environmental educational actions in 2023.

School/Organisation	Program	Period	Total learners	Total educators	Target grades/ages
Glenwood House	Green club	Ongoing (weekly)	23	1	8 to 12 years-old
Glenwood Primary	Green club	Ongoing (weekly)	26	2	5 to 7 years-old
Gracehill College	Green school recycling program	Ongoing	112	7	Grades 1 to 7
George Voorbereiding	Creches project	Ongoing	280	10	Grade R
Klouter Kabouter	Creches project	Ongoing	50	6	Grade 000 to R
Glenwood Pre-Primary	Creches project	Ongoing	60	8	Grade 000 to R
Arbor Week	Arbor Week	Ongoing (one week a year)		12	Adults
Rowdel Rosedal	Food garden	Ongoing (two days a year)	5		All ages from 23
Oakdale Agri School	Conservation Education	Ongoing (three	16	3	Grade 10

		days a year)			
Green Passports EE Tours	EEC	Ongoing	305	5	Grades 4 to 10
Youth	Youth conservation	Ongoing	8		All age from 20
Malgas Revival	Capacity building	Ongoing	20	15	Grade 5 to 6
Touwsriver Revival	Public awareness	Ongoing	30	200	Public event
Glenwood Primary	Life Science EE	Once off	60	6	Grade 2
Gracehill College	Environmental education	Ongoing	135	6	Grade 1 to 7
Natural Resources Users	Adult education	Ongoing		30	Adults from local communities
City Nature Challenge	Environmental Public Forum	Once off (four days)		300	Open reach to George and its surrounding

Wildlife Welfare and Wellbeing Manual

In collaboration with Karen Trendler of Working Wild we are facilitating the compilation of welfare manual and guide related to wildlife management. This manual will be completed in 2024.

Education Projects in 2024

The last three years have seen our resources under pressure that limited the reach of our education work. Regardless, we have achieved a great deal. Given the right opportunity and more resources, we can achieve major changes in our community. We would like to continue:

- To initiate talks with WCED in developing an Early Childhood Development program in schools that will include Environmental Education. It would basically mean that we would implement the Creches Project on a provincial level and get more participation and commitment from educators.
- To increase the number of Green Clubs in schools by targeting at least 4 schools a year. This equates to less waste to landfill and more environmental ambassadors.
- To publish a Farmers', Creches' and Green Club's Manuals as a guide educators and participant facilities.

Collaborations and Partnerships in Education

Landmark Foundation has built strong relationship with other NGO's and organizations in the environmental education field. These partnerships facilitate achieving more impactful results.

Collaborating Organisations

- Cape Nature Conservation - Various Projects and collaborations
- SANParks – Environmental
- Garden Route Botanical Garden – Environmental Education

- Nelson Mandela University, Saasveld – Interns
- George Herald – Environmental awareness – Tree Committee
- WESSA EDEN – Support with various projects and collaborations
- George Municipality – Support with Green schools
- Garden Route District Municipality – Support with recycling and waste
- LGE Waste – George Waste Recycling Agents support with recycling and various projects with schools. Major role players in minimizing waste to landfill and generating green economy opportunities.
- Kaelvoet Consulting – Restoration, rehabilitation and education.
- SANBI
- DFFE



"True change is the change that comes from within. Our role is to change people and children's attitude toward the environment. In some cases, we assist with furthering conservation efforts and in others with initiating understanding for the natural world. There are many ways to create change; passion and strong leadership are key elements. We strive to be resourceful, streamlined and not wasteful in any of the projects we initiate. Process is an important factor to achieve long term change. This requires time. Our coined phrase being: "ONE BITE AT A TIME" and "YES WE CAN". Monica Vaccaro, Education Coordinator – Landmark Foundation

Biodiversity Governance Project

Our Biodiversity Governance advocacy work has become some of our most impactful ecological governance work in the last few years. This continued on in the last twelve months. We are of the opinion that we are of the most impactful organisations in this field.

Landmark Foundation Public Activism

We have taken the opportunity of participating in forums, public comment, petitions, litigations and other public assemblies to have input into the greater elements of biodiversity in our community. This work has focused on mobilising the public to participate in securing the biodiversity commons.

George Municipal Tree Committee

Landmark Foundation initiated the establishment of this committee after we noticed the large number of trees that were been felled and cut down in George suburbs and CBD. As we all know, trees play crucial role in mitigating climate change, providing shade and living landscapes, and hosting wildlife species. The committee has been operational for two years, and we have thus far contributed to:

- The first Tree Policy for George
- A tree species list to use for planting in George and surrounds
- The implementation of penalties for trees cut without permission
- The regulation for cutting or removing trees in the George Municipality
- A public consultation process for removals, cutting or planting trees by George Municipality, inclusive of trees with cultural significance even when alien species.

