Environmental entrepreneurialism and the limits and possibilities of socio-economic transformation in the Karoo

From wind farms to plant poaching and the SKA telescope's quiet zone, the Karoo emerges as a contested frontier of green development, where global imaginaries collide with local realities.

WILLIAM BEINART and STEVEN ROBINS chart the rise of environmental entrepreneurialism, a wave of private-sector investment reshaping landscapes, livelihoods, and power relations. The result is a provocative portrait of a region caught between ecological recovery and socio-economic exclusion.

Renewable energy wind turbines, Copperton, Northern Cape
Photo: Stephanie Paula Borchardt)

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Abstract

In recent decades, a new and multi-crested wave of investment has washed across the Karoo, much of it focused on aspects of what we are calling environmental entrepreneurialism, especially wildlife farming, conservancies, ecotourism, and renewable energy. 'Sustainable' copper mining, green hydrogen, and carbon credits are also promised. While driven by the private sector, this has not replaced the state, and it intersects with national and provincial projects that extend protected areas, facilitate conservancies, and regulate renewable energy infrastructure. The latter, with investment largely by private companies on privately-owned land, is probably the most significant area of investment. Renewable energy infrastructure is not directly aimed at benefitting the Karoo environment but at augmenting and decarbonising provincial and national electricity supplies. Other enterprises are similarly complex. While copper mining may enhance global environmental conservation, it is environmentally destructive locally.

In this article, we explore some of the dynamics of these environmental trends across different sectors. Generally, they are resulting in national environmental gains and enhancing local biodiversity. However, as we discuss briefly in each case, they are making little impact on socio-economic inequality. Landowners are benefitting and land ownership is increasingly concentrated. New networks of expertise have emerged between farm-owners, government agencies, universities, and private consultancies. We focus primarily on private sector environmental entrepreneurialism as a process of increasing significance and a shift away from the state as the key agent in conservation. Evidence suggests that redistributive processes are marginal, with the partial exception of those resulting from renewable energy licences.

Introduction: Environmental entrepreneurialism

Our main focus is an overview of private sector, environmentally related enterprises in the Karoo and the shift away from the state as the key agent in conservation (Beinart, 2003). We argue that critical concepts such as neo-liberal conservation and green extractivism have limited capacity to address the specificity and rapidity of change. At the same time, we see evidence that long-standing social inequality is being reproduced. We explore a few possibilities for more equitable futures.

For reasons explained below, we use the term environmental entrepreneurialism to describe these processes of non-state investment and engagement in conservation and green enterprises. As the research has emerged largely out of the Cosmopolitan Karoo programme, initiated by Cherryl Walker in 2016 at the University of Stellenbosch, we draw in part on findings already published by that research group, especially in Hoffman and Walker (2024), as well as new research by postgraduate students. This has been presented and discussed at the Arid Zones Ecology Forum (AZEF) in Graaff-Reinet, 2023, and at seminars in Stellenbosch. The idea of this synthetic overview comes out of these meetings.

After a period between about the 1910s and the 1960s, in which Karoo environments were probably at their ecological nadir, the succeeding decades have seen slow improvements (Hoffman et al., 2018; Hoffman et al., 2019; Boardman et al., 2017). Initially, the state played a major role through legislation and policies to combat denudation, soil erosion, overstocking, and invasive plants as well as expanding areas reserved for wildlife. But increasingly, over recent decades, private landowners, companies, consultancies, and non-profit agencies, sometimes working with the state, have seen opportunities in environmental and conservation initiatives. These include wildlife farming, eco-tourism, conservancies, planting indigenous species, and renewable energy. The last, with investment very largely by private companies on privately-owned land, is probably the most significant in scale of expenditure.

Renewable energy is not directly aimed at benefitting the Karoo environment, but at augmenting and decarbonising provincial and national electricity supplies. Similarly, copper mining might enhance global environmental aims, yet it can have an environmentally destructive local impact. We also touch on the Square Kilometre Array (SKA) astronomy project that is not primarily driven by private capital but which has environmental implications. It has necessitated

appropriation of 135,000 ha. of farmland to create the Meerkat National Park.

