



GCRO ANNUAL REPORT



ANNUAL REPORT

2018/19



GCRO | Gauteng
City-Region
Observatory



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GCRO ANNUAL REPORT 2018/19

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Gauteng City-Region Observatory Annual Report 2018/19



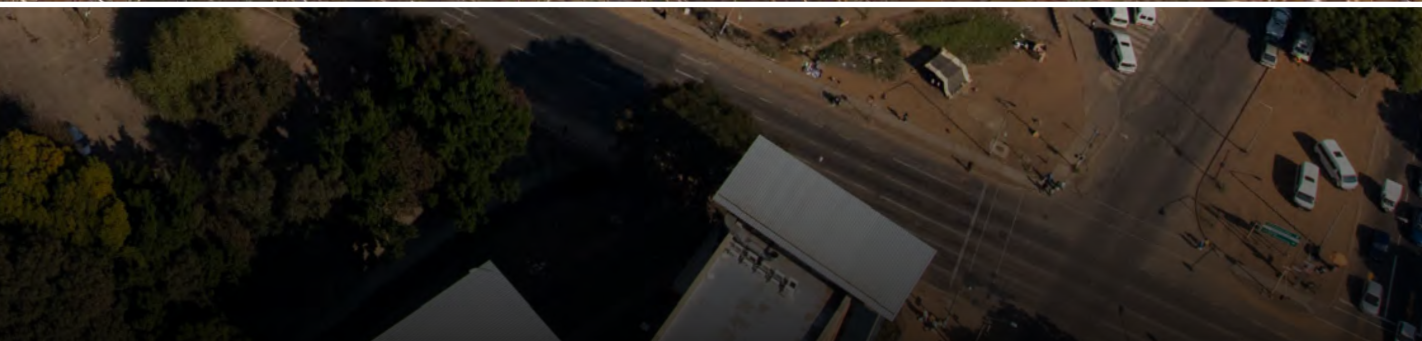
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Foreword from the Chairperson of the GCRO Board

It is a decade since the GCRO was first established in late 2008, with the appointment of the inaugural Executive Director, Prof. David Everatt, who began to assemble its capacity in 2009. The genesis of the project arose from a growing understanding that the human and economic geography of the region, divided into a set of metropolitan and local municipalities, nevertheless functioned practically as an interconnected and interdependent spatial territory. The economic flows and patterns of mobility self-evidently run across the boundaries set out for the local government entities, and complex interrelationships sustain the businesses and communities of the region. The question that followed was whether there should not, therefore, be a greater degree of cooperation and coherence in the planning of some key priorities – for example transport infrastructure, economic development, water security, and a collective vision for the region as a whole. Following the example of many similar urban agglomerations globally, the territory within and adjacent to the province of Gauteng could be understood as a ‘city-region’, and should attract planning and governance as such. Given this rationale, what should be the role of the Gauteng

Provincial Government (GPG) in supporting the prosperity of the city-region?

Whatever approach might be taken to city-region governance would need a comprehensive and reliable base of information, and the notion of an ‘observatory’ was accepted as a means to this end. The partnership was formed, with a commitment of core funding from GPG, and in-kind resourcing from the two partner universities. The observatory would draw on the methods of the scholarly world, but direct its enquiries to matters of the city-region. It would have scholarly independence, but be responsive to the needs of its government partners. It would have a core of its own research strength, but also work in partnership with urban researchers elsewhere. Since then, the GCRO has grown to exemplify the value of dedicated urban research for governance purposes, as well as the rewards that come from a resilient and productive partnership.

In the interim, a number of national planning frameworks have emerged which emphasise the importance of spatially oriented approaches to planning, including the National Spatial Development Framework (NSDF), the Spatial Planning and Land Use Management Act (SPLUMA) and the

“Whatever approach might be taken to city-region governance would need a comprehensive and reliable base of information, and the notion of an ‘observatory’ was accepted as a means to this end.”

Integrated Urban Development Framework (IUDF). All of these have emphasised the need to achieve broader analyses of the systems and structures that operate across spatial zones, and to generate insight into how prosperity and equitable livelihoods may be supported in these regions. Inevitably, these systems function across the boundaries of local government, but may not be adequately addressed by the other spheres of government. Approaches to city-region governance thus require the deliberative platforms and strategic information sources that support transversal governance, without subtracting from the powers assigned in the Constitution to the three spheres of government.

Neither of these (the deliberative platform and the knowledge base) is easy to come by, and they need to be built systematically, taking into consideration the specialised skills needed for large and complex systems analysis, and the mediatory talent and trust equity required for cross-boundary collaboration. The work of the GCRO over the past decade has provided an important illustration of what it takes to generate insight into complex urban settings and the complexity of the governance challenge.

