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Environmental apartheid: Eco-health and rural marginalization in South Africa

Valerie Stull [a, *], Michael M. Bell [b], Mpumelelo Ncwadi [c]

[a] Center for Sustainability and the Global Environment, University of Wisconsin-Madison, 1710 University Ave., Madison, WI 53726, United States
[b] Center for Integrated Agricultural Systems, College of Agricultural and Life Sciences, University of Wisconsin-Madison, 1535 Observatory Drive, Madison, WI 53706, United States
[c] Indwe Trust NPC, 11 Forest Lane, Parklands, Cape Town, 7441, South Africa

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ABSTRACT

South Africa's infamous apartheid policies were not based on social, political, and economic injustice alone. They were also instituted environmentally with consequences that continue to scar the land and its people today. We offer the term *environmental apartheid* to refer to the use of the rural environment to deliberately marginalize racially defined groups, as well as the subsequent consequences of that marginalization. In the case of South Africa, the paradigmatic example of apartheid, environmental apartheid was largely instituted through *rural marginalization*, the use of rural space as an environmental means of marginalization. Although legal apartheid is over, environmental apartheid and its consequences continue to oppress Black South Africans, with devastating implications for their health, livelihoods, and ecological integrity. We illustrate these rural injustices through a case study of KuManzimdaka, a community of smallholder farmers on communal land in South Africa's Eastern Cape Province.

1. Introduction

Resilient. That's the first word that comes to mind when meeting Mildred Ncapayi, known in her community as MamBhele. She will shake your hand with a firm squeeze and a calloused palm. While her colorful red skirt and bright eyes might suggest an easier life, tilling the earth and working with her hands is the glue that holds together her meager possessions and extended but tight-knit family. Near MamBhele's *kraal* – the corral for her small herd of sheep and cattle – chickens scurry to and fro as someone sprinkles maize. Behind the house, potatoes and cabbages emerge like jewels from the crusty red soil. Here, MamBhele plants vegetables, along with other women from the small cooperative she organized.

MamBhele lives in a section of KuManzimdaka, a village of about 300 people in South Africa's Eastern Cape Province. Positioned atop high bluffs at the base of the Drakensberg Mountains, KuManzimdaka rests among vast rolling pastures. Warm summer breezes brush miles of lush grassland, dotted with traditional amaQwathi huts and cattle grazing under the seemingly endless South African sky. Women collect water and firewood. Young boys herd cattle along ridges, and you can just make out the sound of a hoe striking the ground in someone's home garden. The pandemonium of modern South Africa seems far removed from this intoxicating calm.

Such a quick snapshot, however, obscures stark realities. Hundreds of *dongas* – the local word for erosion gullies – wound KuManzimdaka's green pasturelands, chiseling red gashes deep into the soil. The sward on the pastures is short, patchy, and increasingly overtaken by water-sucking invasive species, especially black wattle. A hard pan crusts the land's surface, baked beneath the over-grazed and often dry grass. Rainfall runs off the thirsty ground, and streams are brown with soil that used to be on the hills. Local springs and wells yield little or not at all. And the people are poor, terribly poor. Unemployment is rampant, as is malnutrition. Some 12 percent of the province suffers from HIV/AIDS, including nearly 20 percent of adults (Shisana et al., 2014). Household vegetable gardens sit neglected and abandoned. Crop ground lies fallow or sprouts only patchy rows of stunted maize.

It's not a pretty picture. And it didn't come about accidentally. South Africa's legacy of apartheid is well known, if still not well

* Corresponding author.
E-mail addresses: vstull@wisc.edu (V. Stull), michaelbell@wisc.edu (M.M. Bell), mncwadi@gmail.com (M. Ncwadi).

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understood. In this paper, we contribute to a better understanding by examining the intertwined ecological, social, and health implications of what we term *environmental apartheid* and by showing the instrumental role of rural space in the implementation of South Africa's inequalities. These inequalities are not only social, political, and economic; they are also environmental. Social injustice and environmental injustice feed on each other in a continuing cycle of immiseration of people and land.

By environmental apartheid we mean *the deliberate use of the environment to marginalize racially defined groups*, as well as the subsequent consequences of that marginalization. We present South Africa as the paradigmatic example of environmental apartheid, investigating the use of the environment in the apartheid government's efforts to marginalize the majority of the population. Our focus will be on the use of rural space as an environmental means for marginalizing groups, what we term *rural marginalization*. As we will show, the apartheid government of South Africa wielded rural space as a means to deny most South Africans their political rights, relegate them to the least healthy and least productive ecological contexts, and leave them economically dependent upon distant White-owned capital. This forced many South Africans into slave-like employment in faraway mines and factories, as well as in services for whites.

Environmental apartheid is a manifestation of the more general phenomenon of environmental racism, which we define as Bullard (2001) did: "any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color." Environmental racism, then, is a critical term that highlights environmental framings which disproportionally negatively affect people of color (Dickinson, 2012) and advantage whites (Bullard, 2001).

The conventional use of the term environmental racism points out the environmental abuse of a racially-defined marginalized group. Environmental apartheid is the reverse logic of power. It commits environmental abuse *in order to* marginalize a racially defined group. As stated above, environmental apartheid is not accidental. Moreover, in practice the two logics – environmental abuse of the racially marginalized and environmental abuse in order to racially marginalize – often work in consort to varying degrees. In this sense, environmental apartheid is both cause and consequence.

Many aspects of the environment might potentially be made use of in environmental apartheid. In the case of South Africa, marginalizing forces mobilized a variety of facets of the environment to implement apartheid, keeping Black South Africans apart from the resources of livelihood, well-being, and political power. Our focus here, though, is on the use of the rural to marginalize racially defined peoples. We trace the nesting of three levels of rural marginalization, what we term *first order*, *second order*, and *third order* rural marginalization. By first order rural marginalization, we mean the forcible location of Black South Africans in rural spaces distant from the economic and cultural advantages controlled by Whites. By second order rural marginalization, we mean how Black South Africans were generally relegated to the worst lands within these distant rural spaces. Lastly, by third order rural marginalization we mean the continued isolation and neglect of Black South Africans within first and second order rural marginalization. These three orders of rural marginalization have had major eco-health implications, continuing consequences that cannot be separated from an understanding of the social, political, and economic repercussions of apartheid policies.

This paper explores environmental apartheid through a case study of KuManzimdaka where we have been working since 2011 on a participatory approach to agroecological development. First, we frame our argument in the historical roots of apartheid in South Africa, exemplified by colonial enforcement of the three orders of rural marginalization. Second, we explore how this foundation of rural marginalization led to the official policy of apartheid and its deepening shadow. Third, we step back to consider what the evidence for rural marginalization suggests for a theoretical understanding of the relationship between apartheid and the environment. Fourth, we explore the interrelationship between the material and symbolic powers of rural marginalization, and how that interrelationship often results in "blaming the victims" of environmental apartheid. Next, we present the methods and context for our case study and dive into the specifics of KuManzimdaka. We include an introduction to several important people living in the area and the eco-health consequences of environmental apartheid. We then also include an assessment of the rural and urban consequences of environmental apartheid. Ultimately, we contend that recognizing the enduring power of the rural (M. M. Bell et al., 2010), for both good and ill, helps us understand why the inequalities of environmental apartheid often seem to last and last, and what we might do about them.

2. The roots of apartheid and the three orders of rural marginalization

Although sometimes seen as a mid-twentieth century offense, apartheid has old roots. Ever since colonization, South Africa has faced severe racial tension. In 1652, the Dutch East India Company established the Cape Colony at the site of what is now Cape Town as a kind of refueling station for its ships in need of food and water to make it all the way to the East Indies and back. Six years later, the first boatload of slaves arrived with captives from Benin and Angola. The Dutch settlers did not enslave the local Khoikhoi and San peoples much, recognizing that locally-derived slaves can easily escape back to their home communities. But the Dutch treated them brutally just the same, considering them a sub-caste, while steadily expanding White farms and grazing north into the lands of the native peoples. By the mid-eighteenth century, the Dutch had taken control of nearly all the agriculturally productive lands of the Khoikhoi and San. Further north, the Bantu-speaking peoples resided, including the two largest groups: the more warlike amaZulu and the amaXhosa. In the late eighteenth century, the Dutch advance into those lands began as well (Thompson, 2014).

