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Cover: *Lupedze Primary School at the Gadlani Village was fully refurbished in 2017 and 2018. However, due to increased enrolment, prefabricated structures were still in use during the HSRC research visit.* ***Photo:*** *HSRC*

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EDITOR'S NOTE

By Antoinette Oosthuizen

South Africa has made significant progress since the advent of democracy three decades ago. However, many South Africans continue to face persistent challenges in various aspects of their daily lives.

As part of the HSRC's Democracy@30 Project, our researchers, together with their collaborators, have conducted fieldwork across the country, visiting sites such as Gqeberha, Makhanda, Mxekazi and Cwebe in the Eastern Cape; Sweetwaters and Wentworth in KwaZulu-Natal; Luka in North West; QwaQwa in the Free State; Langa in the Western Cape; Vuwani in Limpopo; Matsulu in Mpumalanga; and Orlando West in Gauteng. Residents and those closely connected to these areas shared their experiences with democracy over the past 30 years, as well as their hopes for the next 30 years. This edition of the *HSRC Review* features eight articles about these site visits.

Our researchers also visited Muyexe and Nkowankowa townships in Limpopo to examine the impact of extreme climate events on local communities. Residents shared their perceptions of droughts and floods – disasters that are projected to become more frequent and severe – underscoring the urgent need for effective disaster risk reduction strategies, improved infrastructure, and community resilience initiatives.

In addition, we report on an HSRC webinar that discussed the role of digital innovation in climate action. Insights from European Union policies highlighted how information and communication technologies can enhance climate resilience and how these strategies can be adapted to South Africa's unique economic and environmental contexts.

In 2021, HSRC researchers produced reports on local innovation in the Karoo region, focusing on prospects for innovation-driven development. Many municipalities expressed a need for guidance on targeting investments to support such development. At subsequent workshops, stakeholders emphasised the importance of presenting research findings in accessible and user-friendly formats.

Another article examines the modernisation of the mining sector. In collaboration with the Minerals Council of South Africa and the Research Institute for Innovation and Sustainability, the HSRC launched a research project to identify patterns, gaps and opportunities for research, development and innovation aimed at transforming South Africa's mineral industry.

We also share insights on gender, informality and innovation in KwaZulu-Natal, where many women (as is the case elsewhere in South Africa) rely on informal employment as their primary source of income. A policy brief based on research in Sweetwaters points to the structural and socioeconomic barriers that shape gender disparities in learning and innovation.

Additionally, this issue includes an article on gender equality and inclusion in research, focusing on grant-making practices, an article on science diplomacy through a South Africa–Netherlands collaboration and a piece about the importance of science engagement, where research stakeholders and beneficiaries are involved from the outset.

The *HSRC Review* team



Motherwell township, located north of Gqeberha.
Photo: HSRC

The democratic frontier: progress and challenges in the Eastern Cape

As part of the HSRC's community research aimed at providing critical reflections on three decades of democratic rule in the country, four studies were conducted in the Eastern Cape. These case studies provide insight into the quality of democracy through the perspectives of citizens living in the province's largest metropolitan city, a notable small inland city, and two rural communities. In this article, ***Kombi Sausi****,* ***Joleen Steyn Kotze****,* ***Ben Roberts*** *and* ***Emmanuel Fundisi*** *outline some key narrative themes emerging from the research undertaken in Gqeberha, Makhanda, Mxekazi and Cwebe.*

The Eastern Cape is known as the heartland of the ANC. It is the birthplace of many iconic liberation leaders, including Nelson Mandela, Steve Biko, Oliver Tambo and Albertina Sisulu. It is the second-largest province in South Africa by land area and held the hope of freedom, opportunity and prosperity as South Africans cast their first votes in the historic 1994 elections. Thirty years later, however, disillusionment, hopelessness, and disappointment dominate the political narratives of the people of the Eastern Cape. A province once regarded as the heartbeat of the liberation struggle is now characterised by limited opportunities and poor governance. The 1994 promise of a better life remains unfulfilled for the communities of Gqeberha, Makhanda and the rural villages of Mxekazi and Cwebe.

Gqeberha: Exploring the deferred "Dream of '94"

Nelson Mandela Bay captured the national imagination during the 2016 local government elections as the ANC's electoral power declined further relative to the 2011 elections. Once symbolic of the hope of the "Dream of '94", this metro's first transitional council in 1995, under Nceba Faku, represented a reconciled South Africa. By 2016, however, this dream appeared to fade – a "dream deferred". What caused this? A key reason is the government's failure to deliver on the democratic promise of 1994.

Fast forward to 2024, and similar political narratives of disappointment, disillusionment, and change characterise the democratic experiences of Gqeberha's citizens. As South Africans celebrated 30 years of democracy, and building on our 2016 work exploring the Dream of '94, HSRC researchers worked with the Department of Development Studies at Nelson Mandela University to conduct seven focus groups across various township and urban communities in the city in March 2024. Once home to vibrant political leadership and a rich liberation history, Nelson Mandela Bay, South Africa's sixth-largest metro, today grapples with severe political instability and weak governance. Serious deficits in accountability, budget underperformance, maladministration, patronage and inadequate service delivery mean that many residents barely feel the government's presence.

High levels of unemployment, rampant crime (notably widespread drug use and violence), and failing infrastructure were key themes as participants spoke about their experiences and the elusive dream of freedom and a better life. These themes were the basis on which not just the ANC but political parties as a whole were criticised. For participants, political parties did not prioritise the best interests of the citizens. This sentiment was evident in electoral dynamics. In 2000, when South Africans voted in the first local government elections, 62% of Gqeberha residents turned out to vote. In 2021, only around 45% cast their ballots.

Dominant themes in the 2024 focus groups were the lived realities of exclusion (social, political and economic), marginalisation, and continued oppression in the context of poverty, unemployment, deprivation, ineffective governance and lack of accountability. Respondents highlighted that political parties are not interested in their plight and, more importantly, are not accountable to them – the parties engage with them only during election periods but remain absent in between.


Interviews conducted with residents of Motherwell township, located north of Gqeberha. Photo: HSRC

The 'Dream of '94' encapsulated narratives of hope and rebirth, particularly for older participants who recalled apartheid and the optimism of the transition to democracy. Yet, for younger citizens, who have known only democratic rule, the persistent lack of tangible improvements has fostered disillusionment. Voter apathy, a sign of the declining faith in electoral processes, further underscores the growing disconnect between the electorate and those in power.

Participants argued that political representatives must be held accountable by voting them out when they fail to deliver on promises. They noted that they had the power to exercise their constitutional right to vote and demand accountability from their representatives.

Makhanda East: Life on the periphery of a university town

Makhanda, formerly Grahamstown, is a small city located 125 km northeast of Gqeberha and is known as the home of Rhodes University. The communities of the former township areas of Rhini in Makhanda East have experienced significant social, economic and political changes since the transition to democracy in 1994. These changes have undoubtedly influenced the quality of life within the community in various ways. Seven focus group discussions were conducted jointly with the Institute of Social and Economic Research at Rhodes University in March 2024.

Residents in both formal and informal housing areas highlighted persistent socioeconomic challenges, including unemployment and poverty, as well as inadequate access to housing, sanitation and basic services. These struggles were particularly acute in informal settlements where poor infrastructure worsened daily hardships. Although crime was not seen as an urgent challenge in Rhini, drug abuse was a widespread concern, with participants pointing to its negative effects on community safety and youth development.

Frustration with governance and leadership emerged as another dominant theme. Residents critiqued elected officials for corruption, nepotism and neglect, expressing disillusionment with the current political system. Many perceived government actions, such as the renaming of Grahamstown to Makhanda in 2018, as merely symbolic and disconnected from tangible benefits. While some welcomed the name change as a means of reclaiming historical identity, most participants viewed it as irrelevant to their daily struggles. Across all groups, participants emphasised the need for ethical leadership, greater transparency and stronger community engagement in governance.

Despite these challenges, a strong sense of resilience and hope remained. Residents expressed aspirations for improved governance, better service delivery, and increased opportunities for education and employment. Many participants emphasised the importance of grassroots mobilisation and community-driven initiatives to address local issues. Younger participants focused on contemporary concerns like unemployment and drug abuse, while older participants contextualised current struggles within the legacy of apartheid, particularly land dispossession. Across generations, shared frustrations regarding unfulfilled democratic promises persisted, but these critiques were framed differently.

Policy recommendations include addressing infrastructure gaps in informal areas, particularly in housing, sanitation and roads, coupled with more visible and transparent government engagement. Expanding education and vocational training programmes for youth could tackle unemployment and social issues. Community-driven governance and stronger accountability mechanisms are essential, along with comprehensive crime prevention strategies combining law enforcement with grassroots initiatives. Finally, restorative land reform efforts must meaningfully engage communities to address historical injustices.

Overall, the discussions reflected a community grappling with systemic challenges but maintaining aspirations for a better future. By prioritising equity, accountability and tangible development, there is potential to address these concerns and fulfil the democratic ideals envisioned three decades ago.

Mxekazi and Cwebe: Reflecting on public–private service delivery arrangements

Three decades after South Africa's democratic transition, the villages of Cwebe and Mxekazi continue to face significant barriers to accessing basic water services. This Democracy@30 study in the province revisited implementation sites associated with the HSRC's Accelerated Sustainable Water Service Delivery project in OR Tambo and Amathole District Municipalities, which was undertaken in the late 2000s. The 2024 study revealed how geographic isolation, governance deficits and socioeconomic challenges have perpetuated water insecurity, with

particularly severe impacts on women, children and the elderly.

Mxekazi and Cwebe are remote rural villages predominantly populated by women, children and older men, as younger adults have migrated in search of employment away from the former Transkei homeland in the Eastern Cape Province. Situated approximately 40 km from Mount Frere and 150 km from Mthatha, in mountainous and rugged terrain, these villages are accessible only by gravel roads.

The 2024 study found that the solar-powered water purification and reticulation systems installed between 2008 and 2011 by the HSRC and CSIR, with funding from the European Union, had completely broken down, with instances of vandalism leaving the system in disrepair. The absence of a routine maintenance framework meant no ongoing support existed to repair or sustain the systems, leading to failure just a few years post-installation. Furthermore, barriers to water service delivery extend far beyond infrastructural limitations and include:

1. **Geographic marginalisation**: The villages exemplify how spatial segregation perpetuates developmental disparities. The mountainous terrain and poor road infrastructure create logistical challenges for service provision.
2. **Governance capacity constraints:** Municipal incapacities, including chronic issues such as skills shortages, poor planning and frequent staff turnover, undermine sustainable infrastructure development.
3. **Socioeconomic dynamics:** High unemployment, gender imbalances and the persistent outmigration of working-age adults create complex social ecosystems that complicate community-based infrastructure maintenance.
4. **Technological adoption barriers:** The study's examination of solar-powered water systems provides insight into the sociological complexities of introducing new technologies. Community vandalism and a lack of ownership emerge as critical challenges beyond mere technical implementation.



A floating water pump system in Mxekazi. Photo: HSRC

Addressing the issues identified in the study requires a strategic development planning approach that is participatory, inclusive and integrated. One key recommendation is the implementation of comprehensive professionalisation programmes for local government officials. Additionally, efforts must focus on enhancing the technical and managerial skills necessary for effective water service delivery. Equally important is the establishment of dedicated technical support units focused solely on rural water infrastructure.

As South Africa marks 30 years of democracy, addressing rural water access remains crucial for achieving equitable development. Success requires a multi-stakeholder approach that combines improved municipal governance, community empowerment and sustainable infrastructure development.

Conclusion

The political landscape of Gqeberha, Makhanda, Mxekazi and Cwebe reflects a broader complex narrative of progress and disillusionment with the promise of freedom and democracy in 1994. While the Dream of '94 symbolised hope for a new, inclusive and prosperous South Africa, its realisation has been stunted by poor governance, a lack of accountability, economic exclusion and service delivery failures. The struggles of residents, especially in marginalised communities, highlight the gap between political promises and the lived realities of many South Africans today.

The future of the four localities examined in this provincial study will depend on a fundamental re-thinking of governance, emphasising accountability, transparency and responsiveness. For citizens, the path to reclaiming the Dream of '94 lies in holding their elected officials accountable and considering alternative forms of political engagement, including more active participation in local elections. The desire for a better life and a growing awareness of the power in their hands could prompt the people of the Eastern Cape to redefine the future of their local government and governance.

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Democracy@30: experiences from Matsulu, Mpumalanga

Faced with crime and limited employment prospects, some residents of Matsulu township in Mpumalanga feel despondent. They want a caring government and meaningful change, researchers heard during a Matsulu visit as part of the HSRC's Democracy@30 Project. By ***Simangele Dlamini*** *and* ***Nomcebo Ubisi***

As you drive along the N4 highway from the city of Mbombela in Mpumalanga, you marvel at the beautiful landscape: the lush vegetation, the meandering Crocodile River, and the mountains crowned with balancing rocks. Along the serene river, you occasionally see a vendor selling fish at the side of the highway. Approximately 50 km north of Mbombela lies the vibrant township of Matsulu, our destination as we set out to talk to residents about their lived experiences 30 years since the advent of democracy in South Africa.

Matsulu borders the Kruger National Park, and we heard stories of elephants breaking through the park fence into the township streets. Upon entering the township, we noticed a once-thriving marketplace that had fallen into disrepair. We stopped to enquire, and two elderly women hurried towards us, hoping to make a sale. As we bought some bananas and avocadoes, the women spoke of their hardships – that they barely had customers anymore and that they wished former President Nelson Mandela could 'resurrect' and help them escape their plight.



The entrance to Matsulu, Mpumalanga. Photo: HSRC


The dilapidated marketplace in Matsulu, Mpumalanga. Photo: HSRC

While gathering people's stories, we also hoped to capture the landmarks that defined the township's history. We noticed numerous food stalls, spaza shops, hair salons and shebeens on almost every street corner. People were happy to tell us of their experiences, but we sensed despair among the youth and nostalgia among the elderly. Unemployment was reported as unbearable, the crime level was alarming, and teenage pregnancy was high. We talked to a local pastor, who blamed high levels of immorality on a loss of values due to government policies that gave people, particularly children, "too many rights":

> *"The family unit has disintegrated, parents and teachers can hardly discipline children, and the church is seen as unfashionable.*
> *The Bible has been removed from the schools. Children no longer pray during school assemblies. This has led to moral decay."*

An elderly man blamed the high crime rate on the "new government", which, he claimed, discarded the traditional courts that he deemed more effective than the [current judicial system]. He also felt that the ineffective justice system allowed criminals back into the community:

"Criminals now have free reign in our communities. They get arrested today, and the next day they are back on the streets, terrorising communities again. Pre-1994, we used to have traditional courts, izimbokolo. These courts used to be very effective, hence crime levels were low."

We asked the elderly man and the pastor if there was anything to celebrate 30 years into democracy and what they thought should be done to improve the dire state of affairs they were describing. Both responded in Siswati, saying "*komele sibuyele emasisweni"* (we have to resort to the old way of doing things). They agreed that there was little to celebrate, and the future looked bleak for their children.

As we drove further into the community, we came to the Kruger National Park fence. The area had once been a park where people could relax over a picnic during the day and revel away the evenings on weekends. However, as we approached, we were met with a dumping site, with only a few visitors relaxing along the Crocodile River. The place looked forlorn. The visitors blamed the neglect on an uncaring local government, claiming that, despite its flaws, the apartheid government had at least prioritised the preservation of parks. We noticed additional indiscriminate dumping sites along Matsulu's dusty streets. These added to the residents' accounts of their once vibrant township, which sadly had hardly anything left to celebrate as the festive season approached.

On the third day of our visit, we organised focus-group discussions with community members at a local church. We were joined by church leaders, local police representatives, youth and the elderly. They gave us permission to record the sessions and take pictures but wanted assurances that their concerns would not remain in reports but would be used to assist other communities as they believed their plight was shared by other South Africans.

Once again, the discussions painted a picture of dejection and despair. Elderly participants longed for the past, when jobs were more accessible and families could support themselves, despite apartheid restrictions. The younger generation said their future looked bleak and that they were caught in a cycle of despair:

"We go to school, colleges and universities, but nothing comes out of it. Some of us have diplomas and degrees but are still unemployed. The Outcomes-Based Education system and the 30% pass rate is producing semi-literate graduates. Even those who are lucky to get employment abandon this township and go and live in big cities. No one ploughs anything back to this community."

Representatives from the South African Police Service spoke about their challenges, such as the frustration they experience when arresting criminals, only for the courts to release them back into the community. They also cited a lack of resources as hampering the effective discharge of their duties.



The area along the Kruger National Park fence has turned into a dumping site. Photo: HSRC

Community members expressed outrage over the police station closing at 21:00 daily, saying criminals took advantage of this by running rampant at night, knowing there were no police patrolling the streets and that the communities had no one to turn to once the police station was closed. The discussion became heated, and we ended the discussion.

When we asked about the general state of disrepair of amenities – like the public hall, the local library, pothole-ridden roads and uncontrolled waste dumping – participants blamed this on politicians who make grand service delivery promises during election campaigns, only to disappear once voted into power.

> *"We have not even seen our local councillor in ages," said one of the participants. "The infrastructure that you see was built during apartheid and during Mandela's time," said another.*

We then asked the audience what could be done to "achieve a better life for all" and whether there was any progress to celebrate 30 years into democracy. They said the government needed to be more caring and willing to end high levels of corruption.

They also said there was nothing to celebrate, as the country's independence had not translated into the betterment of their well-being but had actually made life unbearable. We then asked them about what the community was doing to ensure a better life for the future. Their views were diverse:

> *"Bring back corporal punishment. Our children now have too many rights, once you try to discipline them, they may have you arrested." [Pastor]*

> *"The police need to work harder to gain respect from the communities. During apartheid days and during Mandela's presidency, the police were feared. Once the Yellow Mellow (old police vans) appeared, people would run. Now, no one fears them, they are involved in corruption and even work with the criminals." [Community elder]*

> *"Give more authority to traditional leaders. The current justice system is not working, and traditional leaders need to take back their communities." [Traditional leader]*

The statement that the "old way" of doing things had to be brought back was a recurrent theme. This included the government implementing harsher



Focus-group discussions with community representatives in Matsulu, Mpumalanga. Photo: HSRC

penalties for criminals, and allowing parents to discipline their children without fear of reprisal. The elderly audience members summed it up: "*Masibuyele emasisweni* " [Let us go back to the old system, and the old way of doing things].

Reflection

There was an air of despondency in the community. Yet, an entrepreneurial spirit among some community members was evidenced by small businesses that dominated the main streets of the township. The church was trying its best too, running a soup kitchen for school children. The general infrastructure seemed dilapidated, but a project was underway for the rehabilitation of roads. We also reviewed a community member's copy of the Integrated Development Plan, listing priorities for the coming five years:

- Water supply and sanitation
- Road infrastructure and stormwater development
- Electricity supply and management
- Local economic development and tourism
- Waste and environmental management
- Social services
- Financial management and viability
- Integrated human settlement
- Community development and public safety
- Good governance and public participation
- Public transport

These items had been flagged by the community members as areas of concern. But will these be translated into action areas for the betterment of the community and the enjoyment of democracy, so many years after 1994?

We left, promising to document the community's stories. Hopefully, someone somewhere will hear their cries.

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Focus-group discussions with community representatives in Matsulu, Mpumalanga. Photo: HSRC



Shops in the Clinic Road shopping centre, Wentworth
Photo: HSRC

Wentworth views on the promise and experience of democracy

Most residents of Wentworth, a historically 'coloured' suburb 10 kilometres south of the Durban Central Business District, believe there is little or nothing to celebrate 30 years into democracy. This emerged from research conducted as part of the HSRC's Democracy@30 Project. By ***Gregory Houston***, ***Darian Smith***, ***Theresa Saber*** *and* ***Maree Harold***

Many Wentworth residents believe their lives have worsened since the advent of democracy in 1994 and that much still needs to be done to achieve the promised 'better life for all'. Wentworth is located in the southern part of Durban in KwaZulu-Natal.

Between November 2023 and February 2024, an HSRC research team engaged with 99 residents of Wentworth as part of the organisation's Democracy@30 Project. Other research teams conducted similar research at several other sites across South Africa, including Makhanda, Nelson Mandela Bay and Cwebe in the Eastern Cape; Sweetwaters in KwaZulu-Natal; QwaQwa in the Free State; Langa in the Western Cape; and Vuwani in Limpopo. During the fieldwork, researchers collected stories of people's experiences of democracy over the past three decades and gathered opinions on what the next 30 years needed to look like to achieve the promised "better life for all" in South Africa.