There are no short cuts or silver bullets in this domain. Real capability has to be grown over time in stable organisational forms that nurture skills, experience, longitudinal datasets and relationships of trust and reciprocal exchange. With this in place, it becomes possible to provide both considered insights based on solid research, as well as quick turnaround support for the rapid responsiveness that government often needs to provide. Both of these qualities are needed for adaptive responses to the exigencies of fluid environments, and for achieving the broader transformative purposes of our society.

There is much to be learned from the model, and the track record, of the GCRO, for possible reproduction elsewhere in one form or another. I commend readers to the content of this Annual Report, and do so with considerable appreciation for the continuing work of the GCRO team.

Professor Zeblon Vilakazi
Deputy Vice-Chancellor (Research and
Postgraduate Affairs) – University of
the Witwatersrand, and Chairperson
of the GCRO Board

Prof. Zeblon Vilakazi, Deputy Vice-Chancellor: Research and Postgraduate Affairs, Wits, and GCRO Board Chairperson, at the QoL V launch



Introduction and overview of the year

This report covers the April 2018 to March 2019 financial year, and reports on the fourth year of the GCRO's 2015/16 to 2019/20 five-year Strategic Plan. The GCRO is a relatively rare partnership between government and universities: the Gauteng Provincial Government (GPG) provides an annual core grant, while the two partner universities provide valuable in-kind support, which includes office accommodation, and administrative and library services. The GCRO is governed by a Board with representatives from GPG, the two universities and organised local government in Gauteng. While the GCRO is guaranteed its academic independence, its research agenda is focused on the issues of the city-region and its governance. Relationships of significant trust and reciprocal exchange exist between the partners, enabling greater insight for researchers into the priorities and complexity of government, and enabling greater absorption of the GCRO's work into government quarters. The unfailing financial support from GPG, its steadfast respect for the GCRO's independence, and the strong support of the universities have, together, enabled the GCRO to strengthen its capacity and reach over the years since its inception in late 2008. We are pleased to note the continued high levels of interest and credibility that our work has attracted over these years.

During the period under review, the GCRO's flagship Quality of Life Survey successfully completed its fifth iteration. The data collection was completed in early September, with about 25 000 interviews distributed satisfactorily around the wards of the city region. The public launch of the headline insights from the survey went ahead successfully in November 2018, and wide media coverage and public interest was achieved. Closer analysis of the data will continue into the future, as usual. A comprehensive 10-year review of the survey has now commenced (and will

continue throughout 2019), with a view to fine-tuning approaches to the focus areas of the questionnaire, the sampling methodology, the fieldwork management systems and the reach of its results across various audiences. The review process, chaired by Prof. Mark Orkin, includes a series of interviews with key informants and stakeholders, and a series of day-long technical review workshops scheduled throughout 2019. Prof. Orkin will oversee the production of a final report in the course of 2019/20, which will inform the conduct of the survey into the future.

Following a series of presentations to high-level structures in the last quarter of 2017/18, including the Premier's Coordinating Forum, the GCRO was asked to facilitate the development of a Water Security Plan for the Gauteng City-Region. Working closely with the Gauteng Planning Division, project lead Gillian Maree commissioned a group of water specialists and co-drafted the plan with them. After processes of internal and external review, and consultation with stakeholders such as municipalities and Rand Water, a final draft was submitted to the Premier's Office for approval. The plan highlights critical issues for achieving water security and covers a range of interconnected issues that require intervention and the need for effective institutions for water management. The plan has achieved broad consensus among key role-players and has been presented to a number of government fora and academic events.

The GCRO contributed in a number of ways to the Metropolis Annual Meeting that was hosted by GPG in Gauteng in August 2018. We advised on the structure and participants for the programme, and for the event itself the GCRO developed a major exhibition on the issues of inclusive city-building in the Gauteng City-Region. The exhibition included panels of data and information on the topics of population, diversity, economy, governance, settlements and

transport. It also included an overview of the Quality of Life Survey, a new explainer video on the Gauteng City-Region and the GCRO, as well as interactive components such as the GCRO's Gauteng as a village of 100 people. The GCRO staff were involved in multiple conference sessions and engaged with other urban observatories and institutes to discuss opportunities for collaborative research and partnerships.