Then in 1795, the surging British Empire swept into the Cape Colony and forced the Dutch to capitulate. In the decades to follow, the British also swept north, especially along the east coast, forcing back the Bantu speaking people onto ever higher and ever less desirable ground, through a series of bloody wars. Dutch "voortrekkers," however, disgruntled with British rule, preceded the British in vanquishing the local people in the dryer lands in the interior. The British were initially content to let the Dutch – who were coming to be known as the Afrikaners – have the interior. But between 1866 and 1886, a series of discoveries made plain the region's wealth of diamonds and gold, attracting British interest. The ensuing British-Afrikaner conflict culminated in Britain's victory in the South African War of 1899–1902, and the founding of the modern South African state – albeit as a unit of the British Empire, subject to legal override by the British parliament (Thompson, 2014).

After the war, white farmers returned to the business of developing and expanding their properties. They received a mighty boost with the passage of the Natives Land Act of 1913 which banned "any person, male or female, who is a member of an aboriginal race or tribe of Africa" from owning or renting land in 93 percent of South Africa (Thompson, 2014; Wotshela, 2004). The Natives Land Act

made explicit the latent first order rural marginalization of South Africa's earlier colonial period, for the remaining seven percent was hardly the best land. Rather, it primarily included the last refuges of South Africa's various indigenous peoples and the final frontlines of the many wars with the British and the Dutch over the course of the 18th and 19th centuries. It was generally land too high, dry, rocky, and rural to be worth the time and blood of Whites to pursue further. Here, indigenous peoples continued to live in largely traditional manners, communally managing what land they had left through customary land rights awarded based on tribal association.

The Natives Land Act established this seven percent of land as "reserves," under control of tribal authorities – a fact that helped the South African government win the allegiance of tribal authorities to the scheme. But as well, the allocation of these poor lands as reserves assured that Black South Africans would struggle to maintain secure livelihoods there, virtually guaranteeing that many would be willing to accept low wage work in White-owned farms, mines, factories, and homes. The first order rural marginalization of the Natives Land Act did not merely represent the outcome of competition for land but the creation of a population with little social, economic, and political power in the wider society.

The Natives Trust and Land Act of 1936 expanded the area of land available to Black South Africans to 13.5 percent of country, purchasing unprofitable lands back from White South African farmers (Beck, 2000). Even allocating 13.5 percent of the land to 60 percent of the population, though, could hardly be considered generous. Whites hand-picked the most productive land for themselves, furthering the second order rural marginalization that was already evident in the Natives Land Act of 1913. While Blacks were forced to use marginal land and to live in economically less productive areas (Durning, 1990), Whites formerly living on these disadvantaged lands were bought out.

Nor was there much concerted effort to alleviate the disadvantages faced by Blacks segregated by first and second order rural marginalization. Villages and towns in these low-productivity areas lacked basic services like running water, sanitation, electricity, and decent roads. Hospitals were few and poor. Schools as well. This third order rural marginalization of continuing isolation and neglect was not inevitable. South Africa's mineral riches meant it long held the status of being the wealthiest country and largest economy in Africa, although it has now been surpassed by Nigeria in both categories. Of course there are limits to what even a relatively wealthier country can afford. But it is a political choice whether to allocate what wealth a nation has towards the top or the bottom. South Africa pursued the former course of action. Consequently, its relative wealth was also accompanied by being the world's most economically unequal country, a status it retains to this day (World Bank, 2016).

3. Apartheid's deepening shadow

Upon this foundation of the three orders of rural marginalization, the official policy of apartheid was built. The 1948 election gave governmental control to the Afrikaner-dominated National Party (NP), which enacted a series of aggressive laws that enforced rigid segregation between four official "races": those defined as "White" (mainly the British and Afrikaners), "Black Africans" (the many tribes of Bantu peoples, such as the amaXhosa, the amaZulu, and smaller groups like the amaQwathi), "Coloreds" (the Khoikhoi and San, plus the descendants of slaves from the Cape Colony, many of whom also had some European parentage), and "Indians" (the small percentage of South Africans who had migrated from South Asia) (Steyn, 2005). Some of the pillars of legalized racism included the Mines and Work Act of 1911 (part of broader job reservation practices), the Prohibition of Mixed Marriages Act of 1949, the Population Registration Act of 1950, the Group Areas Act of 1950, and the Bantu Education Act of 1953. In parallel, a series of moves stripped away voting rights until only White South Africans had suffrage.

It was the Bantu Authorities Act of 1951, however, that put the capstone on rural marginalization. This is the act that established political entities based on the rural areas where Black South Africans had been confined by first and second order rural marginalization, and gave further legal license to their continued third order rural marginalization. Based on the terminology used by the British in 1947 for partitioning Pakistan from India, White leaders called these areas "Bantustans." Later, trying to make the claim that these were the indigenous locations for the different Black tribes, the White authorities took to calling them tribal "homelands" in complete neglect of the two centuries of war that had disenfranchised Blacks from the regions now owned by Whites.

Fig. 1 shows the borders of the homelands established by the Act. As the map demonstrates, these areas were located in the rural periphery as a result of first order marginalization. The jagged and disconnected shapes and boundaries of most of the homelands reflect the further second order marginalization that Black South Africans faced under apartheid. These boundaries relegated Blacks to what was generally the worst rural land available, often land that was already badly degraded, accelerating a cruel cycle of poverty. In some instances, Black smallholders had access to decent land, but it was the White farmers who controlled nearby dams and water rights, as well as access and entry to nearby markets.

Ultimately, apartheid policies were legal sanctions by which the government could control labor, movement, freedom, and economic status according to race. The Bantu Authorities Act established ethnic governments in the homelands. Outside of the homelands, Black South Africans were required to carry passbooks designating their race and where they could travel and live. Millions were arrested for pass law violations. Alongside homeland creation came forced removal, whereby at least 3.5 million people were pushed from their land and resettled in the homelands between 1960 and 1983 – land that was largely barren and uninhabitable (Platzky and Walker, 1984).

Beginning in the late 1970s, South Africa began to spin off the homelands as independent states. Four homelands – Ciskei, Transkei, Bophuthatswana, and Venda, the so-called "Bush Republics" – eventually gained this status before the end of official apartheid. As a result, Black South Africans were no longer considered citizens of South Africa and had no citizenship rights inside it. In reality, however, these were quite obviously puppet states controlled by South Africa, and no other nation ever recognized them. Meanwhile, the homelands received little economic development and remained mired in poverty and lack of opportunity.

As the Black Anti-Apartheid activist and cleric Allan Boesak declared at the Anti-South African Indian Council Committee in 1984,

> Blacks are not impressed. We have seen what happened in the homelands. We know that the "independence" of the four Bush Republics is a sham; that the homelands are no more than dumping grounds for the discarded blacks of this land; that they are places where our elderly die of misery and want, and our children are stalked day and night by hunger, sickness, and grim death that sits on the shoulder of hopelessness (Boesak, 2015).