During key informant interviews, focus group discussions and workshops in Wentworth, participants indicated that very few achievements of democratic rule had improved their lives. There was progress in achieving gender equality, improving race relations and obtaining rights such as voting, residence without racial restrictions and access to study at any educational institution. However, most residents of this predominantly working-class suburb – where many upwardly mobile members of the community have relocated elsewhere – drew attention to areas of decline, nationally and in the suburb. A small minority still living in Wentworth believed their lives had improved since 1994.

Residents identified poor governance and corruption as the most significant negative developments since 1994. They unanimously believed that failures in public administration in all three spheres of government, coupled with widespread theft and misuse of public funds, were the root causes of many other problems. These failures, they argued, contributed to the dramatic rise in crime and a pervasive sense of insecurity in Wentworth and across the country. Participants cited several factors behind the rise in crime and violence in the community, including increasing poverty and high unemployment, particularly among young people, who have become involved in the sale of drugs and consequent drug-related gang wars. However, they attributed the general sense of insecurity to corrupt and incompetent police officers and a disinterested government.

Wentworth residents saw no improvement in their lives resulting from the efforts to promote inclusive economic growth since 1994. This was evident in pervasive unemployment and poverty, with limited business opportunities. The economic challenges were seen to be a major factor behind the consequent social ills, including general and drug-related crime, as well as widespread gender-based violence. Many of the residents felt that policies such as black economic empowerment had marginalised the coloured community. They pointed to the lack of housing developments in Wentworth, noting that no RDP houses had been built there since 1994, while many residents continued to live in overcrowded and dilapidated flats or as backyard tenants.



Clinic Road shopping centre in Wentworth
Photo: HSRC

Failing healthcare

Although most of the residents acknowledged the significantly improved access to healthcare, they raised concerns about the decline in service quality. Wentworth has a provincial hospital on one of its borders and a clinic in its centre, but both facilities were seen as failing the community. This was largely due to inadequate staffing, overcrowding, excessive waiting times, persistent medication shortages, the lack of staff and equipment to deal with the health issues affecting members of the community due to their proximity to polluting industries, and, in particular, the disdain they experienced from the staff at both facilities.

Overcrowded schools

Wentworth residents acknowledged that democracy had brought about increased access to education. While they had the right to study at any educational institution in the country and had increased access to funding for tertiary education, a host of challenges remained. They were concerned about the influx of schoolchildren from neighbouring black African communities to Wentworth schools. In addition, they mentioned overcrowded classrooms, rising violence in the schools, the declining quality of teachers at these schools, the decline in the quality of basic education due to the 30% pass mark and the policy of promoting failing learners.

Many also felt that Wentworth schools were underfunded because they were considered high-quintile institutions. In addition, they believed they had limited access to higher education institutions due to a perceived racial bias in university quotas and the allocation of NSFAS funding.

These factors, residents argued, significantly affected opportunities for the youth of Wentworth. Despite major improvements in education and employment opportunities for the youth nationally since 1994, Wentworth had seen a dramatic increase in youth unemployment, substance abuse and involvement in illicit activities. Many participants expressed disillusionment among grandparents, parents and young people about the future of the youth in the community.

Lack of recreation

Participants perceived a lack of support for sports, arts, culture and heritage in their community. They described a dramatic decline in these activities since 1994 and an absence of meaningful government support. Wentworth lacked adequate facilities for sports and the arts, leaving parents and community members to support young people who are interested in sports, arts and culture. School sports programmes in the area had virtually collapsed.

Grants

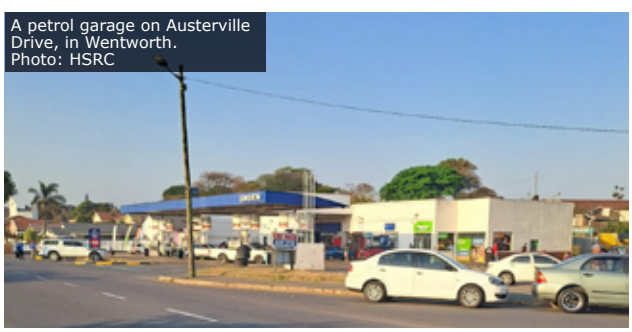
The participants acknowledged the significant increase in access to social protection since 1994, such as child support, social relief of distress grants and the provision of free water, electricity, healthcare and housing for indigent families. However, they were unanimous in their belief that these grants were inadequate and that the processes to access them were onerous. They drew attention to the lack of free housing and the difficulty many indigent families faced in accessing free water and electricity.

Better relations

Two areas where Wentworth residents saw substantial improvement since 1994 were gender equality and the relations between the different population groups. Opportunities for women had improved dramatically, though many believed the rise in gender-based violence was a consequence of gender equality in a community where many men were unemployed. Residents also noted increased mixing of the population groups through interracial marriages, settlement patterns, and social activities, such as sports. However, they pointed to an older generation that found it difficult to lose the racial prejudices fostered by apartheid and the impact of a deep sense of marginalisation as a coloured community during the democratic era on the persistence of such racial prejudices.



A Wentworth community clean-up near a flat complex.
Photo: HSRC



A petrol garage on Austerville Drive, in Wentworth.
Photo: HSRC

Conclusion

The Wentworth research for the Democracy@30 Project illustrates that much remains to be done in historically marginalised communities to achieve the promised "better life for all". Participants suggested a range of solutions, including community-led initiatives in collaboration with religious, youth and women's organisations, as well as measures that require action from government and local industries. The study illustrates that dealing with the many challenges in communities like Wentworth requires collaboration between the residents, the three spheres of government and the private sector. The starting point is to promote dialogue within these communities, followed by a dialogue with the other stakeholders.

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The community providing entertainment to children living in flats in Wentworth. Photo: HSRC



Lupedze Primary School at the Gadlani Village was fully refurbished in 2017 and 2018. However, due to increased enrolment, prefabricated structures were still in use during the HSRC research visit.
Photo: HSRC

Vuwani schools rise from the ashes: a journey of hope

In 2016, a team of HSRC researchers visited Vuwani in Limpopo shortly after dozens of schools were vandalised or burned down during violent demarcation protests. In 2024, the researchers returned to conduct a follow-up study as part of an HSRC-commissioned project marking 30 years of democracy in South Africa. In this article, ***Modimowabarwa Kanyane*** *writes about resilience and hope in Vuwani, where residents have been rebuilding and restoring what had been lost, and about the new challenges they face.*

In 2016, residents of Vuwani in Limpopo witnessed one of the most violent protests since South Africa's transition to democracy. The unrest resulted in widespread destruction of public infrastructure, including about 30 schools that were vandalised or torched to ashes.

The events drew international attention and raised concerns about the future of education in Vuwani and South Africa at large.

Shortly after the protests, HSRC researchers conducted an exploratory study to understand what led the community to destroy infrastructure that is essential for their children's future. Their findings pointed to the Vuwani community's dissatisfaction with new municipal demarcations determined by the Municipal Demarcation Board.

Vuwani's evolving landscape

Vuwani comprises 30 rural villages in the Vhembe District of Limpopo. In 2011, its population was estimated at 2,791, with 710 households. the majority (84%) spoke Venda, while 8% spoke Tsonga, and the remaining 8% spoke other languages, including Sepedi, Sesotho and English.

Over the years, the Vuwani's borders have shifted significantly for various reasons, such as the transition from the Republic of Venda to the Republic of South Africa. Before, Vuwani consisted of three villages – Masia, Tshimbupfe and Nesengani – which later formed one large community.

Previously under Makhado Local Municipality, Vuwani was split into two municipalities following boundary changes in 2015. One half remained with the Makhado Local Municipality, while the other was incorporated into the Collins Chabane Local Municipality. Many residents were dissatisfied with this decision at the time.

HSRC researchers return

In 2024, Vuwani was selected as a research site for the HSRC's Democracy@30 research initiative. Celebrating 30 years of democracy in South Africa, the HSRC commissioned this project to explore and document how the lives of ordinary people have changed over the past three decades. It also provided a platform for local communities to take stock of the progress made and plan for the next 30 years. Researchers interviewed individuals, conducted focus group discussions and employed photovoice methods to engage with the community.

Education since 1994

When asked about education in Vuwani since the advent of democracy, nearly all respondents agreed it had improved tremendously. One elderly respondent recounted how, before democracy, the community had to build a primary school without government assistance:

"Look at those schools. We started them ourselves. There was no school around here until the principal came to us at the Chiefs Kraal and suggested that we build a school. There was no road there, you see. The only schools that were here were Wayeni and Matshila. We started building that one by laying clay bricks and doing thatched roofing. The ladies used to go and fetch water for us at Dwedwedwe. No one was allowed to go to school. You were supposed to work for three months and the other three months you go to school."

Rebuilding schools after the protests

After the 2016 protests, the government prioritised the restoration and rebuilding of many of Vuwani's damaged schools. Some principals noted that, paradoxically, the destruction proved to be a catalyst for positive change, as the replaced buildings were modern and of a better quality than the ones they replaced.

Immediately after the riots, mobile classrooms were installed at the affected schools. When researchers visited in 2024, many of these temporary structures were still in use. The principal of a rebuilt high school noted that the newly built modern structures motivated parents to enrol their children, leading to increased learner intake. However, the new infrastructure capacity was inadequate; so, the temporary classrooms needed to be retained.

The provision of temporary classrooms at the vandalised schools triggered riots in neighbouring communities whose schools were unaffected during the 2016 violent protests. During 2018 and 2019, parents in Mutsetweni Village near Mashau Village, and Rivoni School for blind learners (in a neighbouring municipality) protested and demanded similar resources, as their children's schools' existing infrastructure had been insufficient for some time. This led to the provision of extra mobile classrooms at Ndlavheya Primary School, Nwamhandzi Primary School and Marholeni High School in 2019.

At the time of the research visit, some schools had not yet been reconstructed, including Masungulu Primary School in Khurhuleni Xitsonga tribal space and Vhudzani Secondary School in the Mashau village.



Lupedze Primary School at the Gadlani Village was fully refurbished in 2017 and 2018. However, due to increased enrolment, prefabricated structures were still in use during the HSRC research visit.



Mphagane Junior Primary School, a leading primary school in Mashau village, was also reconstructed.

Access to healthcare

Vuwani residents were also asked about other challenges, including healthcare.

Nearly all respondents reported that access to healthcare had improved significantly since 1994. Community health facilities and services were now located within walking distance in most villages. Notably, while the 2016 protests saw the destruction of the Tribal Authority Office and the Post Office in Mashau, the nearby clinic was spared and remained operational.

Vuwani's healthcare facilities are located in various villages within a few kilometres of each other. These include Wayeni, Bungeni, Mashamba and Masia Health Centres, as well as De Hoop and Mashau Clinics. While these health centres and clinics were deemed accessible, most respondents expressed frustration over sporadic shortages of medical supplies. During focus group interviews, some respondents attributed this to undocumented immigrants in the area accessing health services, with one respondent alleging that undocumented immigrants visit the clinics to collect antiretroviral medication to smuggle it out of the country. Despite these challenges, the general feeling was that access to health services in Vuwani was acceptable and should be improved and sustained.

Immigration controversy

Respondents expressed concern about the influx of undocumented immigrants to Vuwani. Some alleged that immigrants secured housing by paying traditional leaders for allocation of stands. Others accused them of participating in illegal activities, such as harvesting wood timber from local plantations at night and then selling it back to the local communities.



Timber poles displayed for sale to locals along the roadside

Photographs taken during the HSRC's visits show various informal timber outlets along the roads, where respondents claimed illegally harvested and transported timber was sold. Some residents alleged that timber farm employees aided these operations by offering protection for nighttime raids. Such underground economies and crime were triggered by the high unemployment rate in the province, the researchers were told. Many respondents felt that the state had failed to address unemployment during the 30 years of democracy.

Let bygones be bygones

By 2024, some Vuwani residents appeared to have moved past causes of conflict exacerbated by the municipal demarcation. An elderly person said:

"It is very good that we now have our municipality, Collins Chabane. Even those Venda-speaking people who said they didn't want that municipality are now quiet. The municipality is working. [Before,] Vuwani and Tshitungulwani didn't want the municipality. Now they have streets paved and streetlights."

Another respondent added:

"The municipality has brought about a lot of changes. The fight for the municipality was for a good cause. Look, [in] just less than 10 years there is much progress. There are Apollo [solar] lights everywhere. There you can see paved roads. Refuse removal is coming to villages for the first time. Some people are working in the municipality, although there are a lot of corruption rumours … [but] there is change. Unlike when we were in Makhado Municipality. Nobody was ever employed from this side. The [Collins Chabane] municipality has worked. It cannot be an overnight thing."

Conclusion

Eight years after the 2016 riots, the Vuwani community has shown remarkable resilience and transformation. However, an urgent need exists to prioritise funding for the reconstruction and refurbishment of the remaining schools destroyed in the protests, so every student has access to a safe and conducive learning environment. The collective effort to restore the schools not only brought back the physical infrastructure but also renewed hope and strengthened community bonds.

Beyond education, the researchers believe improving lives in Vuwani also requires upgrading health centres with modern technologies, addressing socioeconomic issues and unemployment, and tackling crime and undocumented immigrants. As part of a holistic approach, communities must be engaged proactively to find solutions.

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Orlando West, Soweto: youth reflections on 30 years of democracy and beyond

On 1 February 2025, residents of Orlando West in Soweto gathered at Uncle Tom's Art Centre to celebrate their history while reflecting on 30 years of democracy and beyond. The HSRC and the University of Johannesburg hosted the event to share research findings from the HSRC's Democracy@30 Project in Orlando West. By ***Collin Mongale*** *and* ***Tshepo Moloi***

Founded in 1931, Orlando township in Soweto is steeped in history. Most notably, the late President Nelson Mandela and Archbishop Emeritus Desmond Tutu had houses there, and it was central to events during South Africa's apartheid struggle. The Soweto Uprising started in Orlando West and led to the death of 12-year-old Hector Pieterson. Today, 30 years since the advent of democracy, Orlando West is a popular tourist destination, featuring the Hector Pieterson Memorial, Mandela House and Tutu House.

But three decades into democracy, how do the people of Orlando West perceive progress and the remaining challenges?

In 2024, researchers visited Orlando West as part of the HSRC's Democracy@30 Project to find out. Dr Tshepo Moloi from the University of Johannesburg was commissioned to lead a study, assisted by community members.

On 1 February 2025, the HSRC and UJ hosted an exhibition at Uncle Tom's Art Centre to share and discuss their study findings. The event, themed "Orlando West, Soweto: Youth Reflections on 30 Years of Democracy and Beyond", was also attended by tourists from countries such as the United States of America and the United Kingdom, who were there to learn more about the experiences of the youth of Orlando West.

Sally Gaule, who had recently retired from the School of Architecture and Planning at the University of the Witwatersrand, curated an exhibition featuring photographs and artefacts that captured the stories of the Orlando West youth. The event also showcased young talent from Orlando West. Performers from the Umbuyisa School of Arts and Culture presented a traditional dance, and the Ground Zero Trio live band entertained the guests with songs such as Shebeleza (Okongo Mame) by Joe Mafela and Redemption Song by Bob Marley. The song choice was influenced by the theme of the event, which aimed to reflect the Orlando West youth's experiences of democracy, the area's history, current conditions and their aspirations for the next 30 years.

The study

Led by Moloi, the researchers conducted interviews with 35 people, all either residents or individuals who had close connections with Orlando West. Of the 35 participants, 28 were young people born since 1990. The rest were older. Interviews with the older participants helped to provide a historical background on Orlando West before 1994. During the feedback session at Uncle Tom's Art Centre, Moloi facilitated a panel discussion with three youth representatives from Orlando West, who reflected on their experiences of South Africa's 30 years of democracy and their expectations for the next 30 years. Below are some of the youth's comments from the interviews conducted for this study. (Elderly people were also interviewed as they provided historical context on their experiences of Orlando West before 1994. Their perspectives were contrasted and compared with those of the youth.)

Youth reflections on a better life for all: "very big changes"

Many of the young Orlando West residents had mixed feelings about democracy. They have seen developments in some areas but continue to face socioeconomic challenges, as illustrated by the following two quotes:

"I am unable to identify with this celebrated 'democracy' because we are hungry, we are unemployed, and we are unable to put food on the table."

"Growing up after 1989, I was fortunate to witness the changes taking place in our townships and to understand the significance of my father's anti-apartheid activism. I was lucky to attend a multi-racial school for the first time during my higher primary education (Grade 5), as it marked a visible shift towards inclusivity."

For one young man born in 2000, democracy meant diversity and inclusivity. He noted:

"I think that from how we grew up, I feel like we were freer to express ourselves. And we have become a more diverse country. We can now go to multi-racial schools and actually interact with other kids; can actually come back and learn new things and not just be all close-minded and thinking in a one-dimensional way. So, now we are more diverse, and we are free to express ourselves. We're not tied down to be in this way or be in that way."

Similarly, a young woman who was born in 1997 said the advent of democracy brought new and exciting changes to Orlando West. In her words:

"There are very, very big changes. We have Vilakazi Street and lots of restaurants. And many people frequent them. There are people selling craft work. And on the side of the museum, tourists visit that space in big buses. This did not happen before. We receive many visitors from outside South Africa wanting to learn about the history of Soweto. Actually, Orlando West is the main spot if you want to know about the history [of the country]. We can also access Home Affairs within our township. Before 1994 it was not there. We had to travel to Johannesburg to access it."

Most participants concurred that democracy introduced changes in the township, but some felt that these changes had not benefitted (or were not benefitting) everyone. They argued that many young people in the township had been marginalised. A young woman (24) explained:

"I feel like freedom is there. Kids and people are able to express themselves in ways that they wish. But I would say in terms of job scarcity and the impact it has had on the youth of South Africa or rather in our community, it's quite painful to see many of our youth wasting away their lives to alcohol abuse and drug abuse, which in turn, you know, limit their progress in life, because a lot of them are going to wake up at their 40s and they are going to wake up to nothing and they're going to wake up [and realise they] had not done nothing, you know."



Tshepo Ramutumbu speaks at Uncle Tom's Art Centre in Orlando West during an event to share research findings from the HSRC's Democracy@30 Project.
Photo: HSRC



Prof. Charles Hongoro speaks at Uncle Tom's Art Centre in Orlando West during an event to share research findings from the HSRC's Democracy@30 Project.
Photo: HSRC



Dr Sally Gaule speaks at Uncle Tom's Art Centre in Orlando West during an event to share research findings from the HSRC's Democracy@30 Project.
Photo: HSRC

Looking beyond 30 years of democracy

A young woman did not believe that the situation was entirely dire for young people. If the government could resolve the loadshedding problem in Orlando West, the situation would improve for small businesses owners:

"First, loadshedding has a negative effect on small businesses. For example, if you have an internet café, you depend on electricity. If you have a fast-food business, you depend on electricity. But if there's loadshedding or load reduction your business becomes affected. Unfortunately, some people cannot afford to purchase a solar system. It is expensive."

An elderly man born in 1963 believed that vocational training could help youth gain skills for self-employment. He acknowledged the value of the Technical Vocational Education and Training (TVET) colleges but believed more vocational centres could make a difference:

"I once asked a question about vocational training centres, which we had during the time when I was still a learner. They told me about the TVET colleges; that the TVET colleges have been roped in to substitute the vocational schools. I think the business world must also help the TVET colleges to skill young people. After learning theory, they must learn practical work."

Conclusion

This event featured youth reflections on democracy in Orlando West, their memories of the transition period and their perceptions of progress. During the panel discussion, it became clear that some of the young people have benefitted from democracy while others have not. Some have lost hope, turning to substance abuse, whereas others continue searching for opportunities to better their lives.