In mid-2018, the Gauteng Planning Division requested the GCRO to assist with GPG's end of term review. The GCRO was asked to prepare seven thematic papers that would be synthesised by GPG into an overarching trends and dynamics chapter in the review covering demography, economy, spatial change, poverty, inequality and social mobility, quality of life, environment and governance. Teams of GCRO staff prepared these papers and assisted with the final synthesis of the work. It was agreed that the GCRO will be able to use some of the material generated in this process for its own outputs.

The GCRO was invited as a presenter at the December 2018 EU-DST Programme of Evidence-Informed Policy-Making Master Classes for policy-makers and policy researchers from across the African continent. Four classes were convened by the GCRO for high-level participants with a particular interest in governance strategies for urban and subnational territories.

For some time, the GCRO has been working to strengthen research activity around the theme of 'city-region economies', especially on the ideas of 'inclusive economies' and 'township economies' – terms that often find their way into policy and strategy documents. The GCRO has convened a number of workshops with a loose consortium of researchers with interest and expertise in this domain. One workshop, in October 2018, brought together researchers and officials in a productive dialogue on themes related to 'township economies'. Among other successes has been the recent awarding by GPG of funds for a GCR Chair in Inclusive Economies, intended to be based at the University of Pretoria and working closely with the GCRO. This follows confirmation of a similar GCR Chair in Trade and Investment, to be based at Wits University. A case study on the question of cascading policy coherence related to economic inclusion across

the spheres of government was commissioned, and was presented at the 2018 INGSA Conference in Tokyo.

A potentially productive convergence of thought and vision is emerging in a number of GCRO-related initiatives. The work on the 'City-region economies' theme has enjoyed particular success and attention following presentations on the Firm-Level Survey. Second, and in parallel to this, is a series of deliberations in various GPG departments and agencies, convened by Rob Moore, on plans to escalate the scale and purposes of Gauteng's Regional System of Innovation, particularly to support economic growth and social inclusion.

Within its normal sequence of productive work (including Provocations, Research Reports and the regular Maps of the Month) the GCRO continues to generate research outputs that find appreciative audiences. The GCRO Research Report *A framework for a green infrastructure approach in the Gauteng City-Region* won the award for Research in Sustainability in the 2017/18 Afrisam-SAIA Awards for Sustainable Architecture + Innovation.



GCRO senior researcher Christina Culwick Fatti (left) receiving a 2017/18 Afrisam-SAIA Award for Sustainable Architecture + Innovation for her green infrastructure work

The book *Changing space, changing city: Johannesburg after apartheid*, co-edited by two GCRO staff and published by Wits University Press (WUP), won the Humanities and Social Sciences Non-Fiction Book (2017) award from the National Institute for the Humanities and Social Sciences (NIHSS). The editors elected to give the prize money to WUP to see a selection of chapters from the book republished as an open access edition, and this approach saw the book downloaded 378 times in over 20 countries in October 2018 alone.

Our UJ-funded post-doctoral fellow Dr Aidan Mosselson wrote up his PhD, obtained at University College London, into a book manuscript. The book – *Vernacular regeneration: Low-income housing, private policing and urban transformation in inner-city Johannesburg* – was published by Routledge in September 2018.

Colleagues in the GCRO have generated writing-support opportunities to underpin continuing research productivity and collaboration. For example, the GCRO and the University of Cambridge co-hosted a writing workshop on the theme ‘Governing for urban inclusion’. The workshop resulted from a successful application for funding by Richard Ballard (GCRO) and Charlotte Lemanski (Cambridge). The co-facilitators were Jenny Robinson (UCL) and Amini Kamete (Glasgow). Thirty participants travelled to Johannesburg from the UK, Malawi, Zimbabwe and various parts of South Africa.

In conclusion, in early 2019 the GCRO commenced a five-year strategic review process, which will run through most of the year, including a five-yearly external review process. These activities will culminate in a new Strategic Plan for the 2020/21 to 2024/25 period, which we trust will usher in a new phase of renewal and fresh directions.

Dr Rob Moore
Executive Director





GCRO QoL V launch





**Governance
and organisational
development**

Governance and organisational development

Governance

The GCRO is a partnership between the Gauteng Provincial Government (GPG), organised local government in Gauteng (SALGA-Gauteng), the University of Johannesburg (UJ) and the University of the Witwatersrand (Wits) in Johannesburg. These four partners are all represented on the Board of the GCRO. In 2018/19 the Board comprised:

- Prof. Zebulon Vilakazi (Chairperson): Deputy Vice-Chancellor: Research and Postgraduate Affairs, Wits
- Prof. Saurabh Sinha (Deputy Chairperson): Deputy Vice-Chancellor: Research and Internationalisation, UJ
- Prof. Fiona Tregenna: SARCHI Chair in Industrial Development, UJ
- Prof. Anne McLennan: Associate Professor and Assistant Dean, Research in the Faculty of Commerce, Law and Management, Wits
- Mr Lucky Leseane: Provincial Executive Officer (PEO), SALGA-Gauteng
- Councillor Patrick Naga Lipudi: Deputy Chairperson, SALGA-Gauteng
- Mr Khululekile Mase: Deputy Director General: Development Planning, Gauteng Planning Division, Office of the Premier, GPG
- Mr Rashid Seedat: Head: Gauteng Planning Division, Office of the Premier, GPG.