PAAC – Cape Nature Protected Areas Advisory Committee

Cape Nature have initiated the establishment of an advisory committee for the Outeniqua Nature Reserve. The role of the advisory committee will be to supply advice, facilitate interaction, communication, engagement, and the development of partnerships with stakeholders and surrounding communities to promote the management and the protection of the reserve. Organs of State and municipal officials are also represented.

Touwsriver Conservancy

The Touwsriver Conservancy has initiated a Corridor/Wildlife flow Mapping for the Touwsriver. The idea is to recognize existing wildlife friendly farms as well as land under SANParks and declared Reserves in such a corridor. It aims to increase included habitat by identifying possible land that can be maintained as part of the corridors in the Wilderness, Hoekwil, and Lake's area around George. Landmark Foundation contributes to this project.

Garden Route Dam Development

The George Municipality has opened the area to development. This dam is George's water source and is a critical space for wildlife, especially leopards, as it sits on a crucial corridor zone between George and the natural spaces in the region. After extensive research work done in this area, we are opposing

the development and have registered as an IAP (Interested and affected party) and provided critical inputs to the environmental authorisation and appeals process. Significant press and television coverage on the matter has been generated.



Garden Route Dam

Moutonshoek Mine Project & Cederberg Development



Since 2004, a mining company attempts to get formal approval for a massive open cast tungsten mine in the heart of the Moutonhoek Valley (also called the Krom Antonies valley), located North of the Piketberg Mountains. The Landmark Foundation, Bird Life and 900 landowners are opposed to the mining project as it would present considerable damages to the leopard and overall wildlife population and will irreversibly jeopardize the entire ecosystem health of the area.

The Landmark Foundation also lent its voice to an objection to an inappropriate development deep in the Cederberg conservation area.



Map of the Piketberg-Cederberg-West coast region. The blue circle represents the area targeted to develop the open cast tungsten mine. The red arrow represents the conduit of the 1990s leopard recolonisation of the Piketberg Mountains after extirpation in the 1800s.



Wildlife photographed in the Moutonshoek Conservation area (2022-2023).

CapeNature West Coast Habitat Expansion Meeting

In December 2022, the members of the COP15 adopted a 30 by 30 goals to: *'ensure and enable that by 2030 at least 30% of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories*'.

It was in this context that CapeNature invited the Landmark Foundation and other Biodiversity Stewardship partners (e.g., Bird Life, Endangered Wildlife Trust) to discuss which unprotected areas to target along the West Coast (including the southern side of the Northern Cape).

Public Policy Input

2023 was a year punctuated with key public policy inputs. Landmark Foundation provided extensive and detailed inputs to these various inputs that affect leopard and carnivore conservation. Particularly important statutes and policy positions were up for input this past year. These statutes affect leopard conservation directly. The extensive input was submitted to Government to:

- Threatened or Protected Species Regulations (TOPS regulations related to the National Environmental Management Biodiversity Act (Act 10 of 2004) published in the Government Gazette 12 October 2023 (No. 49469 & No. 49470).
- Draft Policy Position on the Conservation and Sustainable Use of Elephant, Lion, Leopard and Rhinoceros published on 19 September 2023 in the Government Gazette No49322.
- Written representations and considerations in development of the regulations pertaining to the Western Cape Biodiversity Act 2021 (Act 6 of 2021) was submitted in September 2023.

Biodiversity Litigation in Support of Securing the Biological Commons

There is sadly not enough focus on ensuring legal protections for wildlife and natural assets in the conservation sector and goes to the heart of how society apportions "common goods" to private interests or government oversight, without accountability. We will not succeed in addressing the incremental ecological decline we are witness to if we do not assert accountability for the ecological commons that ensures it sustainability and regeneration. The exploitation of private interest in accessing our natural commons is at the heart of our ecological decline. In a society of rules, as we aspire to be, it is through the laws of our country that we secure common interests in our environmental and especially the biological commons.

We believe that Landmark Foundation is doing pioneering work in this field, which our Biodiversity Governance Project seeks to implement.