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Prof. Charles Hongoro, Dr Mpumi Zungu and Fezeka Katise at Uncle Tom's Art Centre in Orlando West during an event to share research findings from the HSRC's Democracy@30 Project. Photo: HSRC



Tebogo Chochoe addresses tourists visiting an exhibition at Uncle Tom's Art Centre in Orlando West during an event to share research findings from the HSRC's Democracy@30 Project. Photo: HSRC



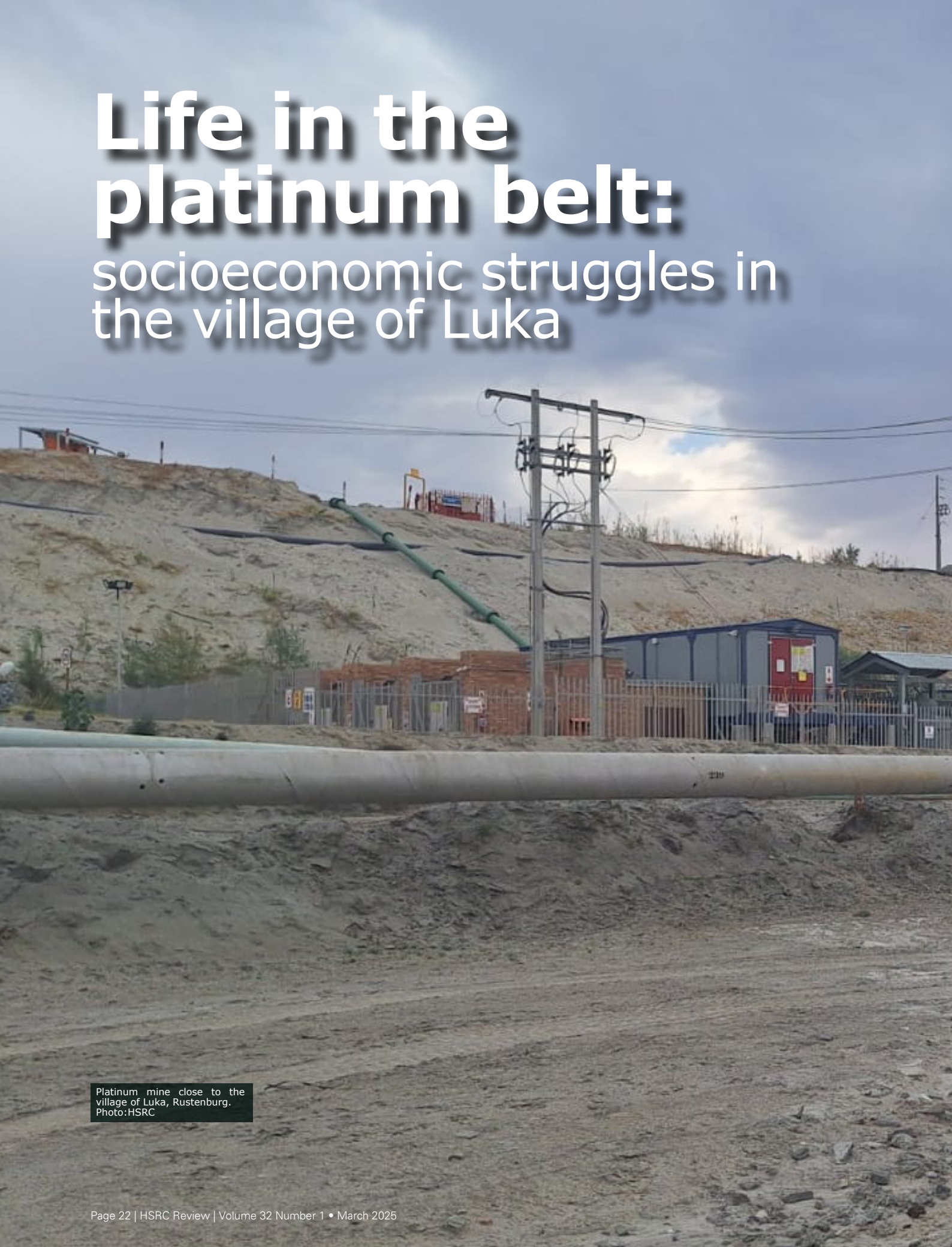
Delegates at Uncle Tom's Art Centre in Orlando West during an event to share research findings from the HSRC's Democracy@30 Project. Photo: HSRC



Delegates at Uncle Tom's Art Centre in Orlando West during an event to share research findings from the HSRC's Democracy@30 Project. Photo: HSRC

Life in the platinum belt:

socioeconomic struggles in the village of Luka



Platinum mine close to the village of Luka, Rustenburg. Photo:HSRC



The village of Luka is located in the mineral-rich platinum mining belt near Rustenburg in the North West province. Despite decades of mining-related economic stimulus, its inhabitants continue to struggle with unemployment, insufficient access to healthcare, housing and other services. ***Modimowabarwa Kanyane*** *reports on community experiences collected as part of the HSRC's Democracy@30 Project.*

South Africa's Bafokeng nation became private corporate landowners in the 19th century. By the turn of the 20th century, they owned almost 20% of all black-owned land in the country's former Transvaal province. This includes the village of Luka, located in the heart of the platinum mining region north of Rustenburg in North West.

In 2024, HSRC researchers visited Luka as part of the HSRC's Democracy@30 Project. They studied the village's history and conducted 35 in-depth interviews with community leaders and other community members aged 20 to 75. The participants discussed their social and cultural activities, as well as challenges related to environmental degradation, crime, migration, employment, housing, and access to services such as health and education.

Arts and heritage

Some community members lamented the government's insufficient focus on arts and heritage in Luka, compared to other places in North West. It can be argued that the provincial government – particularly the department responsible for arts and culture – has failed to unite communities along the heritage lines. Partial support for cultural heritage is tantamount to abandoning the country's unity project, which risks widening divisions between communities and exacerbating the gap between government and citizens.

A participant suggested:

"If all of us can come together … to be honest, back in the day, we used to have a day where the king would call all the villages to come and celebrate our heritage as Bafokeng. That needs to be revived. The crime rate among youth has surged because young people are no longer involved in arts and heritage like they used to be before."

Social integration/cohesion

Some participants believed there had been progress in social integration and cohesion in Luka. However, more effort was needed to educate the public about cultural tolerance, and these efforts should be instilled in learners from a young age. Most interviewees felt that principles such as respect, Ubuntu, non-tribalism, non-racialism, equality, diversity, inclusivity, and mutual respect among people of different cultures should be prioritised, especially among the youth. A female teacher from one of the local schools said:

"The Zulus think they have power over us … In one of our schools, there is still a war between Basotho, Batswana and Maxhosa. The Batswana do not want learners who are Xhosa or Basotho to be admitted to the school … Even when a school succeeds in admitting learners of different cultures, there is division and segregation among the learners according to their different cultures."

Inclusive economic growth

One participant, a man involved in entrepreneurship, expressed frustration over the limited opportunities for local businesses to subcontract in the platinum belt:

"One of the reasons I am refuting claims that Impala is serious about widening local economic participation is because … the conditions set by the mine are quite strange and manipulative. The value chain is too narrow and intentional about strengthening the existing monopolies. If you are given a sub-contract to supply toilet paper, light bulbs, high mast bulbs, and door and window handles, for example, they strictly need the ones from Bidvest. Bidvest is a white-owned firm. So where is local economic participation there?"

Housing and spatial development

Most participants indicated that only a few people in Luka had received government support for housing in the form of RDP houses, with many residents still living in shacks made of corrugated iron sheets. During a focus group interview, a female participant, who also lives with a disability, expressed her frustrations with the government on the issue of housing:

"We have a blind man in that other street, completely blind … I can take you there if you want, but you will need to [be emotionally] strong, but what you will see there is quite devastating. That man is staying in a shack; he doesn't have water and electricity. His neighbours will, from time and again, allow him to use their pit toilet, and they give him water and help him with phone charging. He uses a paraffin stove, and you can imagine the process he follows to feel that the stove is on whenever he wants to cook. He once got his fingers burnt because of that. I raised the issue of this man many times, but no one listened. I wish they could listen to us. If they can't build houses for people living with a disability, what about others?"

Gender equality

Participants unanimously agreed that the treatment of women by the Bafokeng Traditional Council and the municipality had greatly improved. They noted that women were now recognised and entrusted with leadership roles, especially in the mines and the government. One woman said:

"Coming to this, they try to prioritise women, women have been observed taking up significant roles in sectors that have been known to be dominated by men. Today, we are working in large numbers as females. We also have female councillors who reflect a collective understanding of gender issues … so, yes, I can say that there are changes [in] how women are seen in society."

Safety and security

The residents of Luka no longer felt safe and said the village had become a crime hotspot due to the mining activities in the area. A female participant said:

"I am happy that we are doing this interview two days after I managed to escape a serious criminal ordeal. They wanted to hijack me ... there [pointing to a direction] after the railway. I was assisted by Bafokeng Security because they suspected the combi that was following me, I think they have been looking for it because it was the same car used to commit crime elsewhere. We are not safe here."

Mining, immigration and migration

Platinum mining started in the 1960s, but villagers claim they were not consulted about the development despite living in Luka for over a century. Over the decades, their surrounding land has been transformed into mine dumps, violating environmental laws. Mining in Luka also brought an influx of people from neighbouring villages and other countries in Southern Africa. Participants expressed mixed feelings about this issue. Some disapproved, worrying about the effect of the influx on healthcare and other essential services. Others worried about competing with foreign nationals for the few employment opportunities in Luka. They also attributed the high crime rate in Luka to undocumented foreign nationals who were not easily tracked by law enforcement. However, some residents welcomed the influx, as residential property owners profited from renting backrooms to newcomers, and entrepreneurs saw business opportunities. A female landlord explained:

"The influx of foreigners in our area does not always come with negative stuff, but we are also making a living out of the situation because we are accommodating them in our backrooms, and this is our income. Almost everyone here has got backrooms, and they are renting … I have been doing this business since my husband passed away 28 years ago."

Access to health

Many participants believed the local clinic in Luka was not in a good condition and faced capacity constraints, often resulting in people not receiving timely medical care.

"Here in Luka, we have one local clinic, and you can tell that the clinic is overwhelmed and understaffed. Put that aside, one thing I don't like about this clinic is that it closes at around 5pm, and I ask myself whether this is what they mean when they talk about access." – a female participant

"As a nurse, I can tell you that I don't take pleasure in seeing people returning home because we have no medication in the clinic. Some elders will come here and stand in long queues only to be told that we are closing or there is no medication." *– a female nurse*

Access to education

Luka has five schools: Thethe and Molotlegi Secondary Schools, and Ramotse, Mogono and Luka Primary Schools. However, focus group interviews with five young people aged between 21 and 27 revealed that access to higher education remains a challenge. This has resulted in a lack of employment opportunities for those who do not progress to tertiary education. The distance from Luka and Rustenburg to Potchefstroom and Mafikeng – where the North-West University (NWU) has campuses – was a hindrance. A satellite campus in Luka or Rustenburg could bridge this gap and improve access to further education for local youth. The widespread unemployment rate among the youth is also attributed to the lack of skills development training programmes in the Luka area.

Concluding remarks

The situation in Luka mirrors the struggles in many communities in rural South Africa. Endowed with natural minerals, one might expect the mining industry to directly benefit Luka. According to the participants, this was indeed envisaged by the country's mining legislation and social labour plans or agreements entered with Luka. It is, therefore, ironic that Luka remains characterised by poverty, unemployment and lack of access to water, quality healthcare and housing, despite being situated in a platinum mining belt that provides significant economic stimulus for the country.

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Platinum mine close to the village of Luka, Rustenburg. Photo:HSRC

Land use and land cover changes in QwaQwa:

implications for service delivery 30 years after democracy

Over the past 30 years, land use and land cover have changed significantly in QwaQwa in the Eastern Free State. The abandonment of cultivated land and increased urban growth have strained service delivery and affected livelihoods. These findings emerge from the Democracy@30 Study, conducted by the HSRC and the University of the Free State in 2024. The study aimed to provide a platform for local communities to assess progress since the advent of democracy in South Africa and to reflect on the next 30 years in pursuit of a promised "better life for all". By ***Grey Magaiza****,* ***Tholang Mokhele****,* ***Mokhantšo Makoae****,* ***Zanele Mncube*** *and* ***Nompumelelo Zungu***

Since the advent of democracy, human activities have transformed land use and land cover in the predominantly rural areas of QwaQwa, located in the eastern part of South Africa's Free State Province.

To understand how these changes affected people's lives, researchers from the HSRC and the University of the Free State (UFS) QwaQwa Campus visited local communities in 2024. This study formed part of the HSRC's Democracy@30 Project, which aims to collect stories about people's experiences of democracy over the past three decades.

QwaQwa is situated in the Afromontane grassland biome and has a long history of subsistence farming and food self-sufficiency. As a former homeland, it once had a thriving industrial base, subsidised by the state and generating employment opportunities. This history highlights the importance of policy changes and their transformative effects on land use and land cover.

By examining post-democratic land use and land cover in QwaQwa, HSRC and UFS researchers explored the impact of human activities and how land use could be regulated amid increasing pressure on service delivery infrastructure, such as water and sanitation, and on sustaining food security, which is threatened as a result of declining agricultural or cultivated land.

The emerging changes also show the need to regulate urban planning to minimise service delivery protests linked to urban sprawl. Urban sprawl is a complex phenomenon. It results from unplanned expansion due to poor urban planning and population growth.

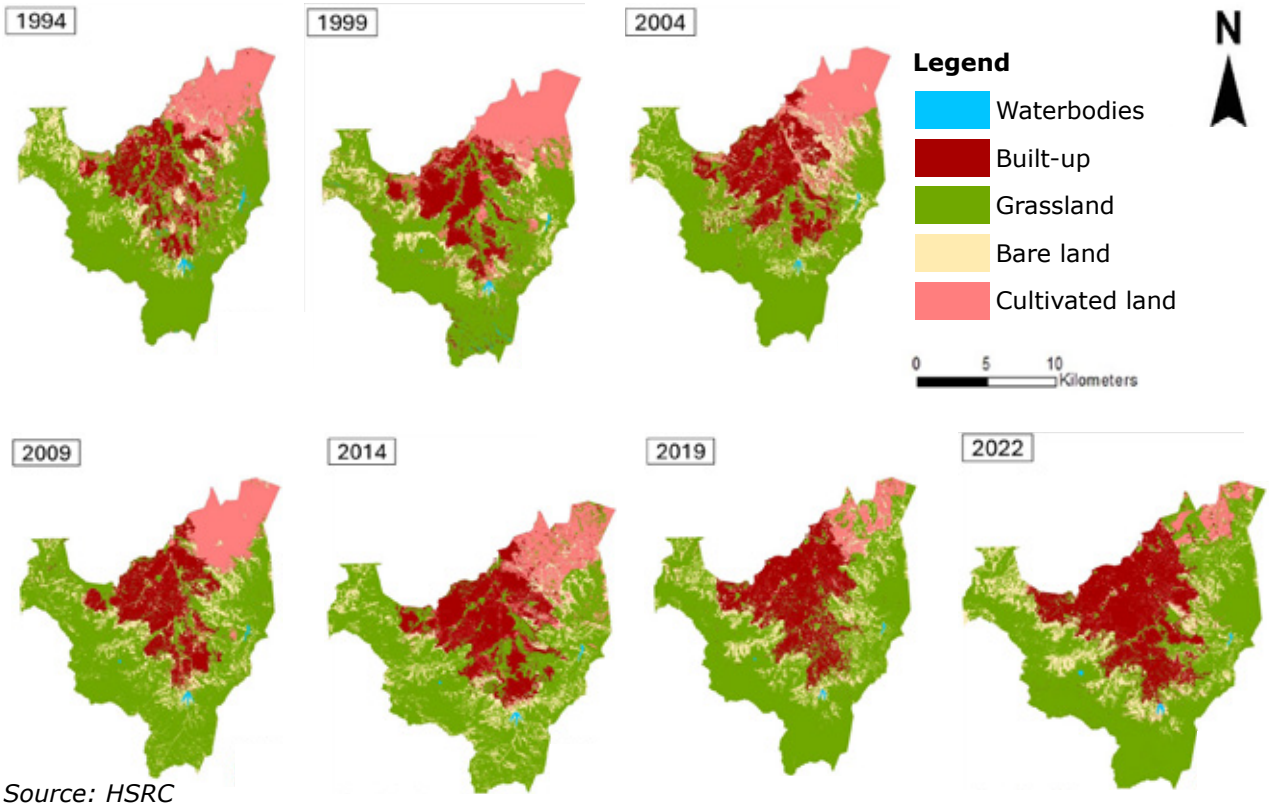
Using Geographic Information Systems (GIS) and remote sensing methods, the researchers conducted a spatiotemporal analysis of land use and land cover changes in QwaQwa. They showed how these might have policy implications for the area's socioeconomic development and sustainable urban growth.

Land use and land cover changes between 1994 and 2022

By classifying land into five categories – waterbodies, grasslands, built-up areas, bare land and cultivated land – the researchers illustrated how the QwaQwa urban sprawl has resulted in an increase in the built-up areas and a decrease in cultivated land, grasslands and bare land (Figure 1). The maps from 2014, 2019 and 2022 show how cultivated land has been abandoned or part of the grasslands or bare land in the area.

"Over there, were our grazing lands, and now, it's just full of houses." – a community member

Figure 1. Land use and land cover changes in QwaQwa (1994–2022)



Source: HSRC

Table 1 quantifies these changes in square kilometres and as a percentage of QwaQwa's total land area. Built-up areas expanded from 15.71% in 1994 to 24.66% in 2022. Meanwhile, cultivated land decreased from 19.60% to 4.61%, and water bodies declined from 0.49% to 0.19%. These shifts pose a significant threat to food security and overall welfare in the region. Notably, cultivated land abandonment did not result from expanding industrial investments in the area but rather from livelihood transitions that negatively affected self-sustenance and land use management.

Table 1. Area coverage (km2/%) of land use and land cover classes (1994–2022)

Class	1994	%	1999	%	2004	%	2009	%	2014	%	2019	%	2022	%
Water Bodies	3.43	0.49	3.23	0.47	1.39	0.20	2.17	0.31	1.59	0.23	1.00	0.14	1.32	0.19
Built-up	109.20	15.71	110.13	15.87	126.77	18.24	123.15	17.73	142.76	20.54	152.25	21.92	171.27	24.66
Grassland	380.83	54.80	380.88	54.89	369.62	53.19	391.94	56.42	371.33	53.43	406.93	58.58	396.78	57.12
Bare Land	65.33	9.40	73.58	10.60	76.62	11.03	80.02	11.52	90.79	13.06	91.91	13.23	93.28	13.43
Cultivated Land	136.20	19.60	126.03	18.16	120.55	17.35	97.35	14.01	88.48	12.73	42.56	6.13	31.99	4.61

Source: HSRC

Strain on service delivery

Urban sprawl has led to previously traditionally controlled lands being converted into built-up areas with private housing. However, this growth has not been matched with the necessary urban infrastructure development to support residents' needs.

Unplanned urbanisation in QwaQwa has primarily occurred within pre-existing built-up areas, where residents have either expanded their homes by adding additional buildings or acquired new sites to create rooms for rentals. The rising demand for student accommodation at the University of the Free State and the Maluti Technical Vocational Education and Training campuses has further encouraged this trend.

Poor maintenance and the local government's inability to repair the ageing water, electricity and sanitation infrastructure have contributed to frequent breakdowns, which negatively affected residents' wellbeing.

> *"We are looking at the level of pollution in the streets and in the rivers ... even the sanitation system has collapsed."* – a community member

These issues have triggered service delivery protests in the area, which could lead to instability in local governance.

The influence of macro-policy decisions

The pressure to urbanise stems directly from macro-policy decisions, such as the Reconstruction and Development Programme (RDP) and the Urban Development Framework. At the dawn of democracy, these policies led to the construction of many houses in the area. While important for addressing the housing backlog, this construction was not aligned with integrated urban planning as a policy imperative. Poorly implemented policy decisions exposed QwaQwa to inefficient local governance.

Key informant interviews with most residents in the locality pointed out that most of the substantial infrastructure belonged to the "Mopeli regime", after successive post-democratic governments in the previous 30 years had failed to maintain it.

> *"We last had those [services] in the ruling time of Mr Mopeli. The ANC does nothing! The dams belong to Mr Mopeli, schools belong to Mr Mopeli, but look what they are doing to them."* – a community member

Some policy and practice suggestions

Over the past 30 years, land use changes have led to decreased land use for agricultural production. Moreover, land use was not converted for economically productive industries, posing a serious threat to livelihoods and human security in the context of poverty and unemployment. Local governance in QwaQwa should find ways of re-engaging the residents in governance and ensure that urban development follows a structured and integrated approach, which is sensitive to the local context as required by the Integrated Urban Development Framework. This means that land use and urban planning requires intentional coordination between municipal and traditional authorities. A regulated urban sprawl will enable local governance structures to plan and effectively budget for land use transitions.

Policy should inform updates on infrastructure maintenance plans in QwaQwa, and local government authorities must prioritise infrastructure development and maintenance. The loss of water bodies due to poor dam maintenance and governance is a case in point, which exacerbates the scarcity of access to bulk water in the overpopulated area. During the key informant interviews, community members reported being able to identify dams and multiple water leaks while still lacking water in their household taps.