Direct evidence that this was all a deliberate plan of marginalization – such as memos and tape recordings of leaders discussing plans – is hard to come by. The politics of marginalization are rarely

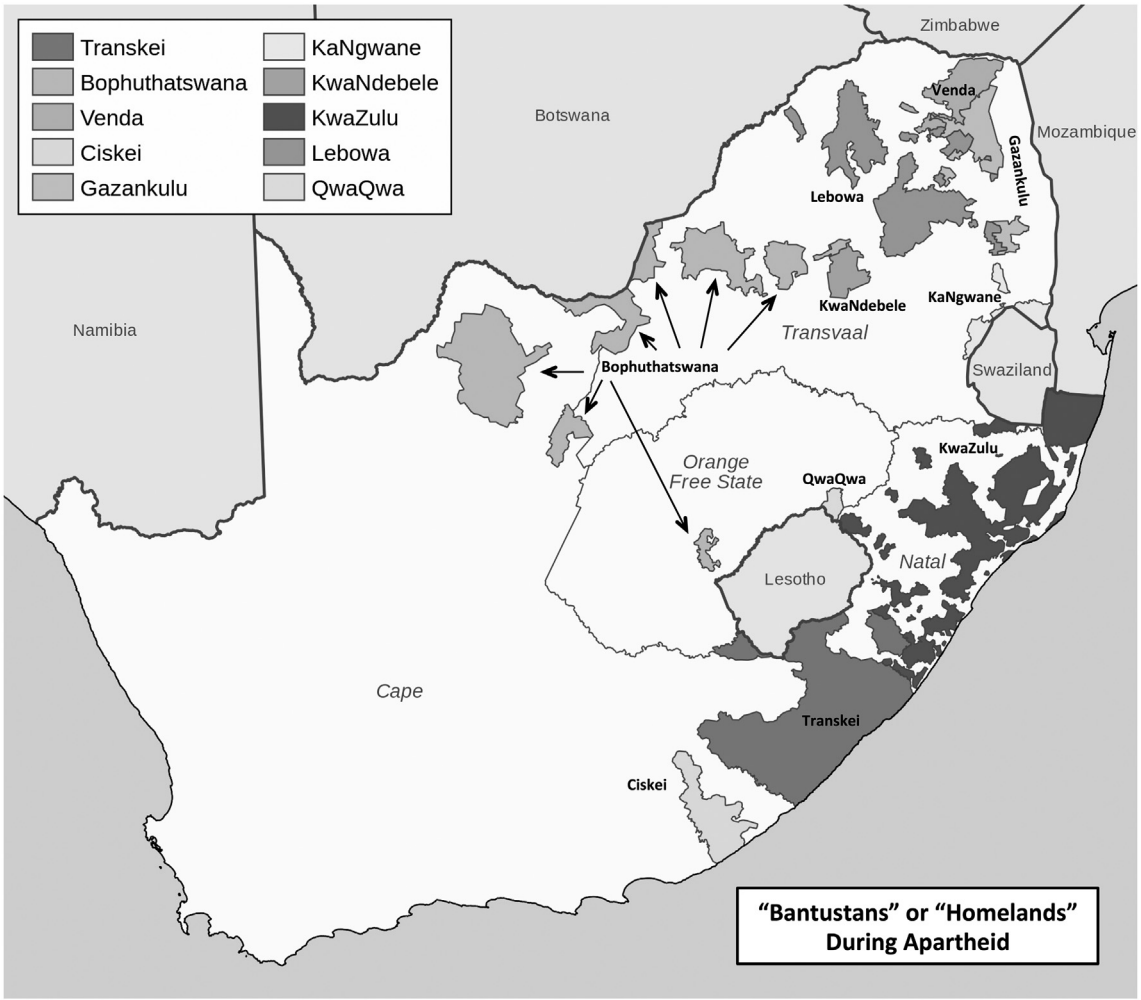

Fig. 1. Map of South Africa's "homelands" or "Bantustans" policy under apartheid.

in full public view, although the proceedings of South Africa's unique Truth and Reconciliation Commission following apartheid subsequently gave much disturbing evidence of deliberate intent, especially the policy known as "forced removals" that relocated millions of Blacks to the homelands, as well as the overall shocking brutality of the apartheid era. Few Black South Africans who lived through this period doubt its deliberateness.

The result was quite effective for the South African government, which aimed to: Create a large population of poor, desperate people who would therefore be essentially forced to migrate to the White areas of South Africa to accept low-wage, menial work with virtually no rights. First, second, and third order rural marginalization kept labor cheap and without rights, while also ensuring that blacks were subordinate and disorganized (MacDonald, 2006). In other words, the point of apartheid was not to keep Blacks and Whites separate. Whites and Blacks interacted closely on a daily basis during apartheid. Rather, the point was to keep Blacks powerless and willing to work for Whites for very little. Separateness was the means; marginalization was the ends.

Recognizing that it was impractical to expect people to show up at work in the morning if they had to sleep hundreds of kilometers away in their designated homelands, Black South Africans were given leave to live on the rural outskirts of cities in vast slums called "townships," or to live in huts on White farms and barracks at mines and factories, or in some cases to live in small shacks in the back gardens of White houses if they held domestic jobs there. But permission to stay outside the homelands had to be granted by, and registered with, the White authorities. It could be terminated at any time, should a Black worker show signs of being insufficiently compliant to White control. The maintenance of first and second order spaces of rural marginalization gave White authorities a continued legal and economic whip to keep Blacks living outside of the homelands in line. Moreover, employment opportunities in the homelands deteriorated throughout apartheid thanks to on-going third order marginalization, as the regime aimed to guarantee a secure stream of cheap labor into White-controlled cities, keeping the homelands economically dependent on the Republic of South Africa (Percival and Homer-Dixon, 1998).

With the eventual success of the anti-apartheid movement and the enfranchisement of all South Africans, the homelands ceased to exist as of April, 1994, when they were reincorporated into a new democratic Republic of South Africa that had nine provinces. Sadly, the end of apartheid has not brought relief to much of South Africa. National income inequalities have actually worsened since 1994 (Seekings and Nattrass, 2005) and the situation in the Transkei – the former homeland where the village of KuManzimdaka is located – is particularly dire. The Transkei is now part of the Eastern Cape Province, along with Ciskei, another former homeland. The Eastern Cape also includes quite a bit of historically White-owned lands, particularly in the southwestern end of the

Province. Poverty rates are especially high in the former homelands of Ciskei and Transkei in the Eastern Cape, with many people dependent on welfare transfers, and most with limited access to education, healthcare, and clean water (Westaway, 2012). (See Fig. 2).

4. Apartheid and the environment

There is little dispute regarding the deleterious impact of apartheid on the South African environment (Beinart, 2003; Beinart and Hughes, 2007; Department of Environment Affairs and Tourism 1999; Durning, 1990; McDonald, 2002; Percival and Homer-Dixon, 1998; Steyn, 2005). The Worldwatch Institute's influential 1990 text, "Apartheid's Environmental Toll," provided stark evidence of the overlap between apartheid policies and environmental degradation. South Africa has a well-established environmental movement, dating back to the 18th century. But the focus of concern was long upon wildlife conservation, and upon correcting other aspects of what Whites regarded as the "environmental profligacy of African farmers" (Beinart, 2003: 355), which resulted in soil erosion, tree removal, and over-grazing. Before the Worldwatch report, South African conservationists rarely contextualized these problems within the history of Black rural marginalization onto the worst land with high population densities – lands that are easily degraded, especially when farmers are poor and desperate. Our village of interest, KuManzimdaka, is no exception; apartheid policies twenty years gone still impact the quality of land available to local farmers, their agricultural productivity, their environmental impact, their access to markets, as well as their access to healthcare, as we will describe.

The very word apartheid – Afrikaans for "separateness" or "apartness" – itself points to the environmental character of the policy through its political use of space. Of course, apartheid was also founded on an ideology of race and racial hierarchy, as well as motivated by efforts to build and enforce economic and political inequality. Numerous other social settings have also seen ideologies of racial hierarchy with economic and political motivations. This paper emphasizes a distinctive feature of apartheid in South Africa, which is not characteristic of all such ideologies: how it was enacted through the environment, emphasizing the powers of the rural to marginalize racially defined populations. The power construct of apartheid in South Africa was, and is, spatial and largely rural.

The recent expansion in the application of the term apartheid in world politics pushes the social scientist to tread carefully, however. Like the term holocaust, the term apartheid now appears in discussions of situations a long way away from where it first originated. It has become synonymous not only with the South African system of racial oppression that prevailed from 1948 to 1994, but also with other forms of racial, religious, and economic separation across the globe. The term has crept into discussions of policies and practices in Palestine (Zreik, 2004), the United States of America (Cable and Mix, 2003; Massey, 1990; Massey and Denton, 1993), and even Ireland (O'Farrell, 2005) – evidence that the term carries substantial weight in our understanding of discrimination. We do not write to reject the application of the term apartheid elsewhere; rather we seek to expand understandings of apartheid by examining its environmental linkages. By the phrase "environmental apartheid" we seek to point to situations in which the environment is a central factor in building and maintaining racial marginalization, as was and in many ways remains the case in South African apartheid. It is perhaps theoretically possible, if unlikely, to construct an apartheid which is not environmental. As well, apartheid is not only environmental. Thus, it is analytically helpful to distinguish environmental apartheid as a characteristic of apartheid, but not equal to it. Further, there is an especially salient characteristic of environmental apartheid in South Africa: the deliberate use of the rural to marginalize and subjugate Black South Africans.