Staff and structure

As at 1 July 2018, the GCRO comprised 19 staff members: 16 research staff members (including the Executive Director and Director: Research) and three administrative staff members.

As always, the year under review saw some comings and goings of staff. Two interns, Bonolo Mohulatsi and Yashena Naidoo, joined the organisation in late 2018, followed by Sandiswa Mapukata in early 2019 after she assisted with the November 2018 launch of the Quality of Life Survey V

(2017/18). Four staff members left. Kate Joseph left to take up a position in the Department of Group Strategy at the City of Johannesburg. Jesse Harber took up a PhD opportunity at the School of Oriental and African Studies (University of London) (SOAS). Elaine Milton, Director of Operations and Partnerships, left for personal reasons. And we pay special tribute to Adele Underhay, who retired after spending eight years since the GCRO's inception building the organisation as its Manager: Finance and Administration.

Adele Underhay at her farewell



Ngaka Mosiane, Thembani Mkhize and Koech Cheruiyot at Adele's farewell



Christian Hamann at the QoL 2018 launch



Rob Moore at Adele Underhay's farewell



GCRO staff 2018/19 at Adele Underhay's farewell

Top and top standing on right	Middle row, from left
1. Christina Culwick	1. Graeme Götz
2. Alexandra Parker	2. Elaine Milton
3. Jesse Harber	3. Ruth Mohamed
4. Koech Cheruiyot	4. Ngaka Mosiane
5. Gillian Maree	5. Adele Underhay
6. Richard Ballard	6. Samkelisiwe Khanyile
7. Hannah Benn (temporary contract researcher)	7. Nadine Abrahams
8. Darlington Mushongera	
Bottom row	Staff who are missing from photo
1. Julia de Kadt	1. Rob Moore
2. Thembani Mkhize	2. Samy Katumba
3. Mamokete Matjomane	3. Christian Hamann
	4. Bonolo Mohulatsi
	5. Yashena Naidoo
	6. Sandiswa Mapukata

Staff development

The GCRO pays close attention to the ongoing development of its staff, providing opportunities for the attainment of qualifications, especially higher degrees, and the acquisition of skills through short courses. The financial year 2018/19 was noteworthy for the following:

- In 2018, Nadine Abrahams got her Matric qualification.
- In 2018, Samkelisiwe Khanyile and Alexandra Parker completed an online course on Data Visualisation for Journalism.
- In 2018, Samkelisiwe Khanyile completed an online HTML course on Codecademy.
- In early 2019, the GCRO arranged a data visualisation course using Tableau for a number of staff members.
- In early 2019, two GCRO GIS staff members, Samy Katumba and Yashena Naidoo, attended a one-week course on Remote Sensing at the University of Pretoria.
- Them bani Mkhize attended the Brown University (Boston) International Advanced Research Institutes' (BIARI) 'Governance and Development in the Age of Globalization' two-week class in June 2018.
- Koech Cheruiyot attended training on macroeconomic modelling at Statistics South Africa in October and November 2018.
- Samy Katumba attended training on Python for geoprocessing in November 2018.
- Christina Culwick and Darlington Mushongera continued to make progress on their respective PhDs.

Strategic planning for the next five years

Every five years the GCRO reconsiders its medium-term Strategic Plan, reviewing progress over the previous five years, referencing key governance and development trends, developments in relevant fields of scholarship and government priorities articulated in its Strategic Plans. Anticipating the new GPG term of

office starting after elections in May 2019, the GCRO initiated a new round of five-year strategic planning in early 2019. Initial steps in this financial year involved preparation in advance of a strategic breakaway in the first few days of April 2019. The strategic review and planning process will continue in 2019/20.