> *"We used to have water at Poohong or Sefikeng … We used to take money there, but the water came from Fika Patso (dam) to our taps. Even from the springs, but when the springs dried up, we would get water from our taps. Herein lies the problem of why I say I don't see the benefits of democracy. When it arrived, the running water stopped …"* – a community member

Local economic development

Local economic development (LED) should build on available resources, yet QwaQwa's LED plans have not sufficiently considered ecological services in the area. Given its grassland biome, and as shown by the land use and land cover changes in the area, significant areas of grassland can still be used for agro-based livelihoods.

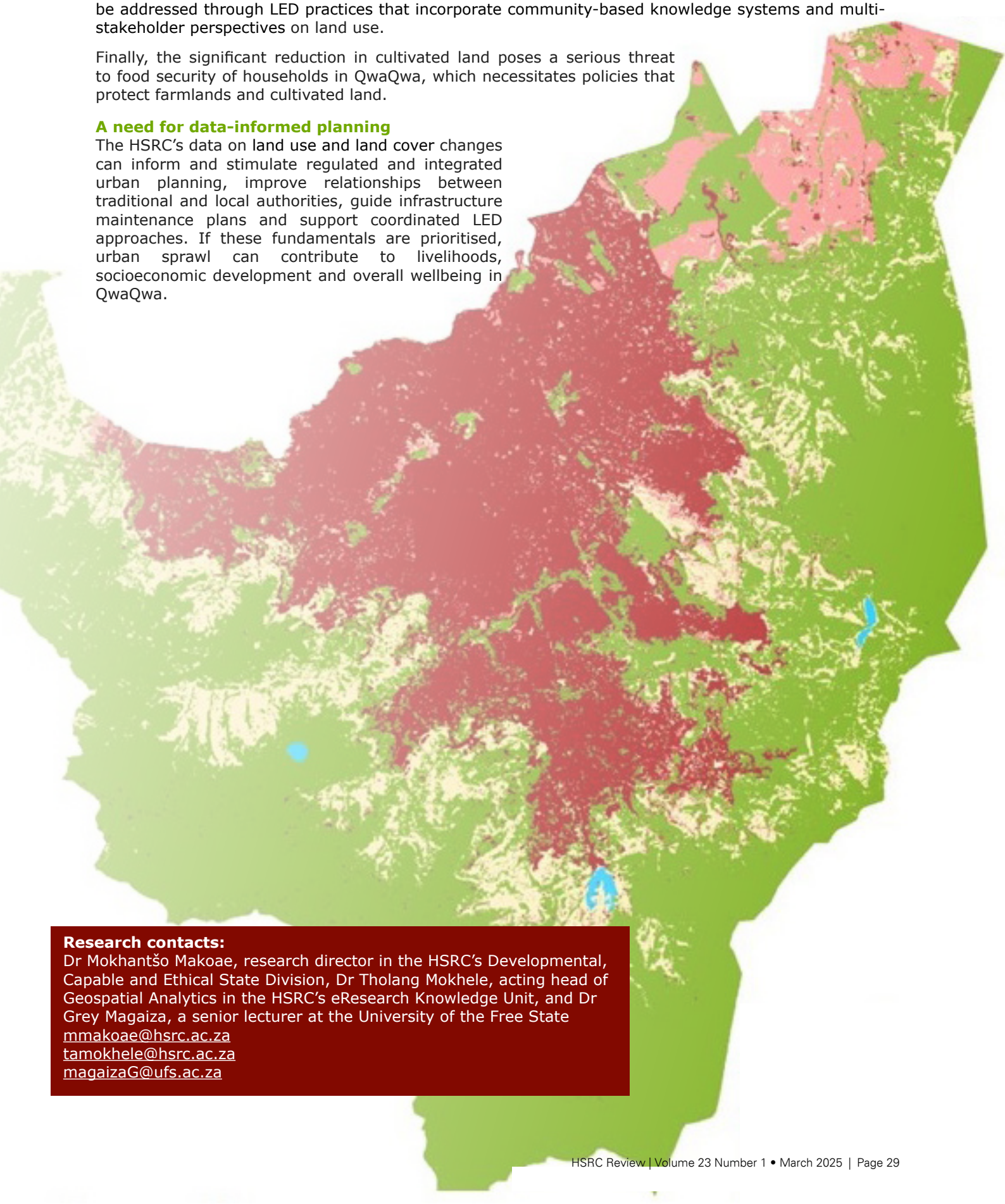
A deliberate strategic focus on climate-smart agriculture projects for domestic consumption could reduce unemployment, reduce food insecurity and promote subsistence green agriculture practices. Developing viable and profitable agriculture value chains could help mitigate the impact of climate change.

The land use and land cover changes show an increase in what may be termed "idle" land, and this can be addressed through LED practices that incorporate community-based knowledge systems and multi-stakeholder perspectives on land use.

Finally, the significant reduction in cultivated land poses a serious threat to food security of households in QwaQwa, which necessitates policies that protect farmlands and cultivated land.

A need for data-informed planning

The HSRC's data on land use and land cover changes can inform and stimulate regulated and integrated urban planning, improve relationships between traditional and local authorities, guide infrastructure maintenance plans and support coordinated LED approaches. If these fundamentals are prioritised, urban sprawl can contribute to livelihoods, socioeconomic development and overall wellbeing in QwaQwa.



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AI Image, Bing



Democracy@30: "We are not seen" – experiences of Langa residents living with disabilities

As South Africa celebrates 30 years of post-apartheid democracy in 2024, individuals with disabilities remain among the most discriminated against and marginalised groups in society. ***Dane Isaacs*** *and* ***Diana Sanchez Betancourt*** *share insights from the first phase of the HSRC's Democracy@30 Project, conducted in the township of Langa, Cape Town.*

In 2023, the World Health Organization reported that an estimated 1.3 billion people (or 16% of the global population) live with disabilities. Every year, 3 December is recognised as International Day of Persons with Disabilities, which aims to raise awareness and promote the rights and well-being of individuals with disabilities.

According to Statistics South Africa, in 2022 approximately 3.3 million individuals lived with disabilities in South Africa. The South African government, like various other governments around the world, has introduced several policies and legislation to combat exclusion and discrimination as well as to promote the rights and improve the participation of people with disabilities.

Yet, people with disabilities continue to face significant marginalisation in South Africa. They encounter various forms of discrimination and exclusion, face significant levels of unemployment and have trouble accessing high-quality and inclusive education.

The HSRC recently concluded the first phase of its Democracy@30 Project. Researchers visited several sites across South Africa to conduct fieldwork, including Makhanda, Nelson Mandela Bay and Cwebe in the Eastern Cape; Sweetwaters and Wentworth in KwaZulu-Natal; QwaQwa in the Free State; Langa in the Western Cape; and Vuwani in Limpopo.

The research team collected stories of people's experiences with democracy over the past 30 years. They also explored community views on what the next 30 years would need to look like to achieve the promised "better life for all" in South Africa.

Disability in Langa

In Langa, data collection included a focus group discussion with nine residents from the township. Six of these residents were living with disabilities, two were mothers of individuals with disabilities, and one was a teacher of learners with special needs. The results from the focus group discussion provided insights into the challenges and marginalisation still experienced by people with disabilities living in a South African township after 30 years of democracy.



King Langalibalele Drive, Langa, Cape Town. Source: HSRC

Findings

Participants in the focus group discussion expressed strong feelings of disappointment and dissatisfaction with democracy. Participants with disabilities described being particularly marginalised, receiving no support from the South African government (including ward councillors) in terms of employment opportunities, housing, transport, public infrastructure or educational support to learners with disabilities. Participants with disabilities reported only receiving attention from the government during election periods. For one participant, occupying this position of marginalisation was a strong predictor of choosing not to participate in democratic elections.

Finding employment

Another participant noted the limited progress in employment opportunities for people with disabilities. A mother described how her young-adult daughter with a visual impairment was unable to enter the labour market due to not having matric, vocational skills or certification from an institution. The daughter reported that she was unable to pursue entrepreneurship as a person living with a visual impairment due to inadequate support from the government.

> *"We are struggling to get jobs, or start businesses … Government does not help with skills …"* – participant with a disability

Participants with disabilities have been forced to live on social grants. Similarly, a mother of a child with autism described her difficulty in finding employment. She has been forced to support her child with a social grant.

Access to housing

Participants reported not having access to proper housing.

> *"I am a disabled person. Till now, I don't have a house. I don't have an RDP house. I registered [a] long time ago … 10 years, 12 years."* – participant with a disability

> *"People [without disabilities] got very easy to these houses."* – participant with a disability

Informal and RDP houses were described as small and not conducive for adults or children living with disabilities. One participant, who has a mobility impairment, reported being forced to live with her sister in a third-floor flat. This participant indicated being placed on a waiting list for housing for more than a decade, while individuals without disabilities were described as having greater and easier access to housing.


Gugu Sthebe Centre, Langa, Cape Town. Source: HSRC

Transport and public infrastructure

Participants highlighted difficulty accessing disability-friendly transport in Langa. They must wait for extended periods to gain access to suitable transport, such as Dial-a-Ride, a kerb-to-kerb service for individuals unable to access mainstream public transport.

> *"I am a part of Dial-a-Ride … you need to book seven days in advance if you want to go somewhere. How can I live my life? If I want to go to town, I must wait for a week … We are very limited. We are not given access to live our lives the way we want to … We are not seen. It is frustrating … We are actually taken like we don't exist at all. We only exist when we*

are needed for something. Then that is done. We are not seen at all … We are people too … Because we are disabled, it does not mean that you are not a person. I am not my chair." – participant with a disability

Focus group participants with disabilities were particularly hesitant to use mainstream modes of public transport, citing harsh and unfair treatment by drivers of these modes of transport. However, they often had no other option.

"Taxi owners are very rude … They swear at us and say hurtful stuff to us." – participant with a disability

With regard to public infrastructure, participants described the roads in Langa as unsafe for people who are visually impaired and said that public infrastructure did not cater for persons with disabilities.

Lack of education facilities

Finally, participants indicated that no education facility supported learners with disabilities in the township. One participant said she started an inclusive early childhood development facility (according to the early childhood development policy guidelines) in her home for learners with diverse needs to address the gap.

"There is nothing … I am the first one to open the institution … I am using my house… Government is doing zilch." – participant

In the absence of government support, visionary individuals like this participant struggle to make a real difference. She also identified denial and stigma as a significant barrier for parents accessing adequate educational support for learners with disabilities.

Stronger advocacy and action

The participants also emphasised a need for stronger advocacy and action.

"We need a person with a disability who can stand [up] for us; who is not just there for their own needs." – participant with a disability

"Government needs to come up with something and stop saying that [they] are going to do something but do nothing about it." – participant with a disability

Recommendations and conclusion

This research highlights current service delivery gaps for individuals with disabilities, specifically in South African townships. Overall, and despite policies aimed at inclusion, the experiences of the Langa participants revealed their ongoing marginalisation. The significant barriers to employment, housing, transport, public infrastructure and education require urgent attention and coordinated change.

We need to prioritise equitable service delivery for people living with disabilities in townships to improve their citizenship and participation and to ensure they feel valued as full members of their community. One way this could be achieved is through the proper application of the Batho Pele principles by local spheres of government to ensure fair access to service delivery in townships such as Langa. These principles are described in a set of guidelines aimed at putting people first in public service delivery, with Principle 3, Access, highlighting the need to ensure equitable access to services.

There should also be greater representation of people with disabilities, alongside disability experts and activists, in all government sectors. Such action is important to guide and monitor equitable and adequate access to services for individuals with disabilities – more importantly, service delivery that promotes and prioritises their rights and needs.

Lastly, workshops and awareness campaigns with community members and government officials should be hosted in the communities where individuals with disabilities live. These initiatives are important to teach government officials and community members about the challenges and conditions experienced by these individuals and to improve their citizenship and participation in service delivery within their communities.

This is not just a call to policymakers, government officials, civil society organisations and disability experts and activists but a collective responsibility to ensure that people with disabilities are no longer marginalised. Together, we can create a society that truly values and upholds its rights.

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The value of science diplomacy:

African PhD students benefit from academic collaboration between Africa and the Netherlands



The HSRC, in collaboration with several African academic institutions, social partners and Dutch universities, is fostering scientific collaboration between Africa and the Netherlands. This partnership is enhancing research opportunities for African PhD students, including three from South Africa, who have been selected to conduct research in the Netherlands. They are part of the Graduate Research on Worldwide Challenges (GROW) Programme, which focuses on finding solutions to pressing United Nations sustainable development goals (SDGs). By ***Thokozani Simelane****,* ***Emmanuel Ojo****,* ***Thulisile Mphambukeli****,* ***Roel Kamerling*** *and* ***Lia van Wesenbeeck***

Scientific collaborations between the Netherlands and African nations have evolved. Initially, these collaborations were largely driven by development aid from the Netherlands to support scientific capacity in Africa. Today, they are increasingly based on shared goals, aiming for balanced collaborations and mutual benefits.

Several factors have influenced this shift, such as the growing recognition of scientific expertise in African countries and the need for global cooperation in addressing shared challenges. The Netherlands, in turn, is committed to advancing science diplomacy in international collaboration in science and technology

The GROW Programme

Six Dutch universities have partnered with 22 African academic institutions and 17 social partners to enhance scientific collaboration. In South Africa, the HSRC and the Universities of the Witwatersrand, Johannesburg and the Western Cape participate in this doctoral research initiative.

The Graduate Research on Worldwide Challenges (GROW) Programme, co-funded by the Marie Skłodowska-Curie project from the European Union, promotes interdisciplinary, international and intersectoral research. It engages academia, industries, governments and civil society to address global developmental challenges. In 2024, 51 African PhD students were selected to conduct research in the Netherlands, developing and testing solutions to accelerate Africa's progress towards achieving the UN sustainable development goals (SDGs). Three students are from South Africa: Tshimangadzo Greenberg, Nycholas Oliveira and Mukhethwa Netshiombo.



Tshimangadzo Greenberg at a Global Initiative lunch hosted by the Delft University of Technology.

"Doing a PhD has always been one of my 'Big Hairy Audacious Goals', and being selected for the prestigious GROW fellowship at a world-leading university is a significant milestone," says Greenberg, who is at the Delft University of Technology's Centre for Entrepreneurship exploring the use of gamification to stimulate entrepreneurship.

"I am excited to undertake impact-driven, multidisciplinary work that goes beyond research by developing solutions for South Africa's youth. With soaring youth unemployment rates and a stagnating economy, entrepreneurship could be a powerful tool to counteract these challenges. However, while business-related subjects at high school aim to develop entrepreneurial skills, they remain largely theoretical, failing to equip students with practical knowledge. My research seeks to address this gap by exploring how AI-powered serious games can make entrepreneurship education more interactive, personalised and accessible to learners at all knowledge levels."


Nycholas Oliveira and his wife Robyn at De Haar Castle near Utrecht in the Netherlands

Oliveira's work at Vrije Universiteit Amsterdam focuses on the topic, "On Earth as in Heaven? Christian Prefigurative Politics and a Preferred African Future". "I felt incredibly privileged to be given this opportunity; the selection process was very competitive. My research will be at the intersection of religiosity and sustainable development, the mutual influence of each on the other, and with reference to prefigurative politics as a heuristic for imagining how Christianity in Africa should navigate the relationship between religion and development."

Oliveira is eager to expand his knowledge, develop a thoughtful perspective in his field and build a strong collaborative network across a variety of disciplines and sectors around the world.



Prof. Wieteke Willemen, chair of the joint SDG research programme committee
Photo: Robèrt Kroonen and GROW


Working session facilitated by Prof. Emmanuel Ojo, Wits University
Photo: Robèrt Kroonen and GROW


Brainstorming session among the participants at a GROW meeting held in the Netherlands.
Photo: Robèrt Kroonen and GROW

Netshiombo, the third student from South Africa, is based at Amsterdam University Medical Center and is focusing on work related to environmental sustainability in the South African healthcare sector. Beyond South Africa, other African students are addressing critical challenges. Sally Odunga from Kenya is investigating how climate change-induced environmental shifts have disrupted the distribution of fish stocks, household food consumption, nutrition, income levels and the overall health of household members. Also see testimonies from other African students below.

Testimonies from African students

Temitope Agbana from Nigeria: "I came to Delft University of Technology (TU) to study microwave systems and radar signals. I started part-time work at Delft Centre for Systems and Controls where I combined artificial intelligence and optimised optical systems to detect malaria and other neglected tropical diseases as my PhD research. I collaborated with partners in industrial design and the nearby Leiden University Medical Centre to develop several diagnostic instruments. Now I run my own company, AID-x Medical, with people employed in the Netherlands and Nigeria to bring these to the market."

Victoria Manya from Nigeria: "As a PhD researcher, I joined the African Studies Centre, Leiden (ASCL) to acquire skills that integrate research and development into startup ecosystems in Africa. I am building a community of practice to incorporate my findings into decision-making tools that help actors comprehend Africa's ecosystem contexts. With this PhD, I aim to prepare myself to run a university-based incubator with direct linkages to the innovation ecosystem in Africa."

Anteneh Tesfaye Tola from Ethiopia: "As an academic and architect at Addis Ababa University (AAU), I already collaborated with TU Delft before I decided to do a PhD project there. Together with AAU, we are now developing new housing concepts in collaboration with private and public actors from Addis Ababa. After my PhD, I aim to share my new insights as a teacher, practitioner and researcher in Addis Ababa again."

The power of science diplomacy

Science diplomacy promises to strengthen both diplomatic and scientific relations while enhancing skills, fostering knowledge exchange and promoting sustainable solutions. This approach recognises the interconnectedness of various sectors in addressing global challenges. Within the framework of the UN SDGs, GROW has identified the following core areas for research collaboration, demonstrating the potential of science diplomacy in driving international scientific partnerships:

Agricultural research and food security: Africa and the Netherlands rely significantly on their agricultural sectors. Cooperative research projects in GROW aim to improve food security, sustainability and agricultural productivity in both regions.

Health and biomedical research: Collaborative health-related research focuses on non-communicable diseases, maternal and child health, and infectious diseases.

Environmental and climate research: With Africa's high susceptibility to the effects of climate change, GROW emphasises water management, renewable energy and climate adaptation as the main topics of collaborative research. With its knowledge of water management, partner universities in the Netherlands seek to co-create creative answers to water-related problems.

Education and capacity building: The first GROW PhD recruitment call selected 51 junior African researchers, equipping them with advanced training and a platform for knowledge exchange and enabling them to contribute to research and development in their home countries.

Science diplomacy: advantages and overcoming challenges

One of the main advantages of science diplomacy is the sharing of information and technology. The African scholars bring a unique understanding of the context into the collaborative projects and can play a pivotal leadership role by translating new understandings or solutions to the same context throughout Africa and beyond. GROW emphasises skills development in, for example, entrepreneurship and policy adoption. Advanced technologies and procedures are brought to African research initiatives of universities in the Netherlands, which promotes innovation and enhances research outcomes. Working together helps Africa and the Netherlands to address global issues more successfully. Through long-term partnerships, Africa and the Netherlands can create more solutions to shared wicked problems that plague the world irrespective of being in the global north or global south.

Despite its successes, scientific cooperation between Africa and the Netherlands faces obstacles such as the need for inclusive, equal and sustained partnerships, logistical challenges and sustainable funding constraints. Investing more in research and developing actionable solutions is crucial. Long-term funding is essential for the success and continuation of collaborations. To ensure active involvement and equal benefits for African institutions, partnerships must be built on mutual respect and understanding of cultural and contextual differences. Recognising and leveraging Africa's robust indigenous knowledge systems is vital for co-creating solutions to global

challenges. Enhancing training programmes, equipment and laboratories will enable African researchers to conduct state-of-the-art research. Sustainable cooperation requires long-term alliances based on trust and common goals, making it essential to build strong networks and promote continuous engagement with African partners.

The success of the GROW initiative would not have been possible without the support of the Dutch Embassies, which have facilitated academic mobility and active participation in the GROW programme through favourable visa arrangements. The experiences and testimonies shared by previous beneficiaries of Dutch–Africa collaboration underscore the importance of this academic exchange for the success of international partnerships between Africa and the Netherlands.