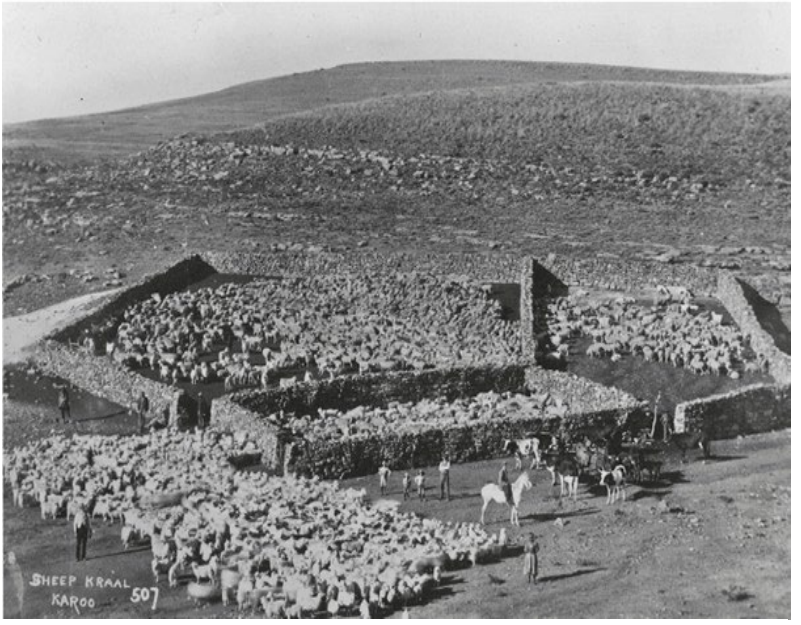
Cosmopolitan Karoo publications have highlighted technoscientific developments such as renewable energy and the SKA radio telescope (Malope, 2022, 2023, 2024; Borchardt, 2023, 2024; Walker & Hoffman, 2024; Walker, Chinigò & Dubow, 2019; Chinigò & Walker, 2018; Chinigò, 2019; Chinigò & Walker, 2020; Walker, 2022). They have generally been critical of the socio-economic outcomes, and the limits to which such initiatives can address entrenched, racialised inequality. Walker and Hoffman (2024) also suggest that the Karoo can be regarded as a renewed resource frontier zone in a new extractivist era bringing unprecedented social-ecological change.

An examination of all these different developments in a single article is complicated by their diverse dynamics, as well as by their different spatial and temporal scales; nevertheless, they are all inter-related in reshaping the Karoo. We are also aware that the unfolding of these multidimensional processes − characterised by complex sets of forces, diverse actors, and unpredictable outcomes − is occurring in many parts of the Global South, not only in southern Africa and the Karoo (Mathews, 2011; Goldman et al., 2011).

Wildlife

Trek buck hunting in the Karoo.
Photo: National Library of South Africa, Cape Town, Jeffrys collection, J1364

Antelope remains on a Karoo hunting farm, 2023. *Photo: William Beinart*



Sheep kraal, Karoo, late nineteenth century.
Photo: National Library of South Africa, Cape Town, Jeffrys Collection, J1335

In this section we trace the initial destruction of wildlife by livestock farmers, the development of protected areas by the state from the 1920s and, in recent decades, the rediscovery of the value of wildlife by landowners in game farms and conservancies.

The Cosmopolitan Karoo research programme, and its name, recognised both the transformation of the environment, and the partial re-peopling of semi-arid and arid parts of South Africa following conquest and colonisation. These were not backwaters. Commercial pastoralism drove the nineteenth century Cape economy and, in many respects, the momentum continued into the 1950s (Beinart, 2003). Landscapes were transformed by dense livestock populations, water management, fencing, fodder production, exotic plants, and transport infrastructure. Private landowners were largely responsible for environmental degradation, but neither environmental knowledge nor environmental concern was monopolised by experts or the state. Many descendants of settler incomers and of indigenous people developed deep knowledge of the landscape and environment, and how to exploit it with new and hybrid technologies (Myburgh, 2025).