GCRO has an active research and GIS internship programme. Interns (from left) Bonolo Mohulatsi, Sandiswa Mapukata and Yashena Naidoo







**Support to
government**

Support to government

It is always intended that provincial and local government steering development in the GCR might take useful insights from the applied research work the GCRO publishes, either in academic works or as its own outputs. In addition, the GCRO often responds to requests from government for more immediate policy

support by providing data, analysis and strategic interpretation of key trends, or even the direct development of policies and strategies. Work in this area entails either larger policy support projects or various forms of ad hoc assistance on request.



Photograph by Clive Hassall

Strategic support to the Gauteng Planning Division

The GCRO continued to provide occasional research support to the Social Cohesion Champions Group appointed by the Premier to address key social cohesion challenges facing the province. Based on the work done for the Champions Group, as well as a Strategic Framework commissioned by the City of Johannesburg, the GCRO finalised and published a major Research Report – *Social cohesion in the GCR* – in February 2019. In the final quarter of the financial year, the GCRO was re-engaged to help prepare a final report from the Champions Group. The GCRO Research Report served as a basis for this, and the printed report was to be made available to the final meeting of the Champions Group scheduled for 12 April 2019.

Following a meeting between the Premier and Vice-Chancellors of universities in Gauteng in 2017/18, the GCRO was asked to assist with brokering productive relationships between GPG and the universities. A series of meetings continued to be held with key representatives of the universities in 2018/19. During these engagements it was agreed that a key focus of the relationship should be the development of a Regional System of Innovation for the province. Coincidentally, the GCRO was asked to become involved in various processes being led by different parts of GPG towards a Regional System of Innovation. For example, in October 2018 the GCRO assisted The Innovation Hub in a workshop to develop an approach to mounting a Gauteng Innovation System Baseline Study. Subsequently, in the final quarter of the year, the GCRO convened and/or participated in a number of meetings on a possible Gauteng regional innovation ecosystem, bringing together various GPG departments and other innovation stakeholders.

Relatedly, the GCRO also continued to assist in discussions to plan the ongoing relationship between GPG and the city of Reggio Emilia and the region of Emilia-Romagna, in particular in relation to the development of regional systems of innovation in the respective regions.

In mid-2018, the Deputy Director General (DDG) for Performance Monitoring and Evaluation in the

Gauteng Planning Division (GPD) asked the GCRO to assist with GPG's end of term review. The GCRO was asked to prepare seven thematic background papers – which the DDG would then use to synthesise an overarching trends and dynamics chapter in the review – covering demography; economy; spatial change; poverty, inequality and social mobility; quality of life; environment; and governance. The GCRO delivered these papers to GPD over November and December 2018. In January, the GCRO further assisted with efforts to distil these into the overview thematic paper, providing additional data and comments on draft work. It was agreed that the GCRO could take the background papers forward towards publication in 2019/20.

In view of the water shortages experienced in Cape Town over 2017 and 2018, the GCRO was asked to provide a number of presentations on Gauteng water security risks to key provincial events in the last quarter of 2017/18, including the February 2018 Executive Council Lekgotla and the Premier's Coordinating Forum. Building from these presentations, the GCRO was asked in early 2018/19 to provide dedicated support to GPD to develop a Water Security Plan for the city-region. Working with a specialist service provider, and in close partnership with GPD officials, the plan was developed over a period of two to three months – as requested – from June 2018. The plan was extensively workshopped in various fora and also presented at a series of academic events.

At the request of the GPD, the GCRO contributed in a number of ways to the Metropolis Annual Meeting that took place in Gauteng from 26–29 August 2018. The GCRO advised on the structure of the programme and possible session facilitators and speakers, and for the event itself the GCRO put together a major exhibition on the issues of inclusive city-building in the GCR (see below). The GCRO staff were also involved in multiple sessions as either facilitators or presenters. Later in the financial year, the GCRO assisted in conceptualising a proposal for the Premier's Co-Presidency Portfolio in Metropolis.

Following widespread protests in coloured communities in Gauteng through mid-2018, the GCRO was asked to synthesise any insights from relevant data sources, such as the Quality of Life Survey, that might shed light on the situation in these communities. The insights were assembled into a presentation to the GPG Exco Lekgotla in October 2018.