While the social scientific usage of environmental apartheid in this paper is certainly more limited than the larger use of "apartheid" in popular culture and broader scholarship, we contend that it is effective in underlining how the environment can be used to marginalize racially defined groups, whether via use of rural space or other means, such the location of highways in cities or the lack of provision of clean water or other environmental necessities and amenities. Environmental apartheid always has a spatial dimension. Powerful populations have often relocated or confined their enemies to the places and spaces they consider to be least valuable or most precarious. Humans draw arbitrary boundaries around swaths of land to form district, state, or national boundaries that often reinforce racial divisions. They cultivate identities and freedoms by way of citizenship acquired from a geographic separation. Although it is outside the scope of this paper to provide a global review, the widespread prevalence of discrimination reinforced using spatial divisions is undeniable. In the case of South Africa, the apartheid government commonly isolated Black South Africans through the strategic use of rural space, forcing them into confined, desolate, and underdeveloped regions of the country as a means to preserve a cheap labor force and to retain racial control.

5. Blaming the environmental apartheid victim

Following Bell et al. (2010), we note two general forms of the use of the rural in environmental apartheid: the material practices of "rural power" and the symbolic practices of the "power of the rural." Physical removal of Black South Africans from spaces of economic opportunity ensured their migration to work for low wages. Forcing Blacks into economically undeveloped regions was dependent on the material power of rural space to isolate people. Additionally, the spatial association of Black South Africans with rural homelands, separate from White spaces, symbolically propelled a sense of social difference, essential for creating the categories of hierarchy. It also served to put poor Black people in a 'blind spot' for Whites with more power and privilege. The notion of separate citizenship in rural spaces served to reinforce this difference and the political disenfranchisement it created. The three orders of rural marginalization thus have both material and symbolic powers.

Importantly, the material and symbolic ruralness of Black South Africans helped define them as backward and in need of control, legitimizing apartheid's racial hierarchy and the victim blaming ideology of much South African environmentalism, as described by Beinart (2003). From the intertwining of these rural powers comes rural abuse: the continuing debilitating eco-health consequences of this racial ostracism. Black South Africans living in rural areas must struggle to cultivate adequate livelihoods from their unproductive lands, with deleterious consequences for both their own health and the health of the land. This is to say that once you take away all the good land in rural areas, what remains is often damaged or rocky, making it difficult to manage properly, as we noted earlier. Degraded land is not highly productive and is a biological magnet for invasive species. Wells are known to dry up in such areas, and poor inhabitants are at risk of waterborne and infectious disease due to poor sanitation and livestock control practices.

Yes, it is true that many rural Black livelihood practices promote these ill effects. But the consequences of first and second order rural marginalization leave rural Blacks little alternative – especially in light of the compounding effect of continuing third order neglect. The South African government still provides few services to

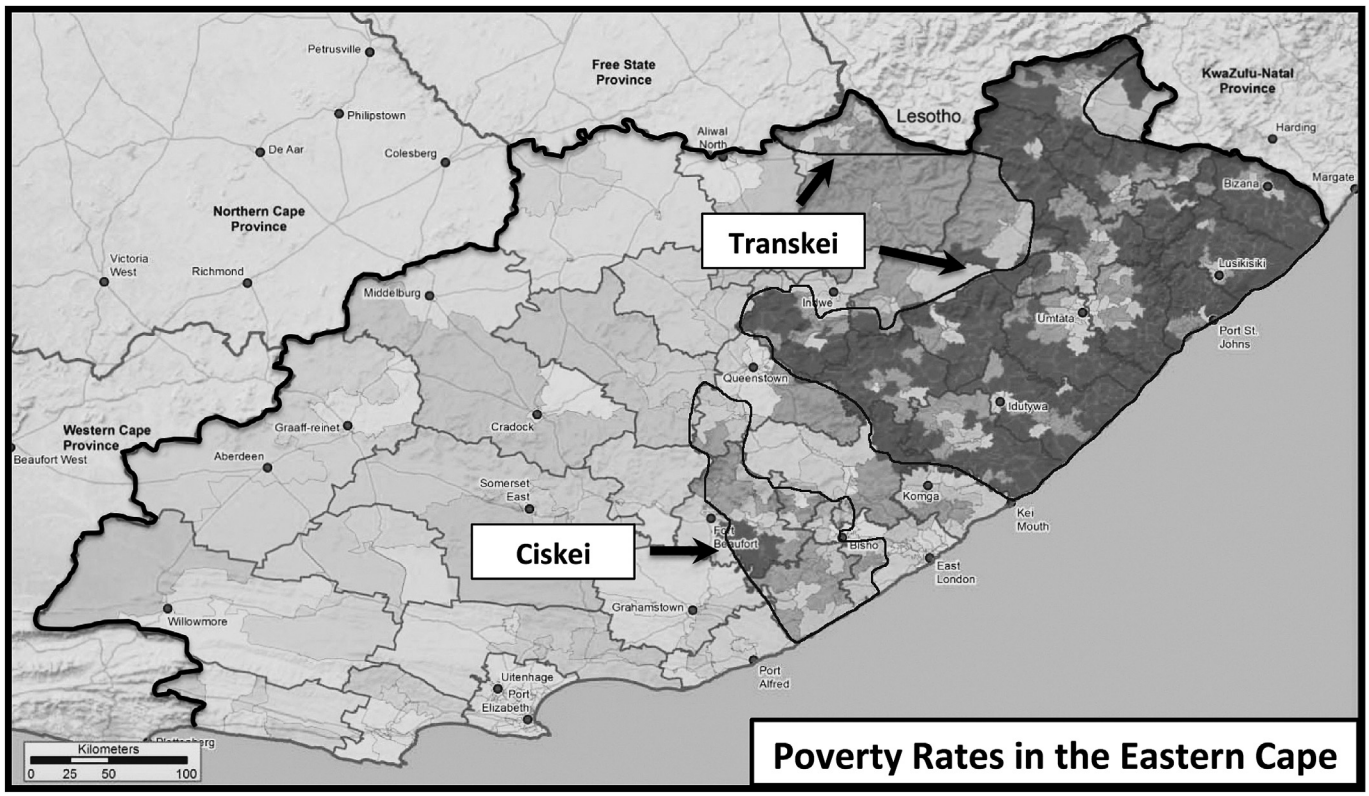

Fig. 2. Poverty Index for the Eastern Cape Province in deciles, showing the correspondence with the borderlines of the former homelands. Darker shading indicates greater deprivation. (Source: adopted from Southern Africa Research Institute, 2014 data).

Black rural residents. Health care is limited. Public water supply and sanitation infrastructure are next to non-existent. Electricity is far from universal. Roads are generally terrible. Agricultural extension agents are rare and poorly trained. Supply chain development for reaching markets, creating employment, and countering poverty is at best rudimentary in most former homelands.

Even the widely-praised "enumerated rights" provision in the South African Bill of Rights gives leeway for government services to stagnate when the task is arduous. Section 27 states that:

> 27. (1) Everyone has the right to have access to—
> (a) health care services, including reproductive health care;
> (b) sufficient food and water; and
> (c) social security, including, if they are unable to support themselves and their dependents, appropriate social assistance.
> (2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights (Department of Justice and Constitutional Development (2016)).

Distance from services necessitates long travel and great expense to "achieve [this] progressive realisation." And the South African state, like any state, does indeed have limits in its "available resources." But as noted above, it is no accident who is living in remote places and experiencing such routine violation of these enumerated rights, and it is no coincidence what path of economic investment the South African government has long followed.

South Africa does have an established extension service and a vigorous environmental movement, as stated earlier. Third order neglect is not the same as inattention and unawareness. The problems we discuss in this paper are by no means unknown to South African elites and decision makers. But the continuance of victim-blaming environmentalism and agricultural extension which is "insensitive to rural social relationships and often highly disruptive" (Beinart, 2003: 366) perpetuates the widely repeated trope among South African Whites that "Blacks can't farm" – a trope echoed by Whites several times during this research and one which is widely debated on social media.[1] Such a trope helps create a sense that nothing can be done, so why bother.