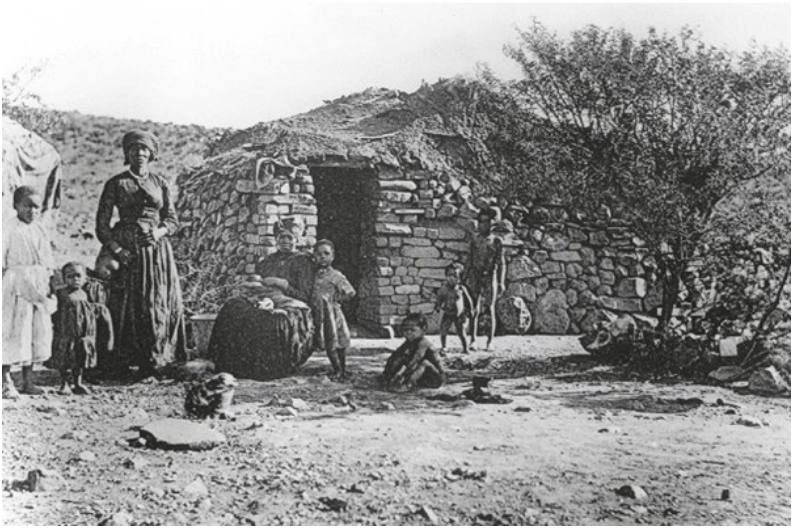
Landowners cleared their farms of wildlife because predators ate sheep, and antelope competed for grazing. As early twentieth century wildlife conservation gained support, the white-controlled state adopted a strategy of protected zones, formalised in the 1926 *National Parks Act* (Carruthers, 1995; Dlamini, 2020). This was followed by the demarcation of the Kruger National Park and reserves in the Cape Province that focused on threatened species: Addo elephants, mountain zebra, bontebok, and gemsbok. Expanded and new apartheid-era protected areas, including the Karoo National Park, developed increasingly diverse aims in conserving habitats and general biodiversity. From the 1950s, provincial nature conservation bureaucracies were established and wildlife tourism became a significant government-run, commercial element in the parks. These policies have been pursued post-apartheid, with extensions to Tankwa Karoo, Camdeboo, and Addo, and the state remains deeply engaged in Karoo conservation notwithstanding private sector developments (Walker & Hoffman, 2024).

Drought and a government destocking programme led sheep numbers to decline in the 1960s. Landowners began to expand wildlife holdings, prompted by both conservationist ideas and prospects of commercial hunting. Yet livestock, especially sheep farming, has remained the Karoo's major commercial activity, with wool exports, though fluctuating, fetching around R4-4.5 billion in the last few years (AgriOrbit, 2025).

Introduced over the last 50 years, the wildlife economy has diversified and created various entrepreneurial opportunities. These cater for the estimated 200,000 South Africans who largely aim to shoot for meat, for overseas hunters looking for trophies, and for wildlife viewing with upmarket accommodation. Wildlife breeding became an allied enterprise. Regular auctions saw top springbok ram prices rivalling those for the best merinos at around R250,000, and the best breeding buffaloes fetching over R1 million by 2018 (Rubidge interview).

Estimates of production in the national wildlife economy suggest that it rose from about R10 to R20 billion between 2014 and 2019 − one of the most rapid increases of any agricultural enterprise − and was employing 140,000 people (SA Jagters/Hunters 2024). The Eastern, Northern and Western Cape provinces account for about a third of that production, much of it from the Karoo and Eastern Cape. A recent estimate claimed the value of hunting and related tourism at R45 billion, though it uses a generous off-farm 'multiplier' for income generated in associated activities from accommodation to transport and taxidermy (Stoddard, 2025). Wildlife farming takes many different forms, sometimes mixed with livestock and often reinforcing processes of growth in farm sizes.

There are many strata of interests in wildlife, hunting, and eco-tourism, as well as environmentally linked enterprises. A globally attuned growth of expertise is rebranding the Karoo and surrounding areas and also emphasising their role in expanding employment. However, the process of consolidating large landholdings through purchases of multiple farms has resulted in the exclusion of Black farm-workers previously employed on livestock and mixed farms (Brandt & Spierenburg, 2014; Mkhize, 2014; Spierenburg & Brooks, 2014; Brandt, Josefsson & Spierenburg, 2018; Manyani, 2020). This is also evident in the expansion of state reserves, such as Addo (Connor, 2014). Moreover, researchers note that the perimeters of conservancies and wildlife farms are more thoroughly fenced, and their boundaries less porous than those of livestock farms. And the evidence suggests that few Black landowners can participate in wildlife initiatives. Overall, it seems that large wildlife farms and mega-conservancies are consolidating South Africa's long histories of racialised dispossession and enclosure, histories that continue to shape the Karoo landscape. Such processes may also add to unemployment rates in some Karoo towns, where most Karoo residents now live (Walker & Vorster, 2024).