Other support

In 2016/17, the Member of the Executive Council (MEC) for Economic Development asked the GCRO to assist with a firm-level survey, looking inter alia at the cost of doing business in the region. Working with the Gauteng Growth and Development Agency (GGDA), the GCRO developed a two-phase firm-level survey process across a number of dimensions. The GCRO offered to pilot a firm survey with past and present business owners identified in the Quality of Life Survey. In addition, the Human Sciences Research Council (HSRC) was commissioned to investigate

the tradeable services sector in Gauteng, while the University of Johannesburg's Centre for Competition, Regulation and Economic Development (CCRED) was asked to contribute a 'census' of 10 industrial areas across Gauteng, laying the basis for a deeper survey in the second phase. Much of the work on this project was concluded in 2018/19. In June 2018, the HSRC finalised its report on tradeable services as an important sector in Gauteng. The GCRO's pilot firm-level survey in June and July 2018 entailed 366 telephonic interviews and 46 face-to-face interviews. Preliminary results were presented to the GGDA Board in September 2018. The analysis was further developed in the last quarter of the financial year and presented to a host of fora, including the Gauteng Department of Economic Development Senior Management Team, chaired by the MEC, in February 2019.

In 2017/18, the GCRO was requested by the City of Johannesburg to help it develop a Green Infrastructure Strategy for the city. Substantial further work was done on the project in 2018/19.



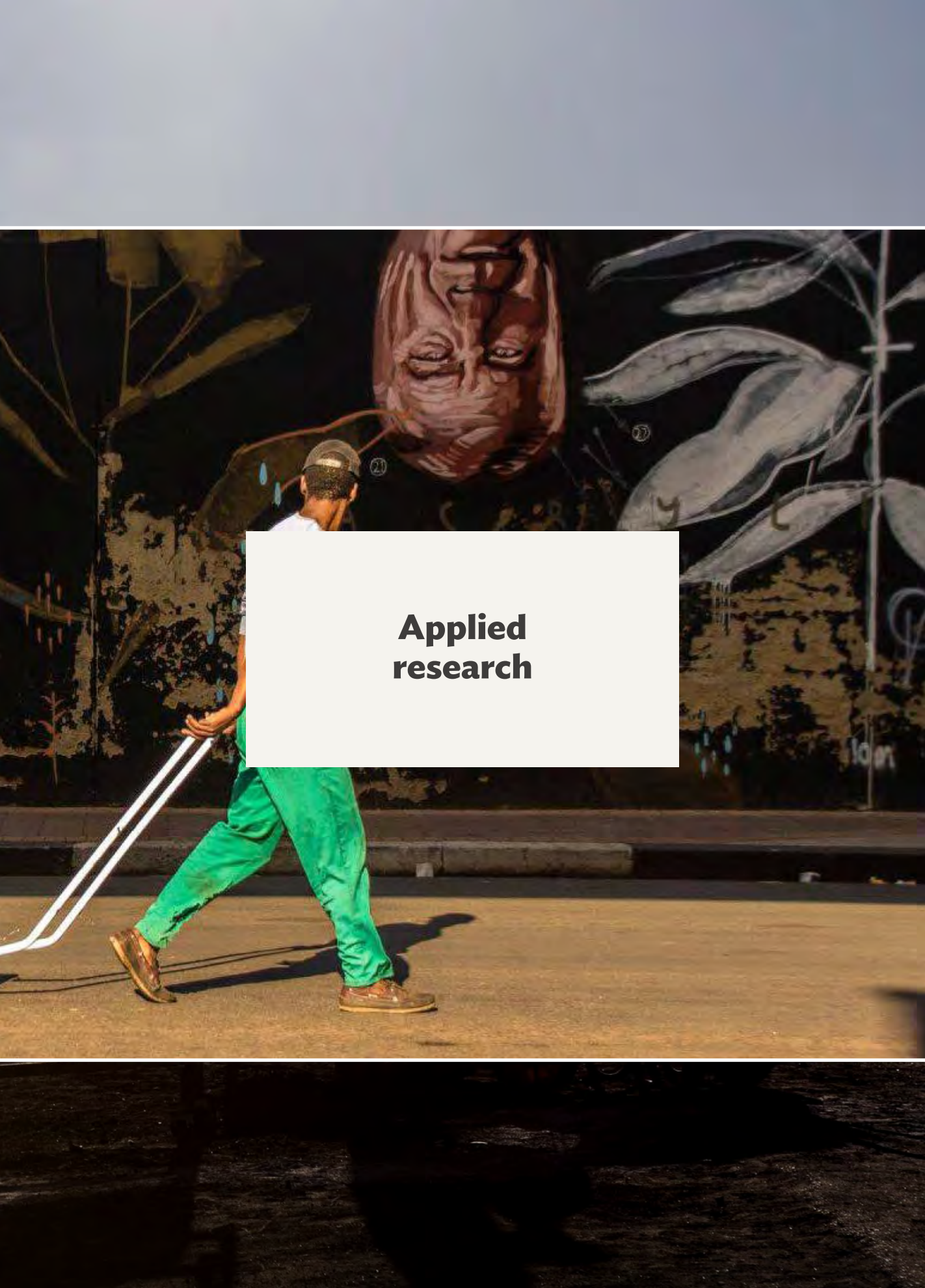
Gauteng Premier David Makhura taking press questions at the QoL V launch