Consequently, rural Black South Africans are exposed to an array of environmental health hazards that contribute to both infectious and chronic disease (Mathee, 2011). Rural people face high rates of food insecurity, poverty, and unemployment. For example, as of 2011, poverty rates in rural South Africa were more than double urban rates: 68.8% versus 30.9%, based on a poverty line of 620 Rand per month or about $40 (Statistics South Africa, 2014: figure 14). Their primary currency – the natural environment, including cattle and agricultural outputs – has been tarnished over time, leaving them with a limited safety net. Meanwhile, they have been afforded very little access to basic services that might ameliorate the situation.

6. Methods and context

Before we dive in further to our case study, let us explain the nature of our work in KuManzimdaka and the research methods we employ. Since 2006 we have been collaborating with community leaders in South Africa's Eastern Cape, through a participatory approach to agroecological development. Although one of us,

[1] For examples, see https://www.reddit.com/comments/co0qa/?sort=qa or http://ozziesaffa.blogspot.com/2012/10/south-africa-no-land-grab-under-anc.html.

Mpumelelo Ncwadi, had earlier met village leaders in KuManzimdaka, we did not begin a concerted effort at community engagement there until 2011.

Immediately some characteristics of the village stood out to us. First, we were shocked by the absence of government and non-governmental organizations (NGO) presence in the area. Given the global push to reach the Millennium Development Goals established by the United Nations in the year 2000, and given South Africa's relative wealth, we were surprised to encounter such neglect by both the government and NGOs. Second, while smallholders in the area enjoy access to land, due to the continued upholding of customary land rights on communal lands, people still face extreme poverty. Third, we were struck by the poor ecological condition of the landscape and the array of health consequences that undermine community vitality. Through conversations, interviews, focus groups, historical research, and observations, we came to appreciate the challenges faced by the community. From there, we began to generate strategies to improve agroecosystems and livelihoods, in collaboration with the community itself.

Years of relationship building has led to our deep investment in this community, and we believe the level of trust is such that all stakeholders can speak relatively freely and honestly even across racial and cultural lines. We ourselves represent a team of mixed age, gender, nationality, class origin, and racial attribution, granting us a diversity of forms of contextual privilege both in the village and with non-village actors in South Africa and abroad. In 2012, we began what we now term the LAND (Livelihood, Agroecology, Nutrition, and Development) Project, an international effort by American and South African partners and collaborators to synergize local and expert knowledge in planning and implementing an agroecological future for the villages of the Eastern Cape. For the purposes of this paper, we draw upon ethnographic research (observation, interviews, and secondary research), combined with focus group results, and numerous conversations with community members to explore environmental apartheid. We also highlight our interactions with two key community leaders – MamBhele (Mildred Ncapayi), the leader of the local women's cooperative, and Vilnius Beta, known in the community as Majola, the leader of a multi-village farmer cooperative in the area – to explore the experienced realities of people living in KuManzimdaka.

It is also worth noting that, while the former Transkei is mainly populated by amaXhosa people (the second largest tribe in South Africa), KuManzimdaka and about 30 surrounding villages are populated by a much smaller group, the amaQwathi. Some regard the amaQwathi as a sub-tribe of the amaXhosa, and the amaQwathi at times seem to as well, for they speak isiXhosa and follow similar customs to the amaXhosa. But historians, anthropologists, and many amaQwathi themselves maintain that they are a distinct group (Ndima, 1988).

7. The village road

It takes almost an hour on rough gravel roads to reach KuManzimdaka from the nearest paved road, and when it rains the route is nearly impassible. A minivan from Elliot (the nearest town) traverses the pass twice a day, transporting teachers, goods, and visitors to and from the community. When the van is coming, you can see it from a distance, spitting up dust (or mud) in its wake. If you miss it, you'll be walking for hours. Early during our work in KuManzimdaka, the extent of true isolation felt here became evident. Despite the many improvements in the South African economy, infrastructure has not reached this place.

Elliot itself is a small town, but the ways in which it resembles larger South African cities are striking. Occupied by many Afrikaner and English families even today, the town is surrounded on its formerly rural outskirts by informal settlements and townships inhabited by poorer Black South Africans. Moving just one block in almost any direction outside of the town's main grid and you will find overcrowded dwellings, many of them mere shacks, with narrow streets and uncollected garbage. Like the countrywide first order marginalization, the Black population, even in the rural Eastern Cape, was pushed out of urban centers into surrounding rural spaces where infrastructure was poor. It is as though there is an invisible barrier between the town and its rural surroundings where those seen as inferior were placed. Once there, and once given little opportunity to improve their condition, the mental imagery of Blacks as different from Whites and happy to live in squalor became a widespread symbolic, power-of-the-rural cultural trope. “I don't know how they can stand to live like that,” one of us heard a White South African woman remark at an elite bed and breakfast. The answer to this question – because they are forced to – seems hard even now for some White South Africans to comprehend.

The road to KuManzimdaka from Elliot shows a tortured history of rural marginalization that still seems stuck to the land. After passing the peri-urban townships, lush green fields appear again where the ground is relatively flat and the soil rich. Commercial farmers – most of whom are White, with a small number of emerging Black farmers who obtained land through South Africa's post-apartheid redistribution policies – and large agribusinesses grow impressive stands of maize. With irrigation, fertilizer, pesticides, high-yield seed, and plenty of machinery, these lush plots on the gentle plateau just below the Drakensberg mountains resemble Nebraska in July. But where the road veers right to the even more rural KuManzimdaka, the topography steepens as the heads of small valleys begin to cut into that plateau. The crest is still high – up to 1600 m, or about 5200 feet – but ever more deeply incised. Dark groves of invasive black wattle (*Acacia mearnsii*) begin to obscure the view. Behind the evergreen foliage rests a rock-strewn landscape stippled with trees, sparse crops, and anemic grass. Black wattle is an aggressive Australian tree that invades bare spots in over-grazed grasslands or over-harvested woodlands, and it successfully competes with indigenous species to the point of take-over. It forms dense thickets that reduce grazing areas for livestock and wild animals, all while hoarding available water. Black wattle is one of the most pervasive and damaging invasive alien trees in South Africa, posing a major threat local to water catchment yields (Dye and Jarmain, 2004). Nearly every household in KuManzimdaka is plagued by the tree.

The road and the view from the road represent environmental apartheid's first order rural marginalization compounded by second and third order rural marginalization. The amaXhosa and amaQwathi who live here were historically pushed to the rural fringes through first order marginalization. Yet even within these margins they were relegated to the worst possible land. Apartheid-era surveyors carefully drew the line of the former Transkei along the heads of the valleys cutting into the plateau that forms an apron of rich crop ground at the base of the Drakensberg – a second order line of rural marginalization that separated ground Whites wanted to own from less valuable land. To north and west of the line, the land could be bought and sold on the open market if you were White, as Black South Africans were then not allowed to own land. To the south and east, the rougher ground was designated as communal land, governed by Black tribal authorities. It remains so today. (See Fig. 3). Having access to land without having to buy or rent it is fundamental to local people's livelihoods and is one advantage that they do have amid their poverty. But managing such marginal land is difficult. The margin for error is tight, and over time it gets harder and harder as bad luck compounds. Excessive grazing in a dry year, for example, could perhaps be followed by a