This allocation of natural assets to private interests has fundamental impact on wildlife and our natural assets that we aim to conserve. Through almost twenty years of Landmark Foundation's addressing top trophic level conservation, landscape conservation, market mechanism, education and research, and a myriad of interventions of addressing these approaches, the same environmental threats have largely gone unmitigated and the ecological degradation continues. This is particularly true for leopards and other top trophic species and related by-catch. We are still having to rescue leopards from lone actors targeting them! We have directly rescued 71 and still the lone actors go on with impunity in their threats to this species and many more that are less charismatic. This lack of reversing the impending environmental collapse applies across the environmental sector and across all actors working in the field. The conservation sector has been largely uncritical in its lack of effectiveness. The solution lies either in methods not yet developed, those to be better implemented, or a refocus on the problem.

We have a Roman problem. Landmark Foundation has suggested that the problem for the environmental risks we face goes to the heart of how society developed the jurisprudence related to living and non-living assets on earth, and central to this dilemma is the fact that such assets are either treated as property or res nullius (owned by no one until allowed to be owned by state permits) in our

tradition of Roman Dutch Law, with the state being the arbiter who gets to own these assets and their use. The Common Law precedents on the allocation of property "rights" on such assets lies at the heart of the ecological decline we are experiencing.

The focus by some has been to develop the "Rights of Nature", something that we enthusiastically support, but will remain elusive for a long time in our country. We have rather focused our attention of the current provisions in our Constitution, which has human rights enshrined in our Bill of Rights, and through it, clear obligations in respect of the rights of others and its impact on nature. We are fundamentally committed to the development of this jurisprudence through strategic ecological advocacy litigation.

The South African Constitution has brought new opportunities to address this and that is what Landmark Foundation has set out to use through available constitutional provisions. We have embarked on public-interest litigation to exert our constitutional (human) rights that protect biodiversity. We believe this work to be foundational to all conservation efforts and ground-breaking. The extensive legal action that Landmark Foundation is undertaking is to enforce accountability on the state, management agencies, and landowners to conserve and protect our biodiversity and leopards specifically.

In South Africa, we have a Human Right in terms of access to a healthy environment in the Bill of Rights of the 1996 South African Constitution, which was one of the early legal jurisdictions in the world that recognised this as a Human Right. (It is now captured in some 150 legal jurisdictions across the world.) Sadly, the South African legal instruments (Acts, Regulations, Norms and Standards) and most of its Government Agencies have merely paid lip-service to this recognition and have largely perpetuated the common law treatment of natural assets as assets/property and resultant abuse by those either granted access or assumed access to such ownership. This is seen in the 2023 published policies on leopard, lion, elephant and rhino "sustainable use, and the new TOPS regulations". Furthermore, government entitlement and arrogance have failed to give citizens access to information to adjudicate their management of OUR NATURAL ASSETS.

We believe our ecological assets are public goods. In South Africa, wildlife and wild assets have been treated as res nullius along old and colonial common law prescripts. Landmark Foundation has started the tough battle to change this and to point out the irrational and unconstitutional behaviour of state agents in this regard. We have viewed this secrecy by which these public goods are handed to private interests, or allowed access to by state provisions (permits, exemptions and or access) as another clearing out of the cookie jar by state agents and their accomplices.

In 2023 Landmark Foundation continued to pursue three foundation Human Rights cases and other litigation to exert better conservation actions for wildlife. This legal advocacy has advocated for a better constitutional dispensation for wildlife and wildlife management. Rights are only sentiments on paper until one exerts them. We recognise that in South Africa, nature and natural assets are not granted rights (we believe that to be wrong), but humans have rights (and Trusts and Companies). It is those rights that we are exerting and their implied obligations on the rights of others.

We have focused on four human rights in our Bill of Rights to assist us with wildlife conservation:

1. The right to a healthy environment
2. The right to information

3. The right to free expression

4. The right to fair administration

In the 2023/2024 year we continued our pioneering litigation advocacy while asserting the human obligations towards the global biodiversity commons, using a rights-based approach. This involved the following cases:

- Promotion to the Access to Information Act (Makhanda High Court Case 1199/2021) we secured a victory in forcing Government to make available issued Threatened and Protected Species permits affecting leopards between 2017 and 2019. We commenced a second PAIA application for permits between 2019 and 2022. These permits we were able to obtain involved more than 30 leopards removed from their natural home ranges in shocking actions involving leopard trade, movement and transactions in the Eastern Cape between livestock farmers, game farms, and tourism and game trading enterprises. These actions involved government officials. Despite the Court Order the Eastern Cape Government have continued to conceal permits in contempt of this Order. We secured our funds awarded in this case. We are pursing accountability of for all leopard transactions in the region. The Eastern Cape Government's cavalier disregard for the Courts, and for biodiversity accountability, demonstrate a government is contempt of their mandate and the law. This is a fundamental tenant we have been fighting for and will continue to pursue this accountability.