Shepherd's hut on a Beaufort West farm.
Photo: National Library of South Africa, Cape Town, Jeffrys collection, J1651

There has, however, been limited research on the wildlife economy's role in job creation directly and indirectly, whether in environmental management, tourism, and accommodation; in infrastructure such as fencing services; or in the limited revival of some small Karoo towns (Atkinson, 2016). Overarching employment figures for the wildlife economy, and for upmarket tourism, show sharp growth with generous predictions of expansion, although, as Covid-19 showed, they are unpredictable. The wildlife economy is a significant factor in the changing location and character of settlement and employment. Further research is needed on losses for those formerly employed on livestock farms and as yet uncertain gains elsewhere.

Renewable energy

Renewable power, both wind and solar, is attracting investment shaped by South Africa's 2011 Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). Despite Eskom's monopoly of coal-fired power stations, REIPPPP was envisaged to diversify private power provision. It has, nevertheless, and unlike wildlife farming, included requirements for wider community development, employment opportunities, and community trust structures. That is because REIPPPP was initially framed in the context of the *Broad-Based Black Economic Empowerment Act* (2003) and the Mining Charter to facilitate Black ownership, employment, and some local development. Bids by renewable companies were judged not only in relation to

technical and financial capacity, but also in their ability to meet these requirements. The first four bid windows had quite high demands, though these diminished from the fifth (2021) as the urgency for electricity supply increased.

Although the energy transition at a national level in South Africa was delayed during the Zuma government, when Eskom's coal dependency was protected, some REIPPPP contracts were issued in the first four bidding windows (Borchardt, 2023, 2024; Bowman, 2020; Malope, 2022, 2024; Rogers, 2024). Electricity supply is still largely coal-based, but renewables have increased rapidly in recent years. Available figures are uneven but in 2021 suggest that about 8% of electricity was generated from renewables, 5% from wind. Wind generation capacity increased to about 7% in 2023 and recent figures suggest quickly growing capacities: 92 installations with 6,000 MW in 2024, which would be closer to 12% of national electricity requirements (Anekwe et al., 2024, Minnaar, 2024). In the Karoo, landownership seems crucial for gaining benefits from renewables. On the whole, companies rent rather than purchase land for investment and most land is controlled by large landowners. Location is thoroughly researched and depends largely on suitability for wind and solar power. Rental payments mentioned to us varied from R1 million to R2.5 million annually and landowners can sometimes continue livestock or wildlife farming.

Recent Cosmopolitan Karoo research (Borchardt, 2023, 2024; Malope, 2022, 2024) suggests uneven outcomes from employment and community-development requirements. Renewable energy construction creates most local jobs, but these are short term. A striking feature of REIPPPP is that companies, rather than the local state, must implement community development projects. This strategy may have been borrowed from the mining sector or resulted from government recognition of state incapacity (Rajak, 2011; Rogers, 2024). Local intermediaries and community liaison officers, employed by the companies, consult about and facilitate projects, mostly relating to education, scholarships, health, small-scale business opportunities, and limited contributions to local infrastructure.

Outcomes are uneven. In February 2024, the local Municipal Manager of Karoo Hoogland Municipality in Sutherland told us that Independent Power Producer (IPP) Red Rocket's contribution towards school mathematics and science teaching, bursaries, sports facilities, as well as shoes and clothing for learners, provided significant gains.

But Borchardt's (2023; 2024) and Malope's (2022) long-term research on community development projects, respectively in De Aar and Loeriesfontein, found a lack of co-ordination between local government, schools, and projects. Laptops, smart classrooms, and computer centres were supplied to local schools without adequate maintenance and support. Residents claimed that they and their impoverished communities received no tangible material benefits. Few jobs had materialised, and some were poorly paid maintenance work, or counting and collecting the birds killed by the wind turbine blades (Borchardt, 2023). During Covid-19, protective equipment and hand sanitisers were distributed when destitute households were in need of food parcels and soup kitchens. Despite the presence of seven large-scale renewable projects near De Aar, the majority of Coloured residents struggled with energy poverty, and could not afford to pay for basic household electricity needs (Borchardt, 2023).