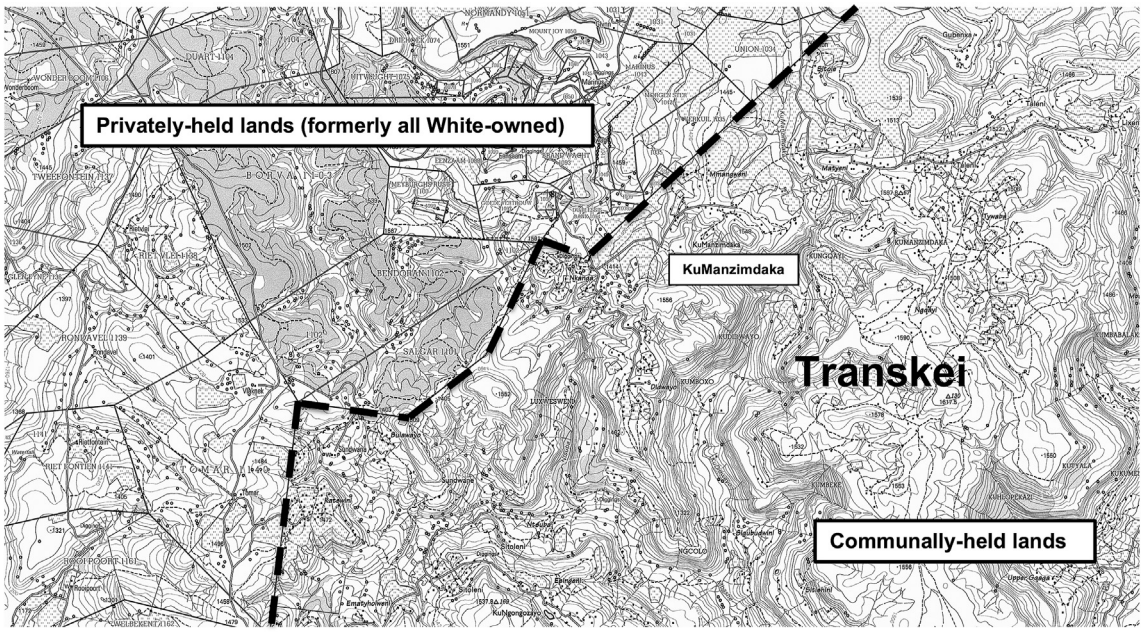

Fig. 3. Cadastral map of property lines in the area of KuManzimdaka, Eastern Cape, South Africa, showing the switch to communally held lands across the boundary of the former Transkei. Note the presence of heavier contour lines in the communally held lands, indicative of steeper slopes and lower agricultural potential, compared to land to the northwest of the former Transkei. Box shows location of KuManzimdaka village (Source: Map base from Chief Directorate, National GeoSpatial Information, South Africa, 2013.).

veld fire. The ground heats in the sun, the grass does not reestablish fully, and opportunistic black wattle along with other weeds and invasives leap into the holes in the grass sward. And sometimes before they do, a donga starts to form, carving the land away and sending it into the muddy streams and rivers.

Today, the wattle stands tall and the dongas cut deep in KuManzimdaka, mocking signposts of stifled productivity where verdant grasslands could have flourished. Black wattle yields serious negative impacts on biodiversity, water resources, and the cohesion and stability of riparian ecosystems throughout rural South Africa, while also increasing erosion (Wit et al., 2001). The extensive veld fires that raged outside Cape Town in 2000 have also been blamed at least in part on the presence of invasive species (Neely, 2010), which pull moisture from the ground and thereby encourage wildfires. In August of 2014, a veld fire decimated almost all the pastureland in KuManzimdaka, exactly in the depths of winter when both the rains and grass growth subside. Charred grass is inedible, and for a time the community livestock herds were on the verge of collapse. Without the generosity of neighboring villages who gave KuManzimdaka access to unburned grazing lands, the people might have lost every single animal. No help came from central government. Third order rural marginalization still pervades.

The journey to KuManzimdaka also exemplifies the symbolic practices of the power of the rural. The village's physical distance and difference from any 'modern' town makes it feel outdated and foreign to several of the White South Africans we have brought to the village as a part of our participatory development work, resonating with past notions that Black South Africans are somehow inferior and uncivilized. "I didn't know people still lived this way in South Africa," one of them remarked, struggling with her cultural expectations. Traditional round huts abound, many with thatched roofs. Women cook on outdoor fires, except in the winter, and can often be seen carrying bundles of fuel wood on their heads. In the winter, people cook inside on open fire pits so as to also warm their houses, leading to dangerous levels of indoor air pollution. About half the homes do not have electric wires leading to them. One might expect that such realizations would motivate more urgent efforts to improve local livelihoods, but as yet they have not. We suspect that some of the reason for this is likely the cultural feeling among South African elites that local people are comfortable living their "traditional" ways.

But environmental apartheid's third order rural marginalization is not only due to symbolic constructions of rural life in KuManzimdaka. The material practices of rural power make such inattention to local needs easier for government to contemplate. It is indeed a long and difficult road from KuManzimdaka. But that road could be tarred. And because it is not, employment opportunities in KuManzimdaka remain a major problem, pushing locals to migrate to cities and mines in search of work. Employment outside of the area has yet to bring much wealth or prosperity to KuManzimdaka itself, but the practice lingers, as the people have few options. Meanwhile, those left behind – mainly women – are tasked with managing the degraded landscape in addition to all other responsibilities.

8. Eco-health in KuManzimdaka

One warm January afternoon, an elderly woman of 84 is walking up a steep hillside to fetch water from a spring. She moves slowly but meticulously up the gradient, taking calculated steps to avoid holes and stones. Her traditional headpiece is large and blue, indicative of her age and marital status. The spring she seeks is meager, where a slow trickle of water emerges from the hillside to pool in a muddy puddle on a flat ledge. Upon reaching the spot, she pulls aside the sheet of metal someone has thrown over the source of the water, perhaps to serve as a bridge for passersby or to protect the pool from rain. (See Fig. 4). But the sheet of metal provides very little real sanitation. A cluster of hoof prints encloses the area, and there are a few in the mud in front of the pool, evidence that cattle and other livestock share this spring and defecate close by. With no running water, no system for keeping out cattle, and no alternative reliable source nearby, this is the only option for this elder. She comes here a couple of times every day to carry this dirty water

Fig. 4. One of the main springs used by local people in KuManzimdaka. In recent years, the springs have been drying up, as over-grazing compounded with invasive species leads to lower ground water recharge.

back home. In recent years, she tells us, the spring has become unreliable. “There were other springs on this hill before,” she says, “but now they are dry.” It seems the water is disappearing.

Grass on the hill is patchy; the soil is hard and chalky. The veld has been overgrazed for a long time, and even the cattle appear despondent when feeding here. The degraded hillside itself contributes to the lack of water, as overgrazing has led to soil compaction, reduced plant growth, and high levels of erosion. Sufficient rainwater no longer seeps in to recharge the groundwater levels. There are scarce plant roots to hold the soil in place and collect moisture. Instead, water runs off down the valley, carrying with it rocks and sand that amass in the river. From here, one can see the river's brown color far below. The land is rocky, the hillside sharp, due to second order rural marginalization's continued legacy of environmental apartheid. It would be nearly impossible to farm decent field crops here, especially without advanced equipment; livestock grazing is the only realistic option. But there is no fencing or training to help people institute a technique like rotational grazing that could restore the grasslands and ground water levels. Nor is there help with establishing even the most basic of water supply improvements, such as a spring box or a drilled well. Signs of NGOs and international aid agencies like USAID are as scarce as the South African government here, in part because of the feeling that South Africa, as one of the richest countries on the continent, ought to be able to handle simple investments like these. But it doesn't. Environmental apartheid persists as third order rural marginalization compiles with first and second order rural marginalization to leave people with little option but to continue the cycle of livestock over-grazing.

KuManzimdaka's common lands are in disastrous condition, yet this is no tragedy of the commons as described by Garret Hardin (1967). A number of scholars have argued that Hardin's parable of environmental decline rarely applies in practice. (See (Petrzelka and Bell, 2000) and (M. Bell and Ashwood, 2016) for reviews of this literature.) Yes, the condition of the privately owned land to the northwest of the line of the former Transkei is much better. But because of second order rural marginalization, these are much higher quality lands, less given to environmental decline and more capable of supporting livelihoods and return on investment. And because of third order rural marginalization, local people have little option other than to over-graze and hope for the best. In KuManzimdaka, it is not individual greed and lack of private property that is leading to over-grazing and other eco-health issues as Hardin conjectured. Local people do not over-graze because of lack of exclusion from the resource as the classic model of the tragedy of the commons suggests. They over-graze because of too much exclusion. That is, they overgraze because they have been largely excluded from every other resource.