  The context to this case is that in 2019 we successfully interdicted the Eastern Cape government from translocating 4 leopards from a livestock farm near Steytlerville, adjacent to the Baviaanskloof World Heritage Site, to Buffalo Kloof Reserve, a trophy hunting farm near Grahamstown (Makhanda). Immediately thereafter we suspected and were eventually informed that the Eastern Cape Government caused at least three leopards to be moved there. Several more were moved to other private locations from livestock farms and game farms without legitimate ecological justification. We believe that the other parties, inclusive of private game and hunting farms, have also been involved with veterinarians (with family interests and private commercial interests) to move leopards in ecologically damaging fashion from livestock farms and between game farms and private reserves. One farmer even claimed to have participated in the movement of 10 leopards from the Baviaanskloof World Heritage site.

  The information attained through this Promotion of Access to Information Act (PAIA) action has confirmed our worst fears of this "trade" in leopards in the Eastern Cape. We are currently in the process of getting current information of leopards being moved in the Eastern Cape and a further PAIA action to assert governance oversight for the species. The information unearthed points to irrational and perhaps unconstitutional actions of the state threatening the leopards in the region.

  The Baviaanskloof World Heritage Site population was shown to have less than 40 adult individuals and significant persecution continues there. The entire Eastern Cape has been demonstrated to have about 400 adult individuals left.

  In trying to expose these ecologically ruinous practices of the Eastern Cape Government pertaining to leopard management and the cosy relationship they have to the trophy hunting industry and farming interests to destroy leopards, we applied in terms of the Promotion of the Access to Information Act (PAIA) to gain access to all applications and permits issued for

leopards in the province. We were denied this based on some trite claim of the Eastern Cape Government acting on "third party confidentially" interests. This is clearly an attempt to conceal their actions, evade accountability and the serving of interests they want to conceal from the public. The Court agreed with us.

The judgment was an emphatic win for Landmark Foundation, with costs granted for two counsels to boot. Despite this and in clear contempt of Court the state failed to provide the information timeously to us. A subsequent further PAIA application has also and is still being frustrated. What is so pernicious in this instant is that the Eastern Cape Government felt entitled to hand out public goods (leopards) to private interests (farmers and game owners and hunters) and conceal this transference of OUR PUBLIC GOODS to private interests. What is more, they felt they were entitled to do this in secrecy and concealed from public accountability. This happened when leopards were removed in ecologically ruinous actions and with backroom allegiances. Despite the judgment it took months for the government to hand over the information and their concealment and ecologically damaging actions are ongoing, cavalier and still being concealed. In November 2023 the Eastern Cape Government put out a tender to consultants to justify trophy hunting of leopards.

- Promotion to the Access to Justice Act matter (Makhanda High Court Case 2795/2020) was heard in March 2023. We lost this case on a rather bizarre basis. The case revolves around the Government's weaponing of their permit system against those holding them to account. Government employed all delay tactics in this case when we challenged them for weaponizing the TOPS permit systems against us for challenging their accountability. The Court ruled that the period in which the permit we had applied for would have lapsed by the time of the ruling, and thus our challenged of the administrative action in question was moot. While we respect the Court decision, we find it bizarre that the Court was endorsing the administrative abuse of the Government through this bizarre approach by failing to deal with the merits of the case and the abuse. No doubt the Court sensing the absurdity of this ruling, no costs we awarded against us. We are currently addressing this matter further as it cannot be acceptable that the Department can abuse administrative action in this manner.
- In the Freedom of Expression matter involving Mr Herman Botha (Gqeberha High Court Case number 2832/2019, Supreme Court of Appeal 887/2020, Constitutional Court 40/2022) We secured a victory in the SCA in January 2022 where the rulings of the High Court ruling was overturned in our favour, this was challenged by Mr Botha in the Constitutional Court where he applied for a leave to appeal.

  The matter involves the 2019 whistleblowing of cruel and ecologically ruinous actions of Mr Herman Botha on his farm in Alicedale, Eastern Cape.



Images taken on the farm of Mr Herman Botha

This hearing was held in the Constitutional Court on 9 November 2023 and the outcome is still awaited. At the heart of this matter lies the competing Human Rights of privacy and free expression, the latter relating whistleblowing of cruel and ecologically damaging conduct on private property. This matter lies at the core of our advocacy work for wildlife and conservation.