Photograph by Alastair Mclachlan



Photograph (back) by Mark Lewis | Photograph (front) by Kirsty Mackay



Applied research

Applied research

Overview

During the 2014/15 financial year, the Board of the GCRO approved a new five-year Strategic Plan to take effect in April 2015, for the period to March 2020. The plan was formulated to build on existing areas of strength, and also to take account of new Strategic Frameworks, notably GPG's TMR agenda for the 2014–19 term of office.

In terms of this five-year plan, the GCRO arranged its project work into a number of thematic focus areas. Seven themes, each made up of a number of research projects, organise the GCRO's applied research. An eighth area is 'Government support' and covers work in response to requests from local, provincial or national government, as outlined above.

The 2018/19 work plan involved 40 live projects across the seven applied research focus areas.

Thematic focus areas	No. of projects
1. Analytics, cartographies and visualisations	7
2. Changes in the social fabric/Changing the social fabric	10
3. Rationalities of government and governance in the GCR	3
4. Histories and futures of the GCR	2
5. Landscapes in transition	8
6. New regional economies	4
7. Sustainability transitions in the GCR	6

1. Analytics, cartographies and visualisations

Primary data collection, as well as data analysis and visualisation, are in certain respects the GCRO's most significant research contributions. Work in this theme includes the GCRO's flagship project, the Quality of Life (QoL) Survey, conducted biennially, as well as the development and maintenance of a number of web GIS applications and viewers. Particular focus is also placed on the development of new data visualisation techniques.

Quality of Life IV (2015/16)

Work on this project was largely concluded during the 2018/19 financial year. The first quarter saw the publication of four Vignettes based on the QoL IV data, which came out of the preparation of the QoL IV City Benchmarking Report. The first complete draft of this report was also finalised during the first quarter, and was published as a GCRO Occasional Paper during the second quarter. The Health Databrief was prepared during the second quarter, and published during the third. Until the launch of the QoL V data late in the second quarter of the year, we continued to provide presentations on the QoL IV results to a number of

audiences in both provincial and local spheres of government, and to respond to media interest in the results. Dissemination of the dataset itself continued through the financial year. Although no further outputs based entirely on QoL IV are planned, data will continue to be publicly shared into the future.

Quality of Life V (2017/18)

This iteration of the QoL Survey unfortunately encountered numerous delays and interruptions in data collection, which was contracted out to a partner (ResearchGo at the University of Johannesburg). These delays and interruptions were most severe during the 2017/18 financial year. However, the GCRO worked with ResearchGo to address the issues underlying the delays, resulting in a period of relatively smooth data collection during the first quarter of 2018/19, although the pace of data collection remained concerningly slow. In this regard, the GCRO Board approved a reduction in the size of the QoL V sample to ensure the project could be brought to a timely conclusion.



Photograph by Clive Hassall

Data collection was completed during the second quarter. Throughout this process, both the GCRO and ResearchGo closely monitored data quality and integrity on a live and ongoing basis, and challenges were resolved as they were identified. In addition, preparatory work for weighting, cleaning, data analysis and reporting was conducted while data collection continued. This ensured that once all data had been collected, it was possible to rapidly generate a clean, weighted dataset, which in turn enabled data analysis to begin within a week of fieldwork completion. Workshops involving all GCRO staff encouraged engagement with the new dataset, and provided support for the preparation of content for various presentations. They also served as a capacity development exercise, providing training and support for colleagues who had not previously worked with QoL data.

During the third quarter, preliminary results were shared with key government stakeholders. Results were publicly launched in November 2018, at a high-profile event hosted at the Fine Arts Theatre at the University of Johannesburg. Substantial content was generated, including a comprehensive presentation, a set of visualisations exploring survey methodology and content, and a pack of 18 data insights designed to showcase the breadth of the data. The launch was attended by the Gauteng Premier and over 200 other guests. The Premier provided a response to the presentation of the results, emphasising the value that government places in the high-quality data that the QoL survey provides. The event went smoothly and attracted substantial media coverage.

During the fourth quarter, the QoL V data was shared with a number of researchers, and considerable progress was made towards the completion of the technical reports to accompany the data. However, during this process, an error was uncovered in the survey weights. Fortunately, this did not have major implications for the results. The issue was rectified, all results verified, reports finalised, and the corrected dataset shared with researchers early in the 2019/20 financial year.