An alternative strand of funding that offers another, potentially greater, benefit is community trusts established to accrue funds from community shares in profits from renewable energy installations. Malope (2022, pp. 241-2) estimates that R25 billion may be available nationally over 20 years from the installations made following the first four REIPPPP bid windows. Such trusts are difficult to establish, lack administrative backup from the IPP office, and have implemented little. But they may be a significant vehicle for redistribution. Malope has advocated using them for direct cash transfers to indigent households, while Borchardt has suggested improving and upgrading municipal infrastructure. Land purchase is another possibility, with an eye on initiating renewable energy schemes on transferred land that might bring in long-term rentals. Land that is poor for grazing in a district like Williston (see below) was for sale at not much more than R1,000 per ha. in 2024. Integrating land purchase, paid for by trust funds rather than the state, and renewable energy projects would, however, require complex, uncorrupt, and sustained administrative backup by non-state agencies.

Renewable energy is bringing layers of new capital into the Karoo − connecting international investment, South African companies, and to some degree local government funding. Moreover, networks of expertise are developing around green energy among companies, consultants, intermediaries such as community liaison officers, academics, and skilled workers. Installations have not resulted, as in wildlife conservancies, in farmworker removals, and some community development projects provide benefits in small Karoo towns where most people live.

While renewable energy generation is likely to be the most transformative new outcome of environmental entrepreneurialism in and around the Karoo, strategies for associated manufacturing, innovation, benefit-sharing, local enterprise, and redistribution are crucial if the region is to move beyond externally dominated energy 'extractivism'. Given their national significance in any just transition to renewable energy, community trusts established under REIPPPP provisions need systematic support. Their effectiveness in redistribution and local participation requires urgent research and debate.

New Karoo energy frontiers? Copper

The reopening of Namaqualand's copper mines, when copper has become a vital ingredient for the green technological revolution, has also excited entrepreneurs (Maree, 2024). In 2021, Copper 360's Director, Jan Nelson, spoke enthusiastically of the company's environmentally sustainable plans to rehabilitate old mine dumps (Creamer, 2021). Although copper deposits are limited, demand seems to promise a bright future for old mining towns, including Springbok, Nababeep, O'Kiep, Concordia, and Carolusberg. For instance, in mid-2025, Orion Minerals secured a capital injection of R67 million to accelerate work on its flagship copper and zinc projects in O'Kiep and Prieska in the Northern Cape, suggesting investor confidence in the province's mining potential (*Diamond Fields Advertiser*, 2025).

But, during our week-long visit to Namaqualand in April 2024, we encountered an unenthusiastic response from Concordia activists and Coloured residents to these promises of a mining boom. Copper 360, which had recently begun carting off tonnes of left-over copper-ore tailings from Concordia's Jubilee mine dump to a processing plant in Nababeep, had not properly consulted with Concordia's residents. Local activists from a Namaqualand social movement, Vrywillige, Vooraf en Voordurende Ingeligte Toestemming (Free, Prior and Informed Consent) or VVVT Namakwaland, mobilised against these mining activities. They were especially aggrieved by trucks loaded with tailings speeding daily through their town, spewing clouds of contaminated dust and destroying their roads. As community leader Shereen Fortuin told a journalist when 29 Concordia residents were arrested while protesting outside Copper 360's Jubilee mine in July 2023: "The trucks are a big problem … they are driving our town flat' (Human, 2024).

Copper 360's processing plant in Nababeep where mine tailings are 'recycled'. Photo: Steven Robins

People expressed their deep concern about the dust they had to ingest, and which covered their bodies and homes. They also railed against the use of contaminated water, extracted from the mine, used to douse the roads and trucks. They worried about the impact of revived mining activities on Concordia Communal Property Association's communally owned land (Maree, 2024). Some of the people we spoke to complained about collusion between the mining company and local state institutions which seemed reluctant to enforce health and environmental regulations. Despite promises of jobs in this desperately poor region, they saw that mechanised mining of old dumps created little local employment, and they consequently called for a moratorium on all new mining. It remains to be seen how local residents of Concordia will respond to persistent efforts by companies to resuscitate copper mining in their town.