Constitutional Court Hearing on 9 Nov 2023

- Landmark Foundation is continuing to claim for a damages against the landowner and its principals had repudiated the agreements that established the Shepherding Back Biodiversity project that was to be a management experiment and a learning site for 25 years. Currently Landmark Foundation is taking action to reclaim more than R22m direct charitable investments (from Landmark Foundation, GEF, Development Bank of Southern Africa, Woolworths Trust, and others) in the project, and a further R57m of damages. The project implementation commenced in 2014 and completed only the establishment period that relied on donor funding. The project was to run over an agreed-on 25 years on the index farms, but our access was terminated immediately upon termination of grant funded establishment period. This was one of the most significant and globally important biodiversity management experiments on production landscapes in relation to regenerative agriculture. Landmark Foundation will, subject to reclamation of investments, aim to re-establish this work on a secured site. Concurrently the respondents in this matter have embarked on a legal assault on the Landmark Foundation and privately on persons associated with it to try to avert the damages claim. These latter assaults are being challenged.
- Andre Barnard Criminal Matter. In or about August 2020, Mr Andre Barnard of Toorwater farm, along the southern slopes of the Swartberg near Uniondale in the Western Cape, is

alleged to have killed a leopard under the most depraved and barbaric circumstances. The leopard was allegedly illegally captured in a cage trap without the requisite permits, then, knowing it was captured, Mr Barnard allegedly wished it dead, but did not want to shoot it. Nor would he call CapeNature or Landmark Foundation for assistance. Instead, it was left to die of dehydration in the cage. His son and the farm workers were knowing of this and/or involved in this. It is unknown how long the leopard was left to suffer before it died. Thirst is the only urge a mammal cannot resist. Dying of dehydration, by deprivation of water, is the cruelest death any animal can be subjected to. The Landmark Foundation has agitated since March 2022 to get the National Prosecuting Authority (NPA) to fully prosecute the alleged crimes. Initially the charges included only illegal capture and killing of the leopard without due permits in terms of the 1974 Provincial Ordinance and disregarded the ethics or depravity of the method the animal was allegedly intentionally killed. With our agitation, charges were added in respect of the Animal Protection Act. However, attempts by the accused and the NPA to get a plea deal agreement intervened. The Landmark Foundation asked for a watching brief in court and the right to address the Magistrate's Court presiding officer in aggravation of sentencing. We demanded that all the transgressions in law (the Conservation Ordinance and the Animal Protection Act) should have been prosecuted and charged. We also believe that the farm workers and the son of Mr Barnard that was allegedly involved in and/or had knowledge of the leopard capture and the circumstances of it being left to die in the cage, be charged also as accomplices.



Leopard allegedly left in a cage to die of dehydration on Mr Andre Barnard's Farm in Toorwater, Swartberg, Western Cape

We have continued our watching brief in the criminal matter after initial unwillingness and tardiness of the National Prosecuting Authority in the matter to expedite the prosecution. The case eventually started on 29 - 31 January 2024. We attended court and although only three witnesses have testified so far we will continue our watching brief to ensure that this crime is fully prosecuted as similar such actions are often ignored.

Reflecting on 2023

Challenges in 2023

1. Dr McManus as forced to seek employment elsewhere as our funds diminished. She now provides parttime input and management.
2. We continue to struggle to recover from the recession in 2020 and the destruction of our Shepherding Back Biodiversity project. Our revenue has been constrained to the extent that it has limited our activities.
3. This past year we were faced with a new challenge in that the adversaries in the claim for damages in the Shepherding Back Biodiversity Project has gone on to assault our institutional funders. They have also combined with ex-contractors that were dismissed in a sinister assault on the NGO and its funders. It would appear that this is part of a stratagem to outlitigate the NGO to avert the damages claim. The Mary Oppenheimer and Daughters Foundation and Hans Hoheisen Conservation Trust are two funders that were assaulted through these efforts. We will therefor not declare current funders as done in the past but are happy to provide such information when requested. The information from our public annual reports were used to target funders.
4. There is a continued fallout of the repudiation of a joint venture agreement we had with Timothy Allsop and his Tamarisk Trust with whom we developed the learning site for the Shepherding Back Biodiversity Project at Kromelboog Farm near Beaufort West. This repudiation has destroyed a long-term research and habitat expansion programme in which more than R30m of charitable funds were invested. Landmark Foundation is now acting to get redress. This also caused an abrupt cessation of the Fair Game efforts. We are addressing this through a damages claim in the Cape Town High Court and a myriad of lawfare attempts to avoid this claim from the legal opponents. The respondents have assaulted Dr Smuts in counter claims and a delinquency application as part of this lawfare.
5. As a consequence of these nefarious assaults the Trustees and Dr Smuts agreed that he would step down as Trustee and Director and that Dr McManus will fill those roles through these legal actions.
6. Matthew Schurch was dismissed in 2021 for dishonesty and breach of trust and he continues to try to extract money from the NGO through the CCMA that we are fighting. He and Vicki Notley are colluding with the respondents in the damages claim.