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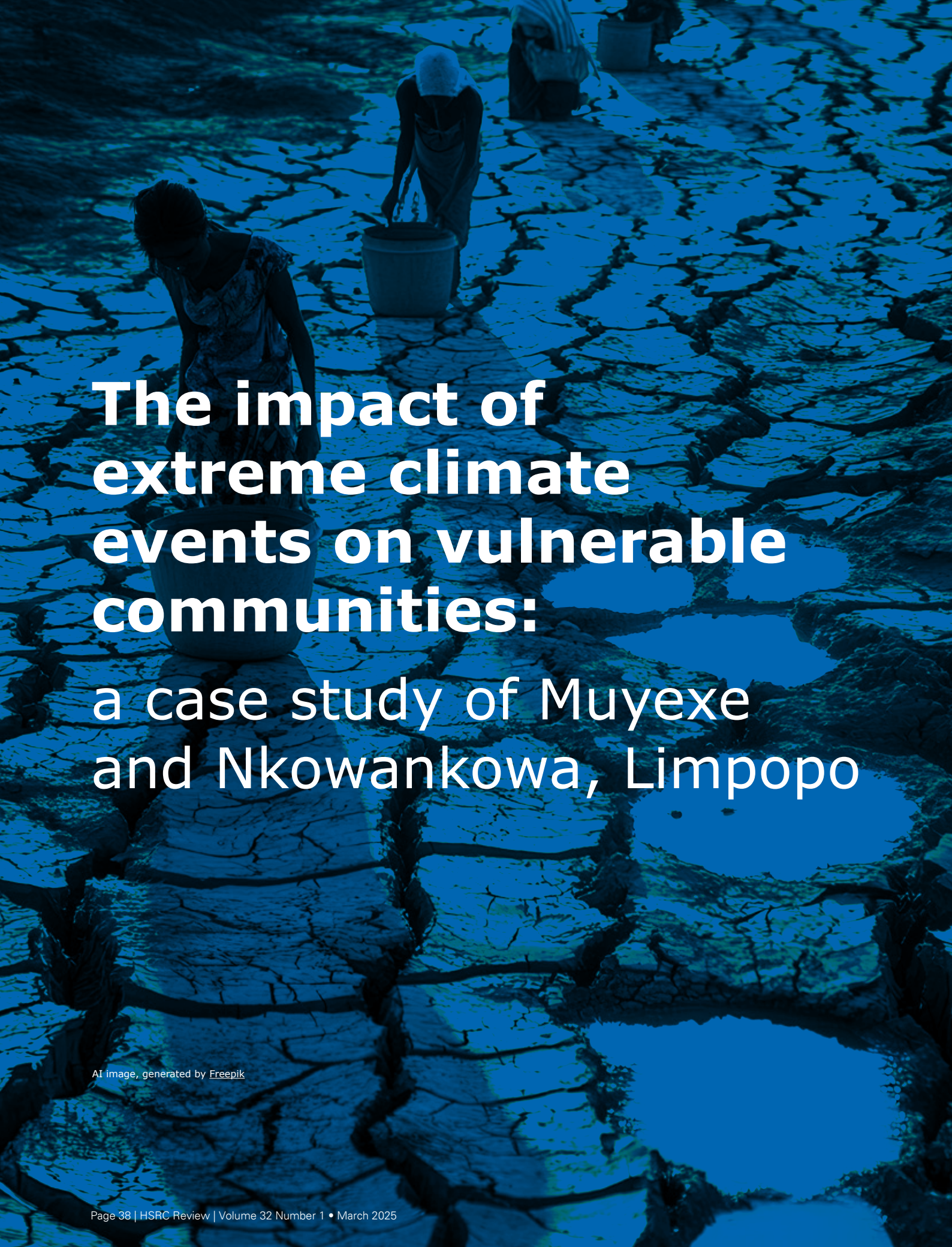
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Delegates at the GROW event, 2024. Photo: Robèrt Kroonen and GROW



The impact of extreme climate events on vulnerable communities:

a case study of Muyexe and Nkowankowa, Limpopo

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Extreme climate events are projected to increase in frequency and severity, heightening their impacts. This highlights a pressing need for effective disaster risk reduction strategies, improved infrastructure, and community resilience initiatives. In response, the HSRC conducted an empirical study on climate change, examining the vulnerability of communities in the townships of Muyexe and Nkowankowa, Limpopo, and their perceptions of drought and flood disasters. By ***Fhulufhelo Tshililo****,* ***Gcina Malandela****,* ***Tshegofatso Ramaphakela****,* ***Caiphus Baloyi****,* ***Fanelesibonge Masinga****,* ***Wilfred Lunga*** *and* ***Charles Hongoro***

Climate change is among the greatest challenges of the 21st century. According to the Sixth United Nations Intergovernmental Panel on Climate Change (IPCC) report, extreme weather events – including droughts, floods, storms, heatwaves, and cyclones – are projected to become more frequent and have greater financial repercussions. South Africa, with its semi-arid climate and rainfall variability, is particularly vulnerable to such events.

In the past two years, 80 reported disasters in South Africa have affected over 22 million people, costing more than R113 billion. In April 2022, KwaZulu-Natal experienced its worst floods on record. The floods caused the deaths of at least 459 people, displaced more than 40,000 people, destroyed more than 12,000 homes, and left 45,000 people temporarily unemployed. The losses caused by the floods were estimated at R17 billion.

South Africa also experiences frequent droughts, which significantly impact agriculture – a critical sector of the country's economy. These setbacks negatively affect employment opportunities, food security, foreign exchange and household incomes.

Subsistence farming plays a significant role in food security and income generation for households. Therefore, subsistence farmers who rely on rainfed agriculture are especially vulnerable to drought, which reduces production, increasing food insecurity and loss of income.

Drought also drives up food prices due to reduced yields, severely affecting poor households that already spend a large portion of their income on food and the worsening food insecurity. The devastating impacts of extreme climatic events in South Africa underscore the urgent need for effective disaster risk reduction strategies through comprehensive policy interventions and local community-based actions.

Assessing climate vulnerability in Muyexe and Nkowankowa

Between January and April 2023, a multidisciplinary HSRC research team studied the impact of climate change in the townships of Muyexe and Nkowankowa in the Mopani District of Limpopo, focusing on community vulnerability and perceptions of drought and flood disasters.

Researchers collected data using transect walks, a systematic method of walking through specific areas affected by hazards, following a predefined path to observe, document, and analyse the spatial distribution and impacts of the hazards. They also conducted key informant interviews and focus group discussions with government officials, residents and community leaders.

Their findings revealed that human activities and poor development practices, such as inadequate urban planning, inadequate infrastructure, rapid population growth, and the mushrooming of informal settlements, worsened extreme climate disasters in these areas. Socioeconomic inequalities and poverty further compound the risks.

Flooding at disaster levels

During key informant interviews and focus group discussions, participants indicated that ageing infrastructure and poor maintenance due to limited funding from local and central governments exacerbated the impact of these disasters. In Nkowankowa, part of the Greater Tzaneen Municipality, flooding is the most frequent climate-related disaster. This was primarily driven by developmental issues, such as inadequate drainage systems, non-compliance with by-laws, and the failure of officials to enforce regulations.

To mitigate the impacts of flooding, residents employed several strategies, such as the "Le-guba" strategy, constructing furrows around houses, creating culverts on roads to divert water, and using sandbags to block water intrusion. In severe flooding cases, temporary relocation was a last resort, particularly in Nkowankowa. Despite these efforts, Nkowankowa experiences disaster-level flooding, posing significant threats to human security and livelihoods. The lack of preparedness has intensified the severity of these disasters.

Droughts in Muyexe: farmers losing hope

Muyexe, located in the arid region of the Mopani District, experiences severe water shortages due to

regular droughts. It has a lack of infrastructure for water services, and boreholes serve as its primary water source. The local economy relies heavily on agriculture and water-dependent trades such as brickmaking and beauty salons, which make them vulnerable to the impacts of droughts.

Farmers reported that they felt a profound sense of hopelessness during dry periods. The situation is further strained by wildlife encroachment from the Kruger National Park, as animals occasionally escape in search of food, adding to the community's challenges. During droughts, communities compete with wildlife for limited water resources, increasing their exposure to waterborne diseases. Addressing these underlying problems is critical to reducing disaster risks and building resilience in vulnerable communities.

Recommendations for climate resilience

1. Flood management in Nkowankowa

Due to its location, floods are inevitable in Nkowankowa, and the focus should shift to long-term, sustainable flood management strategies guided by a stormwater master plan, which will help to manage stormwater, reduce flooding, and improve water quality. This could include:

- wetland restoration to absorb excess water and sustainable urban planning to protect informal settlements, which are often the most vulnerable;
- the upgrading of drainage systems to prevent waterlogging in residential and agricultural areas;
- the construction of retention ponds, levees and floodwalls to manage and control water flow during heavy rains;
- green infrastructure like rain gardens and permeable pavements;
- early warning systems for timely evacuation during floods (integrated with the South African Weather Service, which operates a Flood Early Warning System that monitors rainfall, river levels and weather); and
- community engagement, as local indigenous knowledge can significantly enhance disaster risk management.

The flood mitigation strategies – including infrastructure development, the "Le-guba" strategy, constructing furrows around houses, building culverts on roads, and floodplain management – are potential solutions that need to be explored to develop effective, community-friendly solutions to weather-related hazards in Limpopo.

2. Drought resilience in Muyexe

In Muyexe, where arid conditions prevail, a multifaceted approach is essential to improving resilience and sustainability. This includes strategies that:

- encourage farmers to cultivate drought-resistant crops like sorghum and millet, which are better suited to water-scarce environments;
- implement soil conservation techniques such as mulching, cover cropping, and no-till farming to retain soil moisture and improve soil health; and
- develop and disseminate drought forecasts and weather advisories via mobile alerts, radio, or community meetings, while linking these warnings with preparedness plans, to ensure timely action.

Conclusion

Nkowankowa and Muyexe require tailored climate adaptation strategies to address their distinct vulnerabilities. Community involvement and capacity building are essential for ensuring the long-term success of these interventions.

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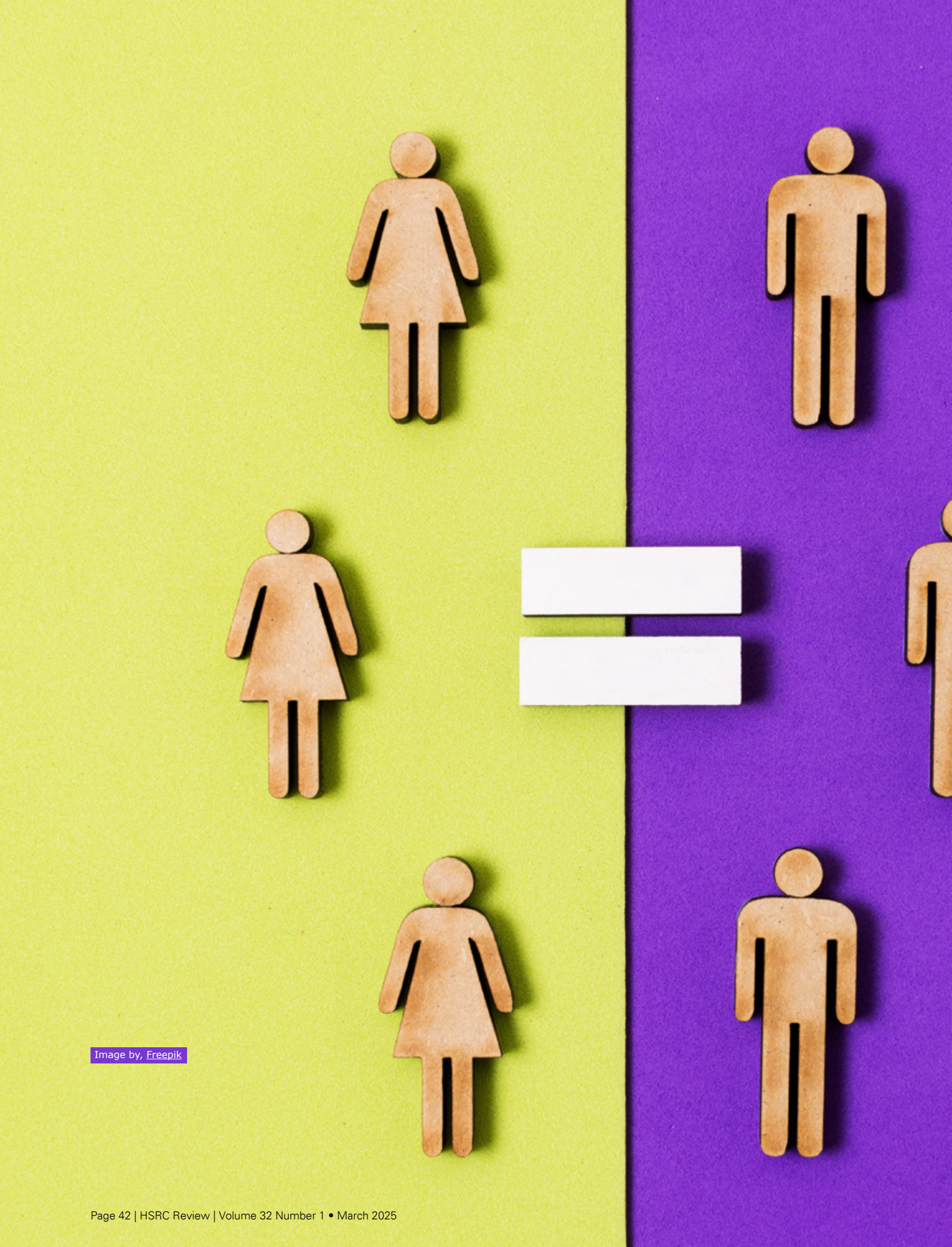


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Collaborative pathways: advancing gender equality in grant-making

After more than a decade of deliberate efforts to narrow the gender gap and promote gender equality in science, technology and innovation, reports indicate that there are still significantly fewer women than men in scientific fields in Africa, especially in leadership roles. Addressing gender equality and inclusion in research remains an issue of social justice and socioeconomic progress in Africa, write ***Lorenza Fluks****,* ***Roshin Essop****,* ***Nazeema Isaacs****,* ***Pilela Majokweni*** *and* ***Lyn Middleton****.*

Gender equality in science is essential for women, sustainable development and research excellence. However, women are vastly underrepresented in scientific fields. As they advance to higher levels in their careers, their representation in science, technology and innovation decreases at a greater rate than that of men, and is frequently described as a "leaky pipeline". Further, gender integration in research content is also still lacking. Science granting councils can play an essential role in bringing about gender transformation by guiding knowledge production and building research infrastructure through intentionally integrating gender equality, inclusivity and intersectionality considerations in their operations and grant-making practices.

The HSRC-led Gender Equality and Inclusivity (GEI) project within the Science Granting Councils Initiative aims to strengthen the capacities of science granting councils in advancing gender equality and inclusivity across various council functions. Through a participatory action learning and reflection process, we implement several parallel activities to support council representatives in 13 public funding organisations across Southern, East and West Africa. Project activities, foregrounding participation and peer learning, include workshops, online accompaniment and technical support for council-led change experiments, science communication of project activities, and an online webinar series. The first phase of the project (2020–2023) followed a gender action learning process and targeted support for councils to develop GEI action plans. The second phase (2023–2025) hones in on the grant-making cycle as a critical tool offering several entry points for advancing GEI concepts, while closely aligning with councils' core mandates of shaping their countries' science landscape.

The GEI actions carried out by participating councils cover a range of areas, as outlined in a recent article by Ingrid Lynch and the project team, "Catalysing gender transformation in research through engaging African science granting councils" in the *South African Journal of Science*. These include, firstly, establishing organisational structures for gender equality and inclusion, for example, developing gender policies. Secondly, councils initiated activities to shift informal organisational norms, practices and power dynamics that maintain gender inequality.

These activities included introducing gender champions to the council and offering GEI training for staff. Thirdly, councils undertook specific actions to address unequal access to resources and research opportunities, such as targeted funding calls, which prioritise female principal investigators. Lastly, councils implemented activities that encourage collective responsibility for, and active involvement in, addressing gender equality and inclusion in the broader science, technology and innovation community to change the systems and practices that marginalise women. Activities relating to the latter involve engagement and forging partnerships across various stakeholders, such as government ministries, science academies and higher education institutions, to generate support for GEI activities.

Currently, councils are undertaking multiple activities funded by the National Research Foundation in South Africa and the German Research Foundation to integrate GEI in grant-making. These include capacity-strengthening initiatives across various actors involved in the grant-making process, crafting monitoring and evaluation plans, policy development and integration, and data collection and analysis.

What have we learned so far?

Context is important: The GEI project underscored that GEI initiatives must be rooted in local cultural, socioeconomic and political contexts. Each council faces unique challenges that shape how their national science, technology and innovation systems develop, and how their organisations interact with these systems. Simply adopting GEI policies and strategies from other countries may not be effective. The project illustrated how councils can be engaged in tailored processes to co-create GEI actions that fit their specific environments.

We need to create spaces for joint reflection and peer learning: The implementation team recognises that the expertise and insights of members of science granting councils regarding GEI are invaluable. When these perspectives are shared through collaboration and peer learning, they enhance regional GEI knowledge and visibility on a global scale. Since the project's inception, we have prioritised opportunities for members to share experiences and collaboratively solve problems. By doing so, councils maintain the power to drive the initiatives they prioritise for their councils, and countries, rather than follow an implementer-driven approach. This approach has been well-received, with many participants noting that peer learning helps them teach and learn from one another. Maintaining reflective spaces allows councils to pause, assess their progress and determine their next steps.

Resources are needed: While councils have tapped into the importance and value of building strategic partnerships to bridge capacity gaps and collectively address GEI, sustainable, successful GEI initiatives require dedicated funding and ongoing support from leadership. Many councils are small, and members often juggle GEI activities and other council tasks. Some councils identified valuable GEI initiatives they could not pursue due to funding shortages in the first phase of this project. Therefore, during the second phase, funding from the National Research Foundation and the German Research Foundation for actioning GEI initiatives is invaluable. For lasting change, it is crucial to prioritise GEI and allocate sufficient human and financial resources across all leadership levels. While more significant investments are essential, even smaller, well-targeted actions can raise awareness and advance GEI issues within councils.

GEI should be integrated into research and capturing change: Applying a GEI perspective in research enhances quality, relevance and the impact of scientific investments. However, this is still a developing area in the project. Further, the project has highlighted a need to develop monitoring and evaluation frameworks suitable for capturing the complexity of gender transformation. Both of these aspects related to gender transformation are receiving more focused attention during the project's second phase. In this regard, some councils are

exploring how to better integrate GEI into research design and methods, and some are developing monitoring, evaluation and learning plans.

So far, the GEI project has made strides in advancing GEI with science granting councils in Africa through various project activities, collaborative learning and strategic partnerships. By fostering spaces for peer reflection and experience sharing, science granting council members have enhanced regional knowledge and global visibility of GEI issues. This collaborative approach has empowered councils to learn from one another, leading to more informed and contextually relevant GEI actions.

Furthermore, establishing strategic partnerships has strengthened organisational capacity, allowing councils to overcome resource limitations and amplify the impact of their initiatives. Collaborations with national academies, university gender departments and gender ministries have proven essential in building a robust gender infrastructure.

Finally, the GEI project underscores the importance of integrating GEI into research content and assessing the effectiveness of GEI actions, ensuring that future initiatives are evidence-based and responsive to the unique challenges faced by different communities. Together, these efforts contribute to a more equitable and inclusive environment within the science, technology and innovation sector.