As a result, MamBhele and other women in the village voice three primary concerns regarding their community. First, there is limited access to clean water and healthcare. The wells are drying up and the water is contaminated. Plus, water sources are far away and water must be carried by hand. Boys, girls, and women walk kilometers to fetch heavy buckets every day. Once home, there are few options for water purification. Even boiling it is a challenge because of the added firewood or other expensive fuel required – resources that take precious time or money to procure. Not surprisingly, children get sick, frequently. A mobile clinic comes through the area every once in a while, but its focus is vaccinations and young child wellness appointments. It does not provide acute care or antibiotics, and it does not visit the village on a consistent schedule. Isolation has left KuManzimdaka in a “healthcare desert” of sorts, cut off from both government and private healthcare services. While primary healthcare provisions are available for free in South Africa, they aren't truly free for the people here. Just getting to a clinic can be a prohibitive expense.

Second, the women note that there are few jobs or opportunities for them in the village. “We need income generating activities,” one woman says. “Without money, we can do nothing,” they say. Where are the jobs? Farming barely meets subsistence levels for most; it is hardly lucrative. And transporting crops grown here to Elliot is as difficult as transporting people. Without jobs, people leave. When they return, they don't stay long.

Third, “the soil is dead,” they say. “There is not enough to eat.” Farmers struggle to grow and sell crops, especially during the dry season. With little water and limited access to fertilizer or training in organic production techniques, agricultural productivity is low in KuManzimdaka. Community members face periods of food shortage throughout the year. The Eastern Cape province is South Africa's second poorest, with almost 60% of its 6.5 million people living in poverty (ECSECC, 2012; Statistics South Africa, 2014), a problem compounded by the fact that nearly 20% of adults in the Eastern Cape are living with HIV and AIDS – and likely far more in KuManzimdaka, were a local survey to be done. (In our experience, nearly every weekend there is at least one funeral in local villages for someone rumored to have died of AIDS.) Malnutrition is still a major problem here too, with rates of stunting in children under-five around 32%, the highest in the country (Zere and McIntyre, 2003). Close to 50% of the population was food insecure in 2008 (Labadarios et al., 2011), making the Eastern Cape the most food insecure province in the country. And yet there is little done to help. The effects of environmental apartheid are everywhere, plain to be seen, as health declines are visible in tandem with environmental degradation.

9. Majola

If it wasn't for Majola, this research likely would not have started in KuManzimdaka. But one of us was fortunate enough to meet him at a local agricultural event. Majola occupies an iconic space among village leadership. He is wise, relatively affluent, and unendingly generous. His home overlooks the only school in the village and is nestled up against the hillside where the elder described above climbs twice a day to fetch her water. It is as though he lives on a

perch, whereby he sees the entire community. Not only has Majola adopted six village children orphaned by AIDS, but he has also adopted the school, at least metaphorically, investing resources into improving education and access to healthy food for students. Majola knows the community inside and out, and he recognizes both its challenges and opportunities. It was Majola who first helped Mambhele begin a chicken rearing project. Without using our terminology, Majola has recognized and highlighted the need to address environmental apartheid in KuManzimdaka.

Majola, like others in the village, is a pastoralist; cattle are his most esteemed possessions. Historically, cattle have been invaluable to amaQwathi and amaXhosa people, serving as a sign of wealth, means of exchange, and symbol of status (Afolayan, 2004). But the modern worth of local cattle in a post-apartheid economy is astonishingly low. Because of environmental apartheid, the current population of KuManzimdaka is almost entirely isolated and thus cut-off from regional markets. They lack the necessary connections with the predominately White-controlled supply chains and do not possess marketing teams or sales experts to support their businesses. Rural marginalization – the base of environmental apartheid – has incentivized many young people to seek work outside the community. Some travel to and from mines for work. Others move to cities in seek of employment. But still others remain in KuManzimdaka, attempting to succeed as farmers – almost all by rearing cattle alone or in addition to other crops. The only hope of successful farming is better management of natural resources.

To grapple with these and other challenges, Majola founded the Ncedisizwe (Helping the Nation) Co-op in 2002, a cooperative of about 800 smallholder farmers in 26 amaQwathi villages in the Engcobo region of the Eastern Cape. The co-op is designed to buy and sell agricultural inputs such as seed and fertilizer. Majola repeats to us at almost every meeting that collectively farmers in KuManzimdaka can do more than they can alone. Despite the size of the cooperative, their ability to sell local, grass-fed beef into broader markets has been stifled by lingering discrimination and seclusion. These farmers do not have a way to track their animals from field to abattoir to market and thereby achieve the traceability they would need to establish a brand. Animal health is another trial, as the farmers of KuManzimdaka struggle to fight pathogens and maintain veld quality, due to the overgrazing of marginalized lands. Against the odds, Majola and other cooperative members do produce high quality grass-fed beef. They also farm a variety of crops of value in South Africa's agriculture sector, but any casual observer notices the discrepancies between smallholder farms and nearby commercial – and mostly White-owned – farms that exist in the lower, flatter areas. Without either industrial or agroecological techniques, the members of Ncedisizwe cannot compete with commercial farmers in yield or quality. Overcoming these challenges is difficult, especially given the additional pressures these smallholders face daily.

Majola has ideas, though. And these ideas stem from careful observation of his own community and its practices of communal land holding and farming. While there are numerous social and economic benefits to communal farming, communal land holding in the Eastern Cape is also highly correlated with erosion and arable land abandonment due in part to years of social and environmental strife. The relocation of millions people to the 'homelands' between 1960 and 1980 (Percival and Homer-Dixon, 1998) led to increased population living on and utilizing communal lands (Davis et al., 2008). Cultivation on communal lands over that same period of time declined, due in part to overuse and soil degradation and also other factors like AIDS and lack of decent healthcare. Plus, it is – and probably will always be – more difficult to manage such marginal land successfully. Changes in land use and erosion over time in the former Ciskei have been studied using time series data from air photos, demonstrating that gullies and extreme erosion are strongly associated with abandoned arable land. Between 1954 and 1988, 60 to 70 percent of all gullying was found on abandoned arable land (Kakembo and Rowntree, 2003). But Majola recognizes the potential of abandoned land and the need for better management of cultivated land and pastures. He says that current practices in KuManzimdaka are not preserving the grasslands or conserving soil. He wants to know about and implement alternatives such as managed or rotational grazing systems.

The situation for Ncedisizwe farmers in KuManzimdaka is grim. Again, this grimness is not the result of accidental or localized activities. It is born from a history of environmental apartheid and its policies of rural abuse that trampled on the people of the former Transkei. As a result, pastures were overgrazed, agrarian land overcultivated, and soils depleted to the extent that traditional methods of production were no longer viable. Meanwhile, agricultural industrialization in South Africa resulted in high yields on White-owned farms. While this productivity protected food security, it came at considerable environmental and social costs (Fakir and Cooper, 1995); many farmers began to rely heavily on synthetic fertilizers, other chemicals, and mechanization. White-farmers have been historically protected by government drought insurance – potentially increasing their willingness to take risks with land (Mather, 1996). Environmental apartheid ultimately hindered the productivity and ecological vitality of all rural lands because it forced Blacks to farm on already marginal soils; encouraged White farmers to carelessly industrialize with over-application of pesticides, commercial fertilizers, and heavy machinery; and perpetuated inequality through unequal access to resources. Today, pastures in the former homelands – including KuManzimdaka – are largely overgrazed, facing extreme erosion, poor water sanitation, and lowered river flows (Cooper, 1991; Weiner and Levin, 1991). Consequently, in the late 1990's, South Africa was identified as having the highest extinction rate of plants and animals globally, abnormally high air pollution levels in some areas, and an unsafe waste and hazardous waste disposal program, along with widespread soil erosion and water contamination (Department of Environment Affairs and Tourism 1999). And yet almost no attention is given to the desperate situation of most rural people in South Africa today, especially in the former homelands. Official apartheid may be over, but environmental apartheid is not.