Successes in 2023

1. Our educational programme continues to break new ground and makes a difference to learners. We have developed extensive collaboration with many institutions. This has been achieved on a shoestring budget
2. Our research work has developed four scientific publications in the last year. Our research work has been integrated into provincial and national government management. We have also developed research partnership with several universities and across the world.
3. We have provided material inputs to policy and regulations at both the national and provincial levels.

4. Our legal advocacy is genuinely groundbreaking. We are busy changing the way we engage the ecological commons.
5. The wetland rehabilitation continues to grow in stature each year.
6. We are perhaps to most impactful organisation in leopard conservation.

Organisational Information

Key staff:

• **Bool Smuts** (2004–present)	General Manager
• **Jeannine McManus (PhD)** (2006–present)	Executive Director, Research Director
• **Johan van Schalkwyk** (2005–present)	Treasurer and Trustee
• **Monica Vaccaro** (May 2013 – present)	Educational Coordinator
• **Lauriane Faraut (PhD)** (June 2021–present)	Human-Wildlife Conflict, Researcher
• **James Harrison** (2019– January 2023)	Consultant Editor
• **Lucas Schor** (February-March 2023)	Student volunteer (USA)
• **Robin Stubbs** (September 2022-present)	Student volunteer
• **Robin Mahne** (January-August 2023)	Student volunteer
• **Anelisa Sitatu** (January 2023-present)	Student volunteer
• **Asanda Mbuti** (January 2023 – present)	Student volunteer
• **Mihle Bolo** (February 2024 – present)	Student volunteer

Current trustees:

- **Rian du Toit** – Chairman, Attorney
- **Johan van Schalkwyk** – Trustee, Financial Manager
- **Jeannine McManus** – Trustee, Ecologist

Legal and tax registrations and reporting

Landmark Foundation is up to date with statutory reporting to the Department of Social Development and SARS. Our AFS statements are published each year within 6 months of the financial year end (February).

Organisational impact

As an organisation, we believe we have had massive impact in policy and legislation, research, market impacts, education and extension, and public advocacy. We are the leading (and at times the only) organisation helping to rescue leopards from conflict in production landscapes and our leopard research work and legal advocacy work is of international quality. The wetland work in Riversdale is proving very successful. Our litigation is foundational in getting a better dispensation for wildlife.

Looking Forward

In 2024, Landmark Foundation will continue to develop its main project activities.

1. **Landmark Foundation Leopard and Predator Project:** Landmark aims to continue the activities detailed above and, with it, expand the efforts for leopard conservation:
    i. Reallocate resources to prioritise outputs as above.
    ii. Rescue and rehabilitate every leopard we can.
    iii. Continue research into leopard persistence in landscapes, with a particular focus on translocations as a management tool and population genetics analysis.
    iv. Continue our educational programme at pre-school, school and tertiary levels – see below.
    v. Focus our advocacy on policy, laws and administration.
    vi. Expand the conservation landscape through land acquisitions and co-opting landowners through promoting land-management practices.
2. **Shepherding Back Biodiversity:** We are seeking redress for the repudiation of our access agreements and then intend to rebuild the rollout of this work.
3. **Landscape restoration:** We will continue water-table rehabilitation and riparian reforestation and rewilding of the Korente–Vette River in 2024.
4. **Litigation:** To be pursued in furtherance of leopard conservation as detailed above.
5. **Education:** Our environmental education programme plans to build on the platform developed in previous years to focus on pre-school, school, youth, and adult education. We specifically want to finalise 3 manuals (ECD, Green Clubs and Farmers Manual) to help facilitate the uptake of these programmes beyond our practical reach and extend our impact to the wider community.
6. **Resource needs:** We will redouble our efforts to obtain the support for our work that we believe we deserve. We are currently redeveloping our website and a concerted funding campaign.
7. **Learning Site:** Continue to establish a learning site at Zeekoegat in Rewilding.