Environment and development in the SKA's shadow

While the purpose of the ambitious SKA radio astronomy project is not environmental, the outcome has been, following the designation of the Meerkat National Park in 2020. Managed by SANParks, comprising 135,245 ha., this is bigger than the Karoo National Park (Chinigò, 2025). At present, visits are highly restricted because they would disturb the workings of the radio telescope. Instead, Meerkat is being developed as a research platform for the South African Environmental Observation Network Arid Lands Node. Internal fencing and artificial water points are being removed and wildlife gradually returned in an attempt to study

ecological recovery and the effects of climate change at the landscape scale over the long term (Van der Merwe et al., 2021; Chinigò, 2025).

In this case, state-led astronomy and conservation projects have displaced the private sector − in the shape of farmers and an agricultural economy. The government and South African Radio Astronomy Organisation (SARAO) websites emphasise their socioeconomic contribution in the Karoo as well as their substantial national contribution to scholarships and postgraduate training (SARAO, 2020). They report contributions of R156 million spent on service providers and contractors by 2020, R222 million on salaries, teacher recruitment, and education, and 1,251 university bursaries, including 20 for students from local Karoo towns. The 80 people employed at the site in 2019 made it Carnarvon's largest employer. Moreover, local contractors were trained to apply for tenders and, as occurs with renewable energy enterprises, SARAO facilitated local enterprises, including a craft centre in Carnarvon, a medicinal plants project with San people, and a feedlot at Williston. Yet, as Arries (2023) records, many farmworkers lost their jobs when SKA bought up farms to create the 'quiet zone' for radio telescopes. Despite having consulted locally, as required by the *Astronomy Geographical Advantage Act*, neither the local state nor SARAO had much capacity to alleviate local unemployment.

In October 2023 we visited Williston, a small Karoo town close to the SKA. Although there is a new Community Development Centre, public buildings in the 'township', Amandelboom, were derelict and vandalised, and services had broken down. We heard that drugs (especially crystal methamphetamine, known locally as 'tik') and alcohol are severe problems. School teachers spoke of rising numbers of children suffering foetal alcohol spectrum disorder (FASD) dropping out of school as early as Grade 1.

While SKA has provided national educational benefits and some local development resources, these have a limited effect on local social problems, a disjuncture reflected in Coloured residents' experiences. As some in Williston said: "If they only treated us with honour." Neither affluent nor poor people in Williston believed that the Meerkat or SKA project had benefitted them. Some landowners said that the loss of farms undermined the area's pastoral economy and brought no renewable energy rental benefits. They complained about the SKA restricting their use of electronic devices − mobile phones, laptops, tablets, and switches for pumps and generators as well as electric fences which can also disturb the radio telescopes (Atkinson, 2019). Fences are particularly important because expanded wildlife zones (including the Meerkat National Park)

have increased the threat of sheep predators (Terblanche, 2020), especially black-backed jackals.

Chinigò and Walker (2018; 2020) observe that the SKA project resulted in difficult trade-offs between the promotion of state-of-the-art global science, and the many unmet local infrastructural, developmental, and social needs. They also describe a striking disjuncture between the positive framing of this scientific programme by the state and SARAO, and the experiences of local Coloured residents who had expected that their lives would improve.

Plant poaching and illegal entrepreneurs

One of the most striking panels at the 2023 AZEF concerned widespread plant poaching in the Western and Northern Cape. Presenters spoke about threats to endemic dwarf succulents, especially *Conophythums*, which are protected species in great demand as indoor plants. While not exemplifying the kind of environmental entrepreneurialism discussed earlier, such poaching and export constitutes a profitable enterprise that must be understood in relation to the poverty in Karoo towns and the global market for South African species (Rahl-Botha, 2024). When the scale of export became apparent around 2020, law enforcement agencies became more involved. They recorded that 242,000 uprooted plants were confiscated in 2022 and the South African National Bioinformatics Institute (SANBI) estimates 1.5 million had been poached by 2023 (Smith et al., 2023).