10. Rural and urban consequences

The negative impact of apartheid on the environment and human health has not been limited only to rural areas. Colonial control of South Africa prompted a shift away from self-sufficiency for African smallholders by creating a wage laborer system through the use of taxation and land expropriation, among other strategies (Mitsuo, 1996). Thus, apartheid policies led to a collapse of rural livelihoods, and concomitantly massive migration to the outskirts of cities as policies restricted Black residence inside the cities and controlled employment. People flocked to cities because of the lack of jobs in rural areas, and once they got there things did not improve. Consequently, the use of the rural environment to impose racial segregation actually led to an increase in the population of urban areas.

But wage laborers migrating to cities were still constrained in their work options and residency, as well as their movement to and from the homelands where many still had legal access to farmland and had families. Overcrowding, poor sanitation, and pollution led to environmental degradation and poor health for non-Whites in urban areas. Even those that originated from cities were pushed into townships by racial segregation and enforced curfews. Historically, townships were designed to house non-White laborers

who worked in the cities, preserving separate living spaces. Today, the cost of living at the heart of South African cities remains too high for most migrant laborers. Racial spatial divides are still apparent in all major cities. Thus, environmental apartheid's use of the rural to marginalize had and continues to have urban effects.

Pushed away from urban centers, the peri-urban slums resemble in concentrated form some of the most underdeveloped rural areas: overcrowded and barely resourced. The LAND project also works in Alexandra "township" – the South African term for a slum on the edge of a city – which is a bustling zone of half a million people living on about one square kilometer of land about 12 km from Johannesburg's city center. Despite the movement and energy of the place, it is a strange mirror of impoverished developments in rural areas with limited infrastructure, overcrowded housing, and sheer poverty. People living in Alexandra are also isolated via first order marginalization as, like most townships, it was situated on land that was originally rural and just outside the city. After pushing people into distant homelands, the apartheid government eventually had to deal with the problem of housing wage laborers within daily commuting distance. The government took a similar environmental apartheid approach but on a more localized scale. Today, Johannesburg has spread out to incorporate Alexandra, but it remains on the city's fringe—far from services and jobs. And while the area is insular in some ways, there is evident dependency on Johannesburg as a whole.

Alexandra shows the effects of second order rural marginalization as well. The rural land used for its site was hardly the best. Running through the heart of "Alex," as local people call it, is the wide floodplain of the Jukskei River. Today, that floodplain contains the worst sections of housing in the township, a vast swath of informal shacks now occupied mainly by recent migrants from Zimbabwe, Malawi, and other southern African countries. Tens of thousands live in constant risk of having their homes swept away. Moreover, these dense ranks of mostly corrugated iron shacks often use hazardous materials that contain asbestos (Mathee et al., 2000) or lead-based paint (Mathee et al., 2007). Generally, these dwellings are constructed without proper sanitation including bathrooms, and with very limited water access (Mathee, 2011). Although close to the centers of the country's wealth, third order marginalization means that townships have received few services and amenities, contributing to poor health outcomes. Eco-health problems are widespread; without sanitation, densely populated areas are prone to infectious disease outbreaks and diarrheal disease. Food insecurity and hunger are pervasive, as is HIV/AIDS and violence (Naicker et al., 2010).

The rural marginalization policies of environmental apartheid also generated new urban areas in the homelands. By forcing Black South Africans back to live in homelands where their citizenship supposedly resided, but where there was little opportunity, urban populations in the homelands grew rapidly as well, especially beginning in the 1970s (Jooma, 1991). These urban areas in the rural and fragmented homelands lacked an economic base, however, so they could not function as typical cities (Mitsuo, 1996). Whether it be on the fringes of White cities or the population centers of the homelands, the environmental impact of apartheid on the urban was also devastating. Thus, environmental apartheid's use of rural marginalization has spatial consequences that continue across South Africa today.

11. Challenges and a brighter future

Although this paper paints a bleak picture of KuManzimdaka and the results of environmental apartheid's practices of rural marginalization, there are also examples of resilience and opportunity.

Let's return to MamBhele. She lives just down the road from the KuManzimdaka school – far from town, far from any job or store, on a plot where her ancestors likely settled after first order forcible relocation during colonial control. She cultivates rocky soil, thanks to second order marginalization that pushed her relatives up steep hillsides in contrast to White farmers who occupied the more fertile, flatter lands at the nearby base of the mountains. There is no clinic within an hour's walk, no running or clean water, no electricity. Through third order marginalization and current government neglect, MamBhele must fend for herself and fight for her community in nearly every way.

MamBhele is, in some ways, a foil for the Kumanzimdaka landscape. While the land is tired, MamBhele is nearly bursting with energy. She is a picture of determination and rural entrepreneurship. On her small plot, MamBhele has created several profitable businesses. She raises chickens for local sale, grows a set of vegetables and marketable crops, and led in the formation of a women's farming cooperative: the Masithembane Co-op, which means 'let us trust one another.' Together, and thanks to MamBhele, women in the village are generating new ideas and products, tapping into their environmental resources with a wise, longer-term vision for development. Together, they have more purchasing power and can sell bulk foodstuff to neighbors and even in town. Together, they support one another when someone is sick. They share in their profits, their woes, and their labor—fighting against the negative ecohealth consequences of environmental apartheid.

Majola is also pushing back against the troubled position of cattle producers in the area through the Ncedisizwe Co-op. While rural marginalization has made access to markets and availability and use of natural resources challenging, he is not without hope. He is networking and reaching out to businesses. He is leading by example and learning to manage the grasslands with conservation in mind.

A history of abuse and seclusion has not completely demoralized KuManzimdaka. The people recognize that they can no longer wait to be helped; instead, some are stepping forward with urgency to change their circumstances. They are making use of the resources around them, learning to protect the environment and tapping into their strong community ties. They are learning that they have some rural powers too, such as their communal traditions, a land base that they still control, potentially high-value products like grass-fed meat and organic vegetable production, and a rural narrative that could be a strong symbolic resource in gaining attention to their circumstances.

Plus, although this paper outlined the ways in which KuManzimdaka has long been marginalized, scholars should not overlook some recent efforts to improve the lives of rural peoples made by the South African government, however inadequate they may be for the scale of the problems. Specifically, the ANC has worked to redistribute land to Black South Africans since the end of apartheid, buying land from willing White sellers and making it available to emerging Black commercial farmers. The fruit of that policy can be seen in much of the privately owned lands on the plateau between KuManzimdaka and the mountains. Other initiatives have supported Black farmers through grants and training, although most of that work has focused on the emerging Black commercial farmers, not the smallholders on communal land. There has also been a recent surge in legally recognized cooperatives in South Africa, as cooperative agricultural business models were identified as a potentially powerful mechanism for simultaneously empowering previously marginalized groups and jump-starting the economic engine. Government incentives were introduced to achieve this purpose including grants to promote co-op development. Beginning with the end of official apartheid in 1994, the South African government implemented the Reconstruction and Development

Programme (RDP), the National Growth and Development Strategy (NGDS), and the Growth Employment and Redistribution strategy (GEAR) to name a few (Alemu, 2012).

But progress in most, if not all, of these areas has largely fallen short—as is plainly evident in KuManzimdaka and elsewhere. Throughout the Eastern Cape, much of the land that was redistributed is unused or under-produces because of lack of skills and capital held by new owners, enduring deficiencies in support services, and continued exclusion from White-controlled supply chains. Cooperative development efforts have been stymied by a lack of fundamental financial literacy, foundational agricultural knowledge, and working capital. Government agricultural policy, while encouraging cooperative growth and smallholder farmers through grant making, often prioritizes cheap food and has been more effective at supporting large, predominantly White, farm operations. Black smallholders and emerging commercial farmers struggle to compete with large, established, White-owned farms.

Rural powers can push two ways, however, as we note above and as the people of KuManzimdaka are starting to discover. Indeed, the leadership of the African National Congress (ANC) developed out of the rural isolation of the Transkei. Nelson Mandela was born in a Transkei village about a hundred kilometers away. Local people are not passive actors. MamBhele and Majola are both examples of the current and necessary movement away from rural oppression, building on the strengths of their rural history and location. KuManzimdaka, like other rural places in South Africa, has substantial potential. The slow progress in these areas underscores that the impact of environmental apartheid runs deep. But with collaborative and participatory efforts that strive for holistic and agroecological approaches to justice and development, South Africa's rural margins can become spaces of hope and well-being.

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