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Lungile Ngcobo, Mandisa Mkhize, Nomasonto Mkhize, Nokwanda Zondi and Zintle Mthethwa developing story content during a digital storytelling workshop, which aimed to gain insight into the innovation activities of specific informal businesses that operate in the hair and beauty services industry. Photo: HSRC

Gender, informality and innovation:

insights from research in Sweetwaters, KwaZulu-Natal

Women in South Africa are disproportionately affected by unemployment and poverty and must often find alternative means for their livelihoods. Many rely on informal employment as their primary source of income. A policy brief based on findings from HSRC research in Sweetwaters, KwaZulu-Natal, points to underlying structural and socioeconomic constraints shaping gender differences in learning and innovation. By ***Pilela Majokweni, Il-haam Petersen*** *and* ***Setsoheng Mayeki****.*

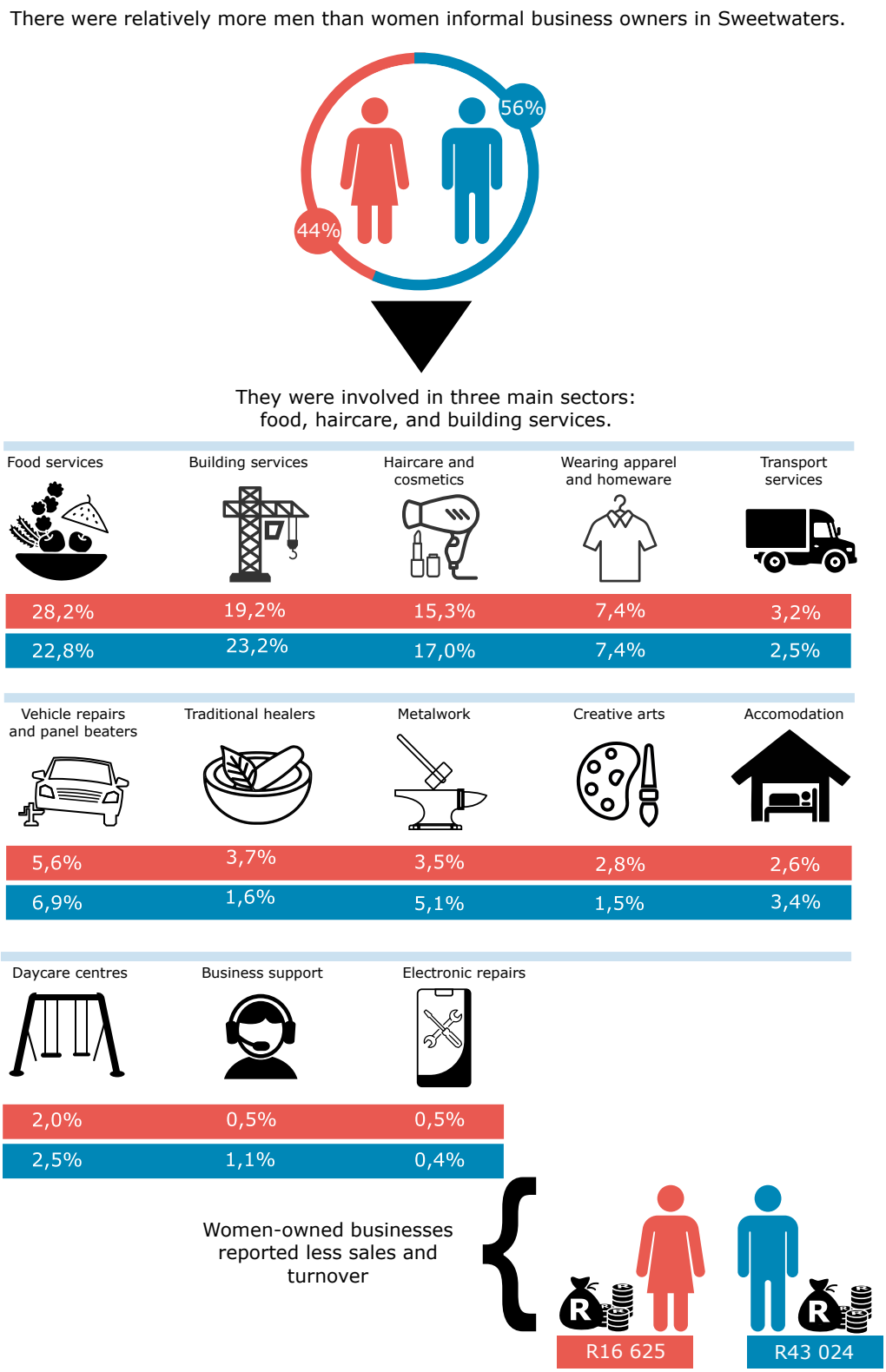
The latest South African general household survey showed that female-headed households have higher poverty levels than their male counterparts. Women are disproportionately affected by unemployment, with approximately 35.5% of women unemployed compared to 32.6% of men. Additionally, as reported by the United Nations Conference on Trade and Development, unequal gender norms and structural barriers contribute to women's lack of access to resources, credit and financing. Women also face higher barriers to entry and, therefore, require more support such as technical assistance, access to infrastructure, capacity building and links to markets.

HSRC research in Sweetwaters, KwaZulu-Natal (KZN), shows that the rate of innovation is high among informal businesses as they continuously implement changes to survive and remain competitive. However, research on gender differences in innovation and entrepreneurial development is limited. Overlooking these disparities leads to inadequate support for women-owned businesses.

Gender differences in informal businesses in Sweetwaters

Of the 990 informal businesses surveyed in the 2017–2018 South African Informal Sector Survey in KZN, a slightly larger proportion (56%) were men-owned (Figure 1). Informal food services accounted for the main economic activity, with 28.2% of business owners in this sector being women, while 22.8% were men. On the other hand, the building services sector was dominated by men-owned businesses (23.2%) compared to women-owned businesses (19.2%). On average, men-owned businesses reported more than double the annual earnings from selling their goods and services. Gender-based discrimination and unequal access to resources and opportunities may also be factors that contributed to the lower turnover rates for women-owned businesses.

Figure 1. Gender differences in the economic activities of informal business owners in Sweetwaters, KwaZulu-Natal (2017–2018)

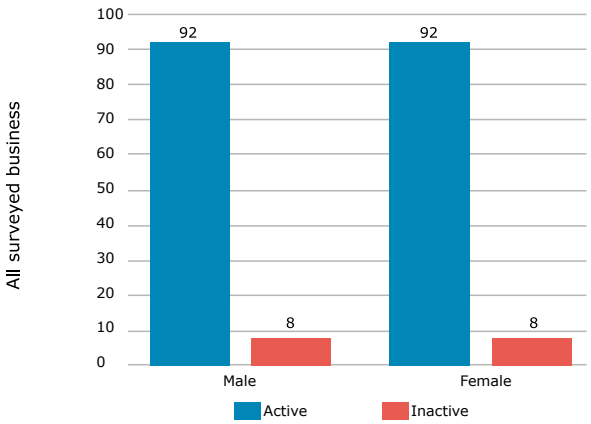


Data source: CeSTII 2017–2018 IIS Survey

High rates of innovation regardless of gender

Most informal businesses (approximately 92%) were innovation-active, meaning most had engaged in innovation activities, including ongoing and abandoned activities in 2017 and 2018. Only 8% of the businesses reported no innovation activity during this period (Figure 2). The high rate of innovation is not surprising, as the challenging and unpredictable nature of the informal business environment calls for constant creativity and adaptability. Furthermore, the informal nature of these businesses allows for fewer regulatory barriers, providing more room for experimentation and innovation.

Figure 2. Innovation-active and innovation-inactive informal businesses (%) in Sweetwaters, KwaZulu-Natal (2017–2018)

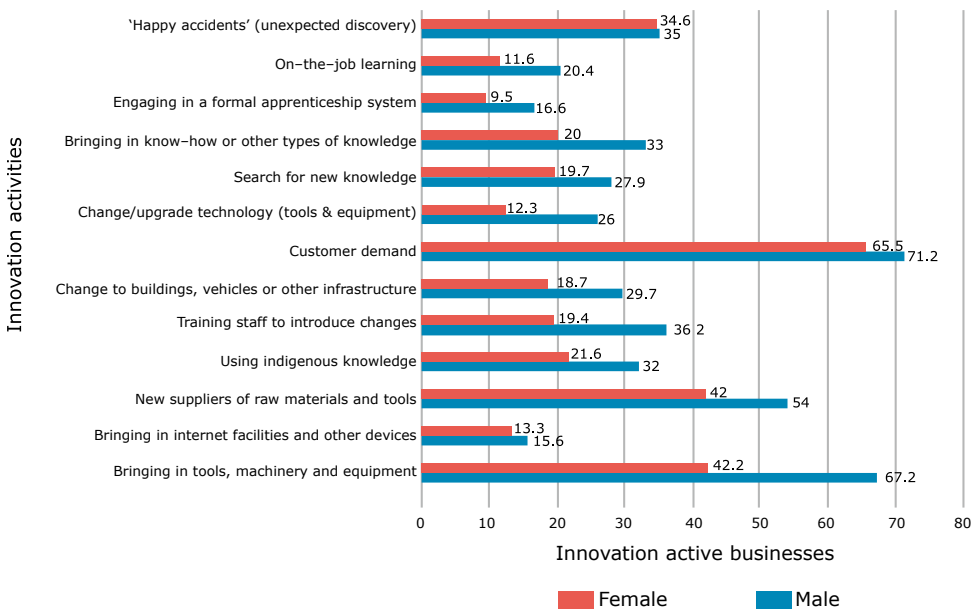


Data source: CeSTII 2017–2018 IIS Survey

Innovation by women: more organic and reactive

The survey found that innovation activities were mainly customer-driven, but women-owned businesses reported more organic and reactive forms of innovation. Besides customer demand, bringing in tools, machinery and equipment (Figure 3) was the second most common innovation activity adopted by the informal business owners (women = 42.2%; men = 67.2%), and the third was bringing in new suppliers of raw materials and tools (women = 41.5%; men = 53.6%). However, men also tended to engage more in structured and intentional innovation activities, such as training staff to introduce changes (36.2%) and bringing in know-how or other types of knowledge (32.5%). In comparison, women who tended to engage in more organic and reactive forms of innovation. "Happy accidents" is the only innovation activity where women- and men-owned businesses were approximately on par.

Figure 3. Innovation activities (%) of informal business owners in Sweetwaters, KwaZulu-Natal (2017–2018)



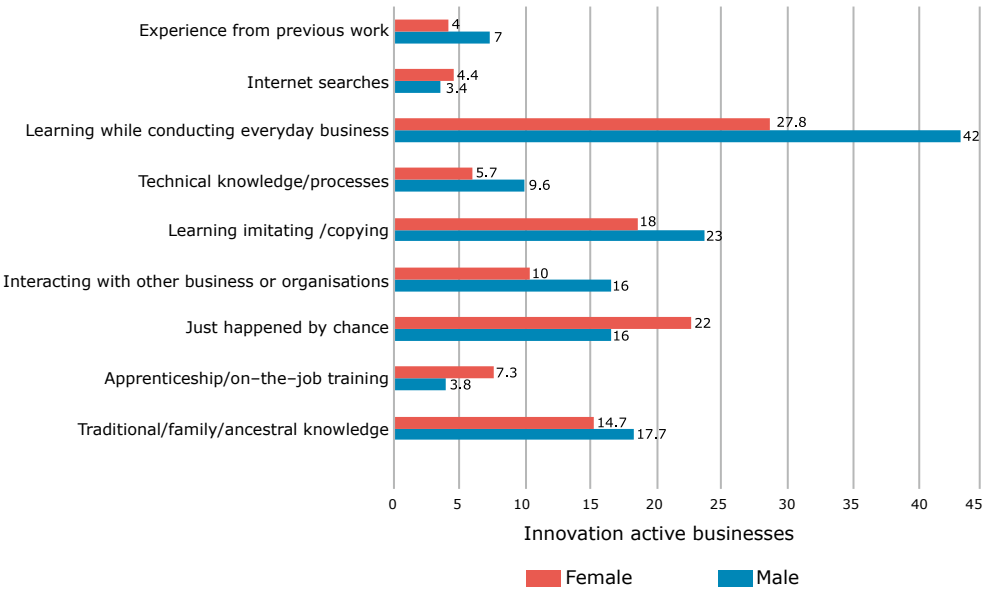
Data source: CeSTII 2017–2018 IIS Survey

Learning-by-doing and imitating

Informal business owners, regardless of gender, tended to develop new goods and services through learning by doing and imitating other businesses.

More men (42%) used knowledge gained through everyday operations to develop new goods and services compared to women (27.8%), as seen in Figure 4. Also, slightly more men used traditional (17.7%) and technical knowledge (9.6%) than women (14.7% and 5.7%, respectively). About a fifth of the women-owned businesses reported developing their product innovations "by chance".

Figure 4. Knowledge used (%) to develop new goods/services in Sweetwaters, KwaZulu-Natal (2017–2018)



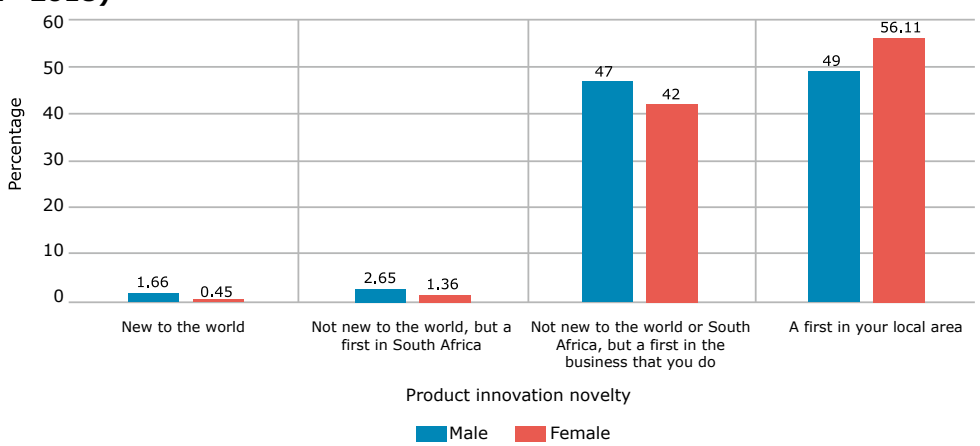
Data source: CeSTII 2017–2018 IIS Survey

Innovations locally linked

For women-owned businesses, the survey showed that the novelty of their innovations was strongly linked to the local area.

Product innovation in both men- and women-owned informal businesses was primarily focused on introducing new products to their respective businesses and local areas rather than creating new products altogether. Women-owned informal businesses (56.11%) tended to introduce more innovations within their local areas, while men (47%) tended to introduce innovations that were novel to the industry but not necessarily new to the country (Figure 5). Differences in access to resources such as funding and technology may play a role in shaping the types of product innovations that men and women business owners can introduce.

Figure 5. Product innovation novelty of informal business owners in Sweetwaters, KwaZulu-Natal (2017–2018)

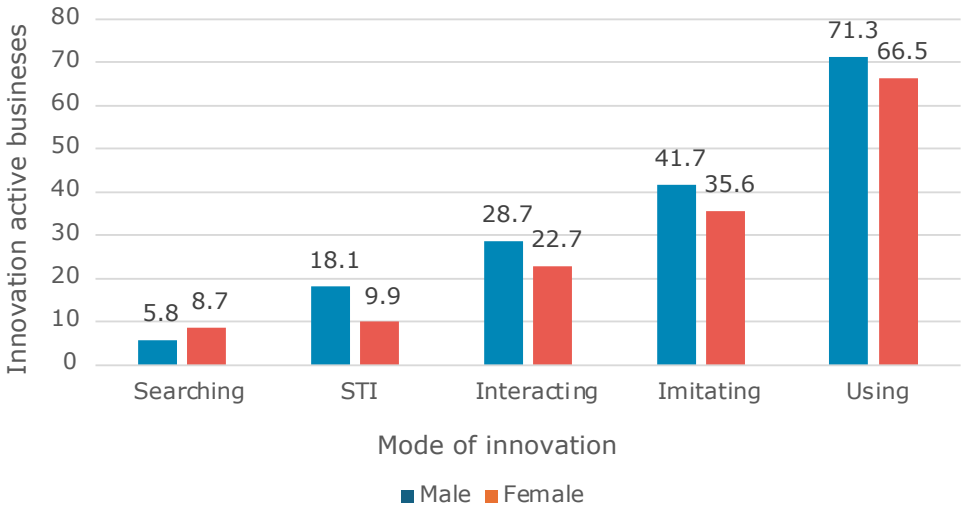


Data source: CeSTII 2017–2018 IIS Survey

Using technical and scientific knowledge

There were notable gender differences in the modes of innovation (Figure 6). The main strategy used by both men and women-owned informal businesses was learning by using (71.3% and 66.5% respectively). The biggest difference was in the use of science, technology and innovation (STI) modes of innovation, with more (18.1%) men-owned informal businesses using technical and/or scientific knowledge to inform their innovation activities than women-owned businesses (9.9%). Men also tended to rely more on learning by observing and learning from others by imitating (41.7%) or through interaction (28.7%). In contrast, women-owned businesses relied on searching, that is, seeking out external information and resources (8.7%) more than men (5.8%).

Figure 6. Modes of innovation among informal business owners in Sweetwaters, KwaZulu-Natal (2017–2018)



Data source: CeSTII 2017–2018 IIS Survey



Delegates developing story content during a digital storytelling workshop. Photo: HSRC

Different factors can influence the choice of innovation mode. One possible explanation for the higher percentage of men using the STI mode is that they may have more access to technology and formal education, which can facilitate the adoption of new technologies and the use of technical knowledge. In the study, women reported lower levels of education. Women face more constraints in terms of access to education, technology and resources, which may limit their ability to innovate using more sophisticated modes such as STI and interaction.

A need for gender-inclusive policy

The HSRC's Innovation in the Informal Sector survey in Sweetwaters forms part of a larger project, initiated in 2017, to develop a programme for measuring innovation in informal businesses. The project addresses a gap in innovation measurement, to complement the well-established formal sector Business Innovation Survey that the HSRC conducts on behalf of the Department of Science, Technology and Innovation, providing an evidence base for the national innovation policy.

The findings from this HSRC survey motivate the need for gender-conscious and inclusive policy approaches to better support informal sector innovation. A gendered lens illuminates the unique experiences, needs and challenges of women-owned businesses in rural towns, villages, townships and other resource-poor informal settings. This provides new insights for public policies promoting the mobilisation of science, technology and innovation for gender inclusivity. More specifically, policymakers can:

- Improve access to financial resources, technology and training for women-owned businesses, including microfinance programmes, grants and subsidies.
- Promote support systems tailored to women-owned businesses, such as incubators, mentorship programmes and networking events, and customise training to meet the education and skill needs of women-owned informal businesses.
- Invest in further research exploring the intersections of gender, innovation and informality to inform targeted and inclusive policies and programmes.

In addition to a gender-sensitive approach, informal businesses also require support to leverage their advantage of strong local and traditional knowledge, which must be combined with technical know-how and scientific knowledge. For example, one of the women entrepreneurs who owned a fast-food café selling healthier versions of traditional foods participated in a training and support programme to strengthen her technical cooking skills and build her business. The programme was offered by a big business in the food industry. We must promote learning through interaction with formal businesses, education and training and other support organisations. Women-owned businesses, in particular, can benefit from such support as they tend to dominate sectors, including informal food services and textiles, where traditional and local knowledge provides a competitive advantage.

Interventions aimed at supporting women-owned informal businesses also need to consider the structural and socioeconomic constraints, including access to education, financial support and other resources, that influence innovation and learning in these businesses. In this way, women-owned informal businesses may be supported to be more intentional rather than passive and reactive in using innovation in their businesses.

To fill a gap in entrepreneurship skills training and support to informal businesses, the HSRC conducts training workshops with informal business owners. It has produced an Informal Business Innovation Toolkit and My Business Innovation Planner (MyBIP) app, providing research-based guidelines, templates and interactive tools. MyBIP can be downloaded free of charge from the Google Play Store.

Research contacts:
For more information, please contact the Project Lead, Dr Il-haam Petersen, at ipetersen@hsrc.ac.za. The project resources are available on the project website. For updates on MyBIP and informal business innovation events, follow the MyBIP WhatsApp channel.



Established in the 1850s, The Okiep Copper Mine is one of the richest copper ore bodies ever found. Photo taken in 2017 by Waitabout, CC BY-SA 3.0, Wikimedia Commons.

The future of mining in South Africa: modernisation and what needs to be done

Imagine unlocking R153 billion in value by 2026 through mining modernisation – what does this really mean? To find out, the HSRC, in collaboration with the Minerals Council of South Africa and supported by the Research Institute for Innovation and Sustainability, launched a research project to explore the patterns, gaps and opportunities in research, development and innovation for transforming South Africa's mineral industry. By ***Kgabo Ramoroka, Theodore Sass and Viwe Sigenu***

South Africa's mining industry is under increasing pressure to adapt to a changing global landscape, and move quickly to adopt key advanced technologies related to automation, digitalisation and artificial intelligence.

South Africa's mineral production is declining, and some mines have closed. However, the Minerals Council South Africa (MCSA) argues that modernisation can extend the life of mines through more innovative production methods.

Modernising the sector is a key strategy in the country's innovation policy documents, such as the 2019 White Paper on Science, Technology and Innovation and the 2022 Science, Technology and Innovation Decadal Plan.

These documents have laid the groundwork to modernise key sectors, putting forward research, experimental development and innovation (RD&I) strategies that are inclusive and sensitive to society's needs.

R&D spending

Data from the HSRC's 2021–2022 South African National Survey on Research and Experimental Development (R&D Survey) show that mining companies spent R645.9 million on R&D to mine minerals, and mining-related activities, 71.2% of which was for the mining of metal ores such as the copper (excluding the gold and uranium) sub-sector. Such disparities in sectoral R&D performance require attention for the industry to progress.

To realise the full potential of mining modernisation, we must understand current sector-specific system elements, such as skills, RD&I and networks. An effective integration of expert perspectives and public engagement is the starting point for understanding mining modernisation.

In 2023, the HSRC launched a collaborative research project with the MCSA and the Research Institute for Innovation and Sustainability (RIIS).