AZEF presenters attributed this market spike to various factors. One is the internet (Ebay, Facebook, and Tiktok) which provides information on availability, GIS location, and prices (Rahl-Botha, 2024). Final retail prices can reach R100,000 for mature rare plants. A second is that Covid-19 may have increased interest in collecting and indoor gardening, with rarity being attractive. Another is that couriers can supply plants in a few days to buyers in countries as dispersed as China, Japan, the US, and France. The ecological requirements of these species make it unlikely that many survive for long.

Hoffman and Gillson (2024, p. 220) directly relate such plant poaching to poverty and insecurity in the Karoo. Urban-based criminal networks with international trade links provide some rural income, which is increasingly risky as law-enforcement is strengthened. Faye Rahl-Botha (2024) has drawn attention to the adverse consequences for conservation of the increasing criminalisation and harsh punitive measures directed at plant 'poachers' from chronically impoverished Northern Cape towns. At the same time, the crisis has mobilised agencies who prioritise biodiversity

conservation, from the World Wildlife Fund (WWF) and Leslie Hill Succulent Karoo Trust to Kew Royal Botanic Gardens in the UK and Trade Records Analysis of Flora and Fauna in Commerce (TRAFFIC), a global non-governmental organisation (NGO) fighting illegal wildlife trade. This is another route through which environmental research and knowledge is expanded, with its own unpredictable outcomes.

Conclusion: Environmental entrepreneurialism and redistribution

Environmental entrepreneurialism in fields such as wildlife farming and conservancies, eco-tourism, and renewable energy has been private sector-driven, but it has not eclipsed the state and is linked to national and provincial policies and projects. Larger landowners tend to benefit and there has also been a continuing process of concentration of land, sometimes in the hands of wealthy individuals, both foreign and South African. New networks of expertise have emerged beyond the farm-owners − in government agencies, universities, and private consultancies. Enterprises are carried by ideological as well as material interests in conservation, which can cross boundaries of race and class. South Africa has been, and perhaps increasingly is becoming, a significant node for applied environmental knowledge. Southern African countries are articulate advocates, globally, of wildlife utilisation, and environmental management.

These processes have contributed to environmental recovery and biodiversity. They are less extractive than livestock farming, although that too has generally become more environmentally attuned in line with results from research and experimentation in pursuit of more sustainable veld management strategies (Myburgh, 2025). In 2023, Karoo Lamb was registered as a South African Geographical Indication (GI), recognising the uniqueness of its production. Scientific studies demonstrated that grazing plants in the typical Nama Karoo and Succulent Karoo biomes give Karoo Lamb meat specific aromatic and sensory attributes that warrant protection and recognition. Moreover, much Karoo-grown wool, mohair and meat are advertised as organic products.

Replacing livestock with wildlife generally leads to biodiversity recovery, although hunting, central to the wildlife economy, is intensely debated (Caygill, 2025). Protagonists argue that it has contributed to a massive increase in the number and diversity of wildlife so that there are now probably more in the Karoo than there have been for over 150 years. Yet these gains are somewhat offset by such animals being farmed, semi-domesticated, and killed

The Karoo could host extensive renewable energy-generation facilities if transmission lines are extended. But this contributes little towards a just transition through creating jobs and infrastructure. It is essential to think further about redistributional possibilities and diversified ownership. The state, as the primary redistributive agent, has limits. REIPPPP probably provides the most effective current framework for private sector socio-economic initiatives, but community trusts require a great deal more support, perhaps with a specialist agency that includes community liaison officers, legal experts, and NGOs. The state, which does not provide the funds associated with renewable energy social development projects, could surely afford to fund this.

Should IPPs be incentivised to prioritise developments on land transferred to communities, which own extensive areas in the Northern Cape? Could land purchase by community trusts be the basis for installation of renewable generating capacity and hence a longer-term income from rentals? Perhaps conservancies, which appear to be narrowing ownership, could be legally obliged to include redistributional mechanisms of the kind that REIPPPP requires. There are some wildlife enterprises that suggest routes to more incorporative strategies. Conservation, and greening the environment, is increasingly attractive to environmental entrepreneurs, who are also innovating in different directions. Such developments also commodify elements of the natural world and are changing the Karoo's social geography. Once the motor of the Cape economy, the Karoo could become an important site of transformation and development, promoting biodiversity, ecological knowledge, and the green energy revolution. But it should include a far stronger socio-economic component aimed at addressing the historical legacies of racial inequality.

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INTERVIEW

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