Examining mining modernisation

Modernisation presents challenges and opportunities that require careful examination and strategic action. Challenges such as declining R&D capacity, experience gaps and research duplication are well-known, but not how they affect modernisation efforts in the mining sector.

The research team developed a framework with a strong focus on human capabilities (knowledge, competencies and skills), technological capabilities (competencies built up by the firm in technology application), actors (private, public and competing companies), networks (ability to forge relationships), research infrastructure (access to laboratories) and institutional support. These are all considered key dimensions of a firm's ability to upgrade operations.

Engagement and reflections

The HSRC in partnership with MCSA hosted a research workshop which offered valuable insights and raised questions about what is next for mining modernisation. One of the main insights was that there is no clear framework currently for achieving inclusive and sustainable mining modernisation in South Africa.

Participants agreed that the most prevalent challenges to modernising the domestic mining industry were:

- Declining capacity and capability in mining RD&I
- A lack of experience and understanding of the mining environment
- Duplication of research and academic efforts

The CSIR's Sibongile Ntsoelengoe reported that declining RD&I investment in mining was a major challenge. Mining is directly linked to national economic performance and, therefore, impacted by economic growth, infrastructure spending and geopolitics.

While South Africa's mining industry earnings soared to R184 billion by March 2024, the industry continued to be plagued by loadshedding and inefficient logistical networks. However, Ntsoelengoe believes that by adopting digital technologies, a potential R156 billion in value could be added to the industry by 2026.

The following additional opportunities emerged during the discussion:

- Multi-stakeholder partnerships in research and innovation can contribute to industry transformation.
- Leveraging existing government support initiatives will enhance RD&I performance.
- Inclusive and sustainable RD&I investment must be promoted.
- Research and innovation must be responsive to a wide range of stakeholders and grand societal challenges.

Research opportunities

Professor Glen Nwaila, of the South African Mining Extraction, Research, Development and Innovation Research Centre at the University of the Witwatersrand, said the need for mining productivity increased the requirement for technological advancement and human capabilities.

"First are drivers, for example, the physical environment of the mine, changing policy imperatives and market risks," said Nwaila.

"Secondly are the enablers, which require embedding technology in culture and human resources, awareness of the environment and rigorous data quality and management."



Established in the 1850s, The Okiep Copper Mine is one of the richest copper ore bodies ever found. Photo taken in 2017 by Waitabout, CC BY-SA 3.0, Wikimedia Commons.

"Lastly, the maturity domains entail understanding how to leverage digital skills, infrastructure and technology, and processes at the heart of system capabilities."

Insights from the workshop guided further activities. A questionnaire was developed in collaboration with RIIS. The workshop and the cognitive testing exercises offered valuable insights into the development of the new survey instrument.

This was tested with the I-team (short for "innovation team"), a collection of mining companies that are members of the MCSA, tasked with the goal of delivering new approaches, methods, inventions and applications to drive value in the market.

At the time of writing, the questionnaire was being used to collect data on advanced technologies and processes in different mining value chains, human and technological capabilities, research infrastructure, networks, and governance of and by firms in the minerals industry for a three-year period (2021–2023).

This data will be combined with R&D data from the HSRC's R&D Survey to help understand the modernisation of mining in South Africa.

Moving forward

The mining sector is constantly evolving and adapting to new ways of operating through automation, digitalisation and renewable energy. The domestic minerals industry requires evidence-based interventions to upgrade mining.

The nature, extent and timing of engagements within the research process will influence the use and uptake of research evidence to create impact. In this sense, the HSRC assumes an intermediary role in the research process between society, science and innovation practitioners to understand the current status and potential role of RD&I in the modernisation of mining in South Africa.

Stakeholders emphasised partnerships, a universal understanding of mining modernisation and the development of measurement indicators.

The partnership between the HSRC and MCSA presents a unique approach to conducting research, which seeks to be responsive to a wide range of stakeholders and grand societal challenges as envisaged in the 2019 White Paper on Science, Technology and Innovation.

Conclusion

Collaborative design of appropriate indicators and measures of modernisation for policy evidence with industry players presents an opportunity to ensure policy cohesion and synergy. To date, the HSRC team has engaged with stakeholders to understand experiences at the site level and how modernisation in mining can be enhanced.

Apart from consolidating research efforts and streamlining technological advancements, collaboration efforts also hold the potential to break down "silos" and encourage a collective approach for impact.

Research contacts
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Strengthening voices, shaping policy:

the impact of the HSRC's multi-stakeholder workshops

Discover how the HSRC's adaptive multi-stakeholder engagement workshops are empowering South Africa's not-for-profit sector by creating safe and inclusive public platforms to address key R&D challenges, foster collaboration and advance equitable development. ***Natasha Saunders*** *and* ***Rory Liedeman*** *examine the evolution of these workshops and their important contributions to future policymaking, inclusivity and tackling urgent socioeconomic and health challenges.*

South Africa's not-for-profit (NPO) sector plays an essential role in addressing the country's socioeconomic and health challenges. However, its contributions to research and development (R&D) are significantly underrepresented, constrained by resource limitations, data collection inefficiencies, and heavy reliance on external funding. In response, the HSRC, through its Centre for Science, Technology and Innovation Indicators (CeSTII), initiated a series of workshops in 2023 and 2024. These engagements aimed to strengthen the NPO sector's capacity for contributing to the national R&D landscape and to facilitate actionable insights for policymakers and stakeholders.

This article traces the achievements and evolution of these workshops, highlighting how the lessons learned from the first engagement shaped the second – leading to important contributions and future outcomes for South Africa's R&D landscape.

Exploring stakeholder needs

On 9 March 2023, the HSRC hosted its inaugural NPO R&D engagement workshop online via Microsoft Teams. This first session was intentionally exploratory, designed to gauge stakeholder interest and identify challenges unique to the NPO sector. The workshop convened representatives from the NPO sector, the Department of Science, Technology and Innovation (DSTI) and CeSTII.

The primary objectives of the workshop were:

- To explain the value of NPO data in national R&D surveys and its broader implications for policy and practice
- To address technical challenges in data submission by providing practical guidance
- To enhance familiarity with the online data submission system to improve compliance rates
- To facilitate knowledge exchange to amplify the sector's visibility and foster collaboration

The outcomes of this workshop emphasised the importance of collecting and disseminating NPO R&D data and highlighted the associated challenges:

1. **Capacity-building**: NPO representatives shared their challenges in meeting survey requirements, particularly in tracking R&D activities and compiling data. This highlighted the need for tailored capacity-building programmes.
2. **Knowledge sharing**: Insights from the 2020/2021 R&D survey results were shared, demonstrating the sector's significant yet underreported contributions to R&D.
3. **Sector visibility**: The platform enhanced the sector's visibility, showcasing the work of R&D-performing entities and emphasising the need for sustained investment and support.

The discussions also uncovered critical challenges faced by this sector. Of the over 250,000 NPOs registered with the Department of Social Development, fewer than 100 have been identified as actively engaging in R&D, posing a significant gap in understanding the scope of R&D activities within the NPO landscape. Additionally, most NPOs prioritise social development initiatives, leaving other critical research areas underfunded. The reliance on foreign funding (65.9% of total funding in the sector in 2022/2023) further undermines long-term stability.

To address these issues, the workshop emphasised the importance of broader stakeholder participation and system improvements. Enhancing knowledge sharing would help to bridge gaps, improve policy alignment, resolve online submission issues, strengthen coordination and create opportunities for funding discussions, while also promoting the visibility and sustainability of R&D initiatives in the NPO sector.

Deepening the dialogue

The second engagement, held on 21 May 2024, implemented many of the recommendations from the first session. Adopting a hybrid format, it allowed Cape Town-based participants to join in person while maintaining virtual access for stakeholders across the country. This adaptive approach demonstrated the HSRC's commitment to inclusivity and responsiveness to stakeholder needs.

This workshop expanded on the themes introduced in 2023, focusing on South Africa's pressing socioeconomic and health challenges. These included the enduring burdens of tuberculosis, HIV and AIDS, and malaria, compounded by structural inequalities and unemployment. Building on the first workshop, this engagement provided a platform for stakeholder collaboration, capacity-building and data exchange, while also introducing new themes:

- **Regional disparities**: Discussions highlighted the uneven distribution of NPO R&D expenditure, with provinces such as Gauteng (30.3%) and the Western Cape (28.8%) dominating, while the Northern Cape and Free State received minimal investment in 2022/2023.
- **Sectoral focus**: The concentration of NPO R&D expenditure in medical and health sciences (75.4% of total expenditure in 2022/2023) limits broader societal impact. The workshop emphasised the need to diversify research efforts, with social sciences receiving just 5.7% of funding in the same period.
- **Support tools:** The Department of Social Development's (DSD) institutional capacity programme and helpdesk were introduced to support NPOs in navigating the R&D landscape.

These services include assistance with registration and compliance, capacity-building training through workshops and guidance on funding and proposal alignment with R&D priorities.

Takeaways from the workshops

Both workshops provided critical opportunities for collaboration and capacity-building:

1. Policy and research impact
   The workshops underscored the importance of evidence-based policymaking in addressing South Africa's unique challenges. Insights from these engagements can inform policy briefs and stimulate follow-up studies aimed to bridge the gap between research findings and actionable solutions.

2. Advancing equity in R&D
   Participants emphasised the need to address funding inequities across provinces and reduce reliance on foreign funding by fostering domestic investment. This aligns with the HSRC's broader vision of creating an inclusive R&D ecosystem that supports underrepresented regions and sectors.

3. Enhanced collaboration
   The workshops fostered partnerships between NPOs, government departments, academia and other national stakeholders. By prioritising open dialogue, they created a space for discussing successes and challenges in the sector.

4. Tangible outputs
   Findings from the engagements were synthesised into accessible in-house reports, highlighting possible future policy recommendations, emphasising actionable steps such as diversifying research focus areas and improving data collection processes.

Potential impact

The HSRC CeSTII R&D workshops represent a positive step towards transforming South Africa's NPO research ecosystem. By prioritising inclusivity, capacity-building and evidence-based solutions, these engagements can help to address critical gaps in the NPO sector.

Future pathways

- Diversifying research focus: Expanding investment in social sciences can enhance understanding of societal challenges, including poverty, unemployment and education deficits.
- Building resilience: Reducing dependency on external funding and fostering domestic investment will create a more stable and sustainable research environment.
- Promoting equity: Ensuring fair distribution of R&D resources across provinces can empower underrepresented regions to address local challenges effectively.

By leveraging the lessons learned from these workshops, the HSRC is not only advancing the NPO sector's R&D capacity but also setting a precedent for participatory, inclusive research practices. The potential for long-term impact lies in fostering a research ecosystem that aligns with South Africa's unique challenges, stimulates robust debates and informs national priorities.

Conclusion

The evolution of the NPO R&D engagement workshops highlights the value of adaptive, participatory approaches in tackling complex socioeconomic and health challenges. By fostering collaboration, enhancing visibility and providing actionable insights, the HSRC drives meaningful change in South Africa's R&D landscape.

These engagements underscore the importance of inclusive dialogue and evidence-based solutions. As the HSRC continues to build on these successes, it remains a cornerstone in the quest for equitable socioeconomic growth and resilience.

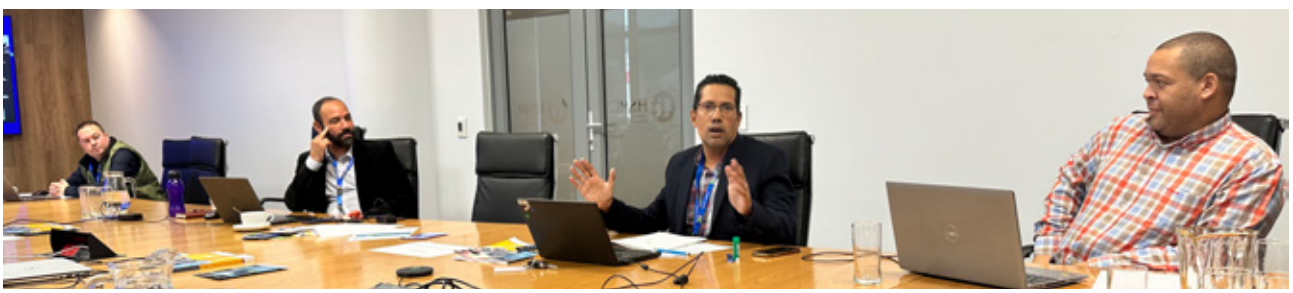
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Team of coordinators at the HSRC's multi-stakeholder engagement workshops aimed at empowering South Africa's not-for-profit sector
Photo: HSRC









AI generated image, Freepik

Step one:

evidence for democratised research in South Africa

Engaged research transforms knowledge creation and application by actively and meaningfully involving communities and stakeholders in the research process. This collaborative approach ensures research addresses real-world challenges, fosters trust and empowers participants. The HSRC is committed to bridging the gaps between academia and society by fostering innovative, inclusive and co-created research and solutions that drive significant change in South Africa and beyond. By ***Jessie-Lee Smith***

Did you know that at any given moment, somewhere in the world, research is being conducted on almost any topic you can imagine? The findings from these pivotal studies often shape the policies that govern our societies, strengthen initiatives aimed at bringing about meaningful change, drive advancements in technology and healthcare, and influence the education of future generations.

Despite the profound impact of research conclusions, the people it affects most are often left out of the decision-making process. They are expected to adapt to new policies and interventions rather than being active contributors. This disconnect can leave significant gaps between research and real-world challenges. Engaged research aims to bridge these gaps.

What are the principles of engaged research?

According to Professor Paul James from Western Sydney University, engaged research is essentially an orientation towards others, including those being researched and those involved in the area of research. He identifies seven main principles of engaged research, including:

1. relations of reciprocity with a negotiated distance between local communities and intellectually autonomous researchers;
2. sensitivity to the past while being future-orientated;
3. sensitivity to spatiality and lived places, e.g. local and global;
4. the bridging of social, cultural and natural realms to understand the human condition;
5. working through differences by holding them in tension and allowing them to inform the research process rather than resolving them;
6. recognising the entanglement of knowledge and power; and
7. remaining ethically and practically attentive to research methods.

Over the years, the HSRC has embraced engaged research principles to enhance its processes and improve its research outcomes.

What is engaged research?

According to the National Research Foundation and the Wellcome Trust, engaged research is an approach that actively involves the perspectives of community members and stakeholders throughout the entire research lifecycle. This lifecycle includes agenda setting, funding, research design, implementation, monitoring and evaluation.

Dr Sara Naicker, a senior research specialist with the HSRC, argues that key elements include inclusivity of diverse perspectives, mutual benefit and the co-creation of knowledge to address real-world challenges. Naicker says, "This approach strengthens the link between academia and society, ensuring research is meaningful and actionable."

Including participants in the process

For example, in a 2019 HIV study known as the Botshelo Ba Trans Study, HSRC researchers found that including transgender women in the research process enhanced the authenticity of the study data, empowered participants by giving them ownership of the process, and made the findings more actionable and meaningful for intervention development. The study covered three of South Africa's major metropolitan areas, including Cape Town and Buffalo City.

From the start, transgender women guided research decisions, including study design, data collection and analysis, through a steering committee. This committee was primarily made up of transgender women who were recognised as experts on the subject matter. This approach encouraged trust, ensured the research addressed issues that mattered to them, and allowed the conclusions to address relevant issues that reflected the community's lived experiences.

Embedding research within the community

The HSRC maintains a consistent culture of participatory research through its Centre for Community-Based Research (CCBR) in Sweetwaters, a rural valley on the outskirts of KwaZulu-Natal's second-largest city, Pietermaritzburg. Founded in the early 2000s, this centre works with community stakeholders, trains residents as fieldworkers, and partners with various community organisations to ensure its research into critical areas such as HIV and AIDS and maternal health is culturally sensitive, impactful and aligned with the community's needs.

Recently, in a nationwide project to gain insight into how 30 years of democracy have impacted the lives of ordinary South Africans, the CCBR became a platform for amplifying community voices and experiences. Read more about the participatory process involved in the HSRC's Democracy@30 Project and what the lives of South Africans have been like since the country's first democratic election in 1994.



AI generated image, Freepik

Improving and increasing participatory approaches

The HSRC continues to strive for a more effective research landscape. One way it is doing this is through the Engaged Research Project. Together with the Department of Science, Technology and Innovation (DSTI) and the National Research Foundation (NRF), the HSRC is working towards mainstreaming engaged research within the National System of Innovation (NSI).

In South Africa, the NSI is a network of institutions, policies and processes that work together to promote scientific research, technological development and innovation across the country.

To make the NSI more responsive to the country's social, economic and developmental challenges, the project will mainstream engaged research practices by:

1. seeking to understand the current landscape of engaged research (i.e. identifying and aggregating available evidence and key stakeholder information on engaged research practices);
2. increasing awareness and broaden participation (i.e. enhancing skills through peer learning and staff exchanges by sharing knowledge and developing guidelines and frameworks); and
3. amplifying the reach and effectiveness of engaged research (i.e. supporting new projects and growing existing collaborations).

So, what do we know?

The HSRC recently held a webinar to share updates on the project's evidence-gathering progress. Dr Lorenza Fluks, an HSRC senior research specialist, provided an overview of an evidence-mapping process currently underway. This mapping is a collaborative project with the Pan African Collective for Evidence (PACE), where available evidence on engaged research processes used across low- and middle-income countries is being synthesised. "Evidence maps play a crucial role in promoting evidence-based decision-making by highlighting what we know, what we don't know and what requires further investigation to optimise the impact of research," said Fluks.

Dr Sara Naicker said, "What we have found so far in the landscape is considerable." Naicker told attendees that South Africa currently has around 418 completed or ongoing engaged research projects across 22 higher education institutions and three research councils. Michael Ellis, a science communicator with the NRF, noted that identifying sectors that are underrepresented in engaged research, such as chemistry and mathematics, may play a critical role in strengthening the NSI.

A review of the NSI revealed gaps in addressing unemployment, poverty and inequality while also struggling to include marginalised stakeholders and integrate non-technological innovations. Domestic technology transfer – the process of sharing technological knowledge, innovations or skills within a country – is also weak. Limited stakeholder coordination and inadequate measures of policy impact further hinder the NSI's effectiveness in addressing significant challenges in South Africa.

During the webinar, the HSRC and other NSI stakeholders shared several ongoing engaged research projects. For example, Dr Catherine Draper, an associate professor from the University of the Witwatersrand, mentioned a study funded by the European Commission to develop health promotion interventions with youth. She is also working on an interdisciplinary project with computer scientists to co-design and pilot a WhatsApp chatbot for social-emotional development and mental health in young children in disadvantaged communities.

The project team aims to host a launch event for the evidence map of engaged research before a symposium to be held in October 2025, where experts and other stakeholders will share knowledge and experience. For more information, visit the project's website.

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Ways of sharing information for innovation-driven local economic development – emerging lessons from Karoo districts

Many municipalities want to invest in innovative economic activities but lack guidance on how to target such investments. This information gap affects municipalities unevenly, with resource-poor areas facing greater barriers. Based on HSRC work in the Karoo, ***Peter Jacobs*** *and* ***Mandy Booys*** *discuss how information about innovation could be shared with municipal stakeholders.*

Research dissemination is an essential way researchers engage with stakeholders, who are targeted as intermediate or ultimate beneficiaries of research outcomes. In contexts where evidence-informed policy interventions are commonly accepted and prioritised, recipients may value the disseminated research findings, but they might also need guidance on how to use these outputs effectively to solve their societal problems.

HSRC researchers produced and shared local innovation status reports about the prospects for innovation-driven development in the Karoo region in 2021, followed by workshops in 2022. As part of the concluding steps of compiling the status reports, researchers conducted a series of regional workshops to reflect on what the documented insights meant for reimagining the future of local development in the Karoo, an ecologically fragile region beset by multiple development obstacles. During these feedback workshops, local stakeholders highlighted the importance of drawing on the status reports and datasets to define and realise their municipal development objectives. They also asked researchers to distil the findings, insights and recommendations into popular formats – including digital and print materials suited to different audiences – for dissemination to local audiences. These local requests to share evidence in user-friendly ways tested the responsiveness of science to municipal development planning and practice.

With financial assistance from the Department of Science, Technology and Innovation (DSTI), researchers developed an initiative to share the evidence. The dissemination process kicked off in July 2021, primarily to plan outreach activities, prepare fit-for-purpose knowledge products and co-produce engagements with municipal officials. Between May and November 2022, actual dissemination activities took place in four municipal districts in the Karoo, also involving the 16 local municipalities in these districts. The four districts – selected based on their representation of different socioeconomic contexts within the Karoo region – were in three neighbouring provinces: Northern Cape (Namakwa and Pixley Ka Seme), Western Cape (Central Karoo) and Eastern Cape (Sarah Baartman).

Convening and coordination of dissemination activities

Initially, the HSRC research team arranged the dissemination events. However, as the process gained momentum, municipalities and the South African Local Government Association (SALGA) in targeted sites began taking the lead in convening events. This shift reflected increasing local institutional capacity and commitment to evidence-based innovation planning. In cases where SALGA convened workshops, their regional presence and established networks helped to attract diverse stakeholders. Municipal-led workshops, on the other hand, allowed for more focused discussions of local innovation priorities. Throughout this transition, researchers maintained their role as technical resources, presenting evidence and facilitating discussions while supporting local institutions in building their capabilities to lead innovation dialogues.



Photo by Myburgh Roux, Pexels.

Dissemination approach: Local innovation through empowered participation

Models of research engagement differ. A once-off engagement to recruit respondents, for example, is unlikely to foster durable relationships compared to cases where researchers co-produce solutions with beneficiary stakeholders. Traditionally, knowledge producers often engaged end users after the research had been written up and packaged for dissemination. But even if stakeholders intensively engage with such outputs, the researcher dominates a process of top-down evidence sharing.

In recent years, participatory approaches have become popular. The Karoo case study exemplifies this approach through its emphasis on co-production and local ownership of the dissemination process. Participatory engagement happens when knowledge producers intentionally work with end users or beneficiary stakeholders before, during and after carrying out research. Every moment in the research cycle is thus a moment for broad stakeholder engagement and underpins the co-production of innovations. Such co-produced solutions require that knowledge producers embed themselves inside targeted beneficiary communities and forge constructive relationships. When stakeholders participate in research processes, transparent and appropriate principles must be followed for self-sustaining transformation. While these processes often face challenges related to power imbalances, ownership and accountability, a clear set of principles helps to foster equitable stakeholder involvement. In line with this goal, stakeholder involvement in research must be equitable and must strengthen their agency and empowerment.

Karoo evidence dissemination case study

With equity, agency and empowerment at the forefront, the HSRC research team split and simplified the Karoo innovation landscape report into themes that were relevant, accessible and useful for each district. Key messages zeroed in on five core themes:

- *Innovation orientation:* aimed at fostering innovation mindsets and capabilities, this quick view illustrates the readiness of municipal officials to embrace and champion innovation for local economic development.
- *Innovation infrastructure:* describes the quantity and quality of public infrastructure (ranging from internet connectivity to research facilities) that can support innovation-driven municipal development.
- *Networking for innovation:* documents the nature and scale of relationships and interactions among municipal stakeholders (formal and informal networks) that enable innovation for socioeconomic transformation.
- *Innovation characteristics:* a broad sketch of the nature and scale of innovation activities inside the borders of a municipality, such as new inventions or the diffusion of innovations brought in from outside the municipal borders.
- *Resources for innovation:* documents awareness and use of government support for innovation activities that can include finance as well as patent and copyright laws.

The research team synthesised findings and recommendations into accessible knowledge products, creating short booklets and pamphlets with user-friendly language and layouts. These materials formed the foundation for dissemination through multiple channels. Workshop presentations, email communiqués, briefing notes, pamphlets and voice notes were prominent ways to disseminate key messages. Participants at workshops received electronic versions of briefing notes and pamphlets alongside suggestions to distribute materials through their own networks. Emails and workshops also provided opportunities for stakeholder feedback on the substantive content and criteria above. To reach larger audiences beyond the targeted districts, a website is being developed to serve as a living repository of disseminated information.

The workshops targeted 150 participants, chosen to ensure representation across different governance levels while remaining manageable within resource constraints. Tables 1 and 2 below show the participant profiles, compiled from attendance registers collected at 12 workshops.

Table 1. Participant headcount (targeted and actual) in terms of spatial scope of their socioeconomic activities.

	Participants			
	Targeted		Actual (Realised)	
Spatial scope	Headcount (N)	Share (%)	Headcount (N)	Share (%)
Provincial	30	20	33	19
District Municipality	40	27	34	20
Local Municipality	80	54	110	63
Total	150	100	177	100

Source: HSRC

Workshops attracted 63% of participants from the local domain compared to the targeted 54%, indicating strong grassroots engagement (see Table 1). The participation of stakeholders who operate across the province signifies wider interest in evidence-sharing and opens prospects for expanding dissemination beyond the boundaries of the Karoo districts.

Table 2. Participant headcount (targeted and actual) in terms of stakeholder group

	Participants			
	Targeted		Actual (Realised)	
Stakeholder group/sector	Headcount (N)	Share (%)	Headcount (N)	Share (%)
Government	40	27	79	45
Research institutes	25	17	20	12
Firms/entrepreneurs	60	40	61	35
Civil society	25	17	17	10
Total	150	100	177	100

Source: HSRC

This view of participant profiles suggests strong interest among government officials in evidence for innovation-driven local development, with government participants forming 45% of actual attendees compared to 27% of the targeted share (see Table 2). While this high government participation is encouraging, the relatively lower attendance by entrepreneurs and civil society organisations suggests a need to strengthen outreach to these sectors to ensure their involvement in local innovation initiatives. Participants from the state have diverse roles in innovation-driven development, from leveraging innovation for public service efficiencies to acting as innovation brokers who aid non-state actors in exploring innovative solutions for municipal residents.

Conclusion

While municipalities and SALGA in the Karoo have embraced this norm of innovation-driven socioeconomic development, it is difficult for them to access fit-for-purpose evidence. Through step-by-step dissemination and participatory engagements with local stakeholders, this initiative bridged the evidence access barriers and empowered Karoo stakeholders to intensively use the status reports, short communications and data in their strategic decisions.

This dissemination initiative achieved modest outcomes in terms of the number of workshops hosted across four districts in the Karoo, headcounts of actual participants at each event and the range of evidence communiqués distributed. The success of participatory approaches, particularly in achieving greater reach and impact, demonstrates the importance of co-producing knowledge with local stakeholders. Municipal innovation brokers and stakeholder beneficiaries displayed a shared interest in the evidence and ought to be co-designers of dissemination for uptake and use of the evidence to benefit more municipalities. Dissemination forums initiated through municipalities, coupled with participation beyond targeted districts, resonate with the empowered participation approach to engaged research. Refined tools to monitor dissemination are a priority that can enhance user-friendly processes in future ventures.

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Photo by Freepik

Bridging divides:

using digital technologies to improve climate resilience in South Africa

As climate change intensifies, South Africa faces urgent challenges, from extreme weather events to food insecurity. Digital technologies offer transformative solutions for climate change resilience. How can we overcome systemic barriers to harness their full potential? This article explores lessons from the EU's twin transition and the HSRC's efforts to drive sustainable development through innovation. By ***Zikhona Ngqula*** *and* ***Darryn Whisgary***

Climate change is no longer a distant threat but a pressing reality reshaping lives globally. In South Africa, worsening droughts, floods and rising temperatures threaten both lives and livelihoods. A 2023 HSRC study found that nearly 75% of South African adults have experienced extreme weather events in the past decade, heightening awareness and concern about climate change. Amid these challenges lies an underexplored opportunity: leveraging digital technologies to build climate resilience.

On 24 October 2024, the HSRC hosted a webinar titled *Harnessing Digital Technologies for Climate Change Mitigation and Adaptation.* The event featured Professor Björn Jindra from the Copenhagen Business School, who discussed the role of digital innovation in climate action. Insights from European Union policies highlighted the potential of information and communication technologies (ICT) to boost climate resilience while examining how these strategies could be adapted to South Africa's unique economic and environmental contexts.

The European Union's twin transition

The EU has set a global benchmark for combining technology and climate policy. However, as Jindra highlighted in his keynote speech, the EU's progress remains uneven, with challenges such as rising transport emissions and policy gaps limiting its effectiveness. These limitations highlight the need for countries like South Africa to critically adapt this framework to their unique contexts.

The HSRC's Dr Wilfred Lunga further emphasised the importance of African-specific solutions, noting that Southern Africa's socio-political and structural challenges require localised approaches to digital sustainability. By learning from the EU's successes and limitations, South Africa can develop tailored strategies that address its specific needs while leveraging digital technologies for climate resilience. Together, these perspectives underscore the critical role of digital innovation in shaping a sustainable future for the region.

Key elements of a twin transition could include:

1. Internet of Things (IoT)-enabled smart grids that optimise energy distribution and reduce wastage
2. Climate data platforms to predict environmental risks, enhancing resource allocation
3. Digital sustainability technologies designed to drive emission reductions

Jindra and Leusin found that digital sustainability technologies are evolving and contributing to emission reduction efforts. However, their study pointed to limitations, such as uneven progress across sectors and policy gaps that hinder the full potential of these technologies. This dual approach – addressing immediate environmental needs while nurturing long-term technological integration – signals an urgent call to leverage digital innovation for a sustainable future.

South Africa's unique challenges and opportunities

South Africa has nuanced challenges and opportunities in integrating digital technologies for climate resilience. The country faces critical obstacles such as weak governance structures; significant digital divides that limit access to technology, particularly in underserved and rural communities; as well as policy and funding gaps with fragmented policies and a lack of investment in digital sustainability.

These systemic issues hinder the country's ability to fully harness digital solutions for addressing climate change.

Opportunities for transformation

South Africa can drive economic, social and environmental progress by strategically investing in digital technologies. With robust policies and infrastructure, these investments can advance energy efficiency, climate resilience and resource management. Integrating digital solutions into key sectors will foster sustainable development, improve service delivery, and foster innovation and environmental conservation.

South Africa has made significant strides in climate change mitigation by adopting and integrating digital technologies:



Dr Glenda Kruss from the HSRC at the webinar, Harnessing Digital Technologies for Climate Change Mitigation and Adaptation. Photo: HSRC

Area of achievement	Description
Renewable energy integration	South Africa has made significant progress in integrating renewable energy sources, particularly solar and wind, into its energy grid. Digital technologies like smart grids and energy management systems have improved energy efficiency.
Smart metering and monitoring	Smart meters provide real-time data on energy consumption, enhancing energy efficiency, enabling improved energy management, and helping to lower greenhouse gas emissions.
Disaster risk management	Digital technologies like Geographic Information System (GIS) mapping, remote sensing and mobile alert systems enhance early warning capabilities for climate-related disasters, improving preparedness for floods, droughts and other climate risks.
Climate data platforms	Platforms like the South African Risk and Vulnerability Atlas (SAR-VA) offer up-to-date climate data and projections to support decision-making and planning for climate resilience.
Adoption of precision agriculture	IoT devices and data analytics enhance water management, boost crop yields and minimise resource waste in agriculture. This promotes sustainable farming practices and aids in climate change mitigation.
Public awareness and education	Digital platforms are essential for increasing community awareness and education on climate change and mitigation strategies. The Climate Change & Sustainability Digital Library (CCSDL) is a key resource, providing open-access educational materials for individuals, educators and policymakers. These platforms leverage tools like interactive materials to empower communities to adopt sustainable practices and enhance climate resilience.
Partnerships and collaborations	South Africa collaborates with global organisations and countries to exchange knowledge and effective strategies for utilising digital technologies to address climate change.

Source: HSRC

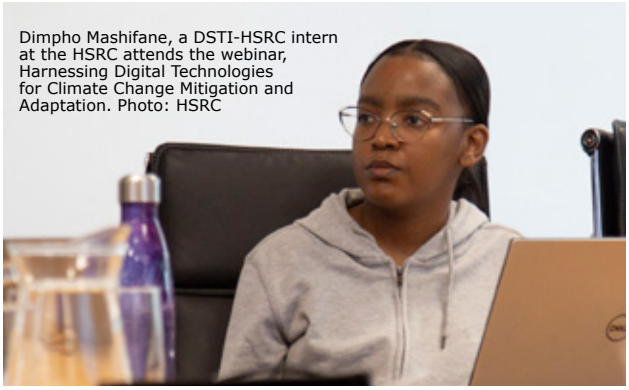
While these achievements indicate progress, continued efforts are crucial to further digital technology adoption across sectors, enhancing climate resilience and sustainability in South Africa.

Bridging the gap: A strategic way forward for South Africa

South Africa needs integrated strategies that combine energy and digital technologies to promote digital inclusion, reduce inequality and achieve environmental goals. Policy innovation is essential, particularly in aligning ICT with environmental priorities and fostering cross-sectoral collaboration. South Africa can develop frameworks to encourage public–private partnerships and address socioeconomic disparities. For example, incentives like tax breaks, subsidies or grants could motivate private companies to invest in environmentally beneficial ICT projects, such as smart grids or precision agriculture tools.

Equally important is the development of cross-sectoral policies that merge environmental sustainability with ICT development. These policies should ensure mutual reinforcement between sectors and include socioeconomic impact assessments to address technological and social needs.

The recent webinar marked a significant step forward by facilitating knowledge sharing, networking, and raising awareness about the role of digital technologies in climate change mitigation.



Dimpho Mashifane, a DSTI-HSRC intern at the HSRC attends the webinar, Harnessing Digital Technologies for Climate Change Mitigation and Adaptation. Photo: HSRC

Conclusion

Collaboration is key to advancing climate resilience and digital innovation. By building on international partnerships and tailoring proven strategies to South Africa's needs, we can drive meaningful change. This requires prioritising investments in digital and energy infrastructure, as well as strengthening research and innovation ecosystems to develop locally relevant solutions.

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Attending the webinar, Harnessing Digital Technologies for Climate Change Mitigation and Adaptation, from left to right: Drs Jacqueline Borel-Saladin, Nazeem Mustapha and Glenda Kruss from the HSRC; Prof. Björn Jindra from Copenhagen Business School; Tina Hilbert; and Darryn Whisgary, also from the HSRC Photo: HSRC

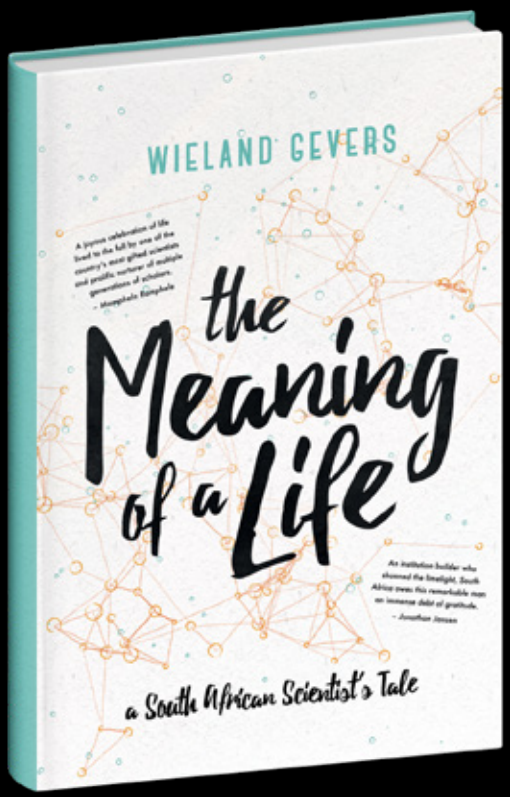
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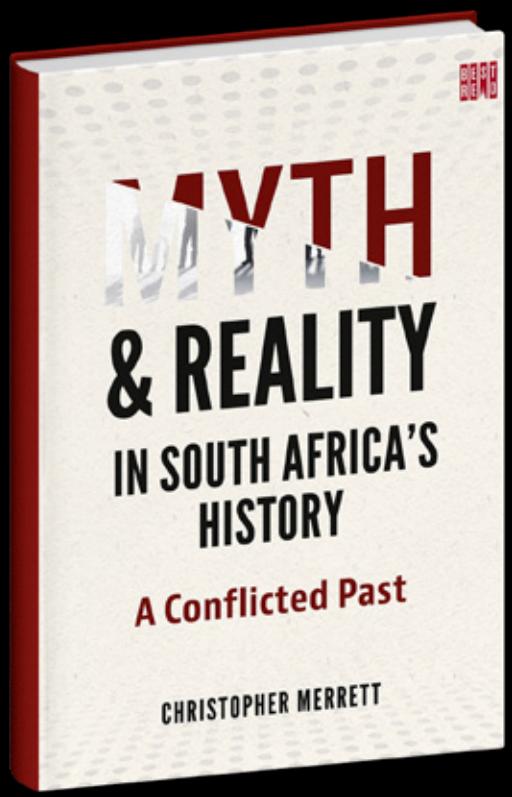
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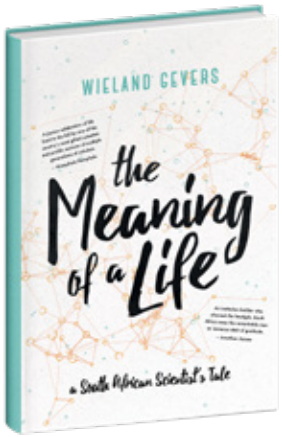
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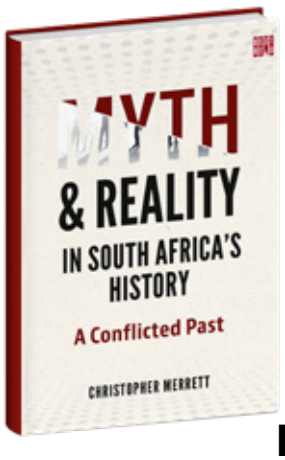
About the book
The Meaning of a Life: A South African Scientist's Tale is a frank and full account of how chance and opportunity shape the life of a scientist. It reflects on how the elusive qualities responsible for survival and eventual success can be retrospectively identified, with lessons for young and hopeful individuals who might wish to follow a similar path.

This book aims to demystify the interplay between professional and public/private lives, revealing how one's inner self and family are affected as a career unfolds. The narrative maps onto the history of South Africa, by including aspects of ancestry and inherited culture, while describing the life-path of one individual in the academic sphere who sought to change, and in some key instances did change, the basic workings of higher education and research as the country went through massive transitions. Readers will see into many aspects of the behind-the-scenes workings of academia, usually hidden from public view, which may significantly affect their lives or those of their communities. A must-read for all citizens, especially those interested in the lives of academics and in understanding university life.

"This is beautifully written and takes the reader on an eight-decade journey of a consummate scholar, teacher and active citizen whose life has touched and shaped many in South Africa and elsewhere, either directly or indirectly. It is a joyous celebration of life lived to the full by one of the country's most gifted scientists and prolific nurturer of multiple generations of scholars. The Meaning of a Life is a must-read and a difficult-to-put-down treat for students, academics, university leaders and active citizens." **(Mamphela Ramphele, Founder and Patron of Reimagine SA**

"Arguably one of South Africa's two or three foremost science citizens, Wieland Gevers is an academic journeyman who behind the scenes helped build the formidable architecture that birthed the Academy of Science of South Africa, defended the modern qualifications system of our universities, and established several world-class biomedical science centres. Mentored by two Nobel Prize winners, he gave up a prestigious career overseas to underpin the transformation of universities after apartheid by attending to the nuts and bolts of higher education reform. An institution builder who shunned the limelight, South Africa owes this remarkable man an immense debt of gratitude. Inspiring, accessible, and deeply moving, read this outstanding book and discover why." **(Jonathan Jansen, Distinguished Professor of Education, Stellenbosch University)**

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Myth and Reality in South Africa's History

A Conflicted Past

Author:	Christopher Merrett
Publication:	BestRed
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R495

About the book
History matters. Some wish to bury it; others wish to use it selectively for their own purposes. But, for any nation, it must be confronted honestly. Just as the Freedom Charter proclaims that South Africa belongs to all who live in it, so does its history. The country was liberated by its people, not one specific group.

Myth and Reality in South Africa's History: A Conflicted Past is a collection of 80 newspaper opinion pieces and feature articles published over 30 years. These pieces examine significant past lives, movements and events, and interpret their contemporary significance for a general readership. The focus is on individuals and organisations that have often been neglected in post-liberation discourse, which tends to exaggerate the role of certain movements.

The intention was to challenge a monochrome version of national history by emphasising pluralism and diversity. Underlying themes include a continued belief in universal human rights, individual empowerment and psychological liberation in the face of power, both under and after apartheid.

The chapters are arranged by broad chronology regardless of date of publication to produce a historical narrative, unified by a brief introduction to modern South African history.

"A serious columnist needs an incisive mind, clear writing style and unwavering courage. Christopher Merrett ticks all these boxes. *Myth and Reality* is an important barometer reading of our times." **(John Conyngham, former editor of *The Witness*)**

"Christopher Merrett's counter-narrative eloquently reminds us of the hidden history the new elite has forgotten. If ever there were a book that confirms the relevance of a critical press, this compilation cements that legacy for *The Witness*." **(Keyan Tomaselli, Distinguished Professor, Humanities, University of Johannesburg)**

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