Work on QoL V outputs will continue in the 2019/20 financial year, with presentations to various interested audiences, the publication of a document providing a range of insights from the dataset, and a first Data Brief on the topic of students. Work on

dissemination of the dataset and results, for example through a WaziMaps portal, will also continue.

Quality of Life Survey 10-year review process

The QoL Survey review process began during the 2018/19 financial year, with work on developing the overall approach, and a literature review and landscaping exercise during the first two quarters. The landscaping exercise included identifying broadly similar surveys locally and internationally, identifying individuals with expertise in implementing large-scale social surveys, and a series of expert interviews. During the third quarter, an external technical review chair, Prof. Mark Orkin, and a facilitator, Dr Tara Polzer-Ngwato, were appointed. Substantial headway was made on preparations for a series of expert workshops, and briefing documents to inform these workshops were developed. The first two expert workshops focused on sampling and weighting, and survey management, respectively. These were well attended by both GCRO colleagues and a number of external experts. The conversations were extremely fruitful both in terms of taking forward our thinking about the future of the survey, and also in building relationships with other organisations and individuals engaged in this type of work. The review process will continue in the 2019/20 financial year with two additional expert workshops, and the preparation of a Synthesis Report with recommendations by Prof. Orkin. The project will conclude in the 2020/21 financial year with the production of a Research Report.

Advancing data visualisation

The project started the year with the commissioning of an explainer video of the GCRO in preparation for the Metropolis Annual Meeting in mid-2018. The video was launched in August 2018 as part of the GCRO's Metropolis Annual Meeting exhibition. The project also saw a number of visualisations being published from the QoL 2017/18 results. In the last quarter of 2018/19, the GCRO hosted a two-day data visualisation training workshop.

Data smart GCR

The key research question explored in this project is: 'How can the GCR become data smart?' There are a number of aspects to the project. It has supported the

efforts of the Gauteng Planning Division to establish a Corporate GIS and a central spatial database (geoportal). In this regard, the GCRO has participated in and contributed to GIS forum meetings organised by the GIS unit at the Gauteng Planning Division (Office of the Premier). The project has also explored how Spatial Data Infrastructure (SDI) concepts and best practices can contribute to making geospatial data available to different government institutions and to the public in general. For this aspect, a GCRO Provocation is being finalised for publication, entitled *Strengthening governance in the Gauteng City-Region through a spatial data infrastructure: The case of address data*.

QoL Viewer second generation

Through the GCRO's QoL Viewer, QoL Survey data is made available online to a wide audience. The Viewer allows various stakeholders, academics, students and government officials to visualise, interact with and use the QoL data. This is an ongoing project focusing on the redevelopment of the current GCRO QoL Viewer to incorporate all five iterations (2009, 2011, 2013, 2014/15 and 2017/18) of QoL surveys to date. A ward-level representation of the data from 2013 to 2017/18 survey iterations is being considered.

Website and dissemination

In the 2017/18 financial year the GCRO's website developers (Unomena) identified that the web

framework on which the GCRO's website was designed has become outdated and the associated support and maintenance for this framework will come to an end. To mitigate the risk of this for the website – the 'public face of the GCRO' – a technical redesign and update of the site's back-end was conducted to ensure the existing content and functionality can be maintained. The final stages of this redevelopment will be concluded in 2019/20, including testing and migration to the new console where the website content will be controlled and edited. This upgrade should provide longevity to the current GCRO website.

The GCRO launched its second photography competition, Urban Gaze, which ran from December 2018 to the end of March 2019. It involved an open call for digital photographs of the Gauteng City-Region. The Urban Gaze competition is an opportunity for professional and amateur photographers to capture how residents of the city-region view and experience Gauteng. Through this competition, the GCRO will have access to user-generated visual content that captures the ways residents and visitors see and experience the GCR, its physical and social landscapes, people and infrastructure, and resources. This competition will assist the GCRO to aptly represent the region's people and spaces in its publications and online platforms. Shortlisted entries will be shown at an exhibition at the Keyes Art Mile in Rosebank in May 2019.



Photograph by Mpumelelo Buthelezi

2. Changes in the social fabric/Changing the social fabric

Projects in this theme investigate issues pertaining to social life in Gauteng, including poverty, racism, graffiti, street renaming, belonging and motherhood.

Graffiti in the city

Graffiti has a political history in the GCR but in recent years has been tied to urban renewal and the creative economy. After examining graffiti and street art in central Gauteng, the preliminary findings of the Maboneng study were presented at a local seminar and at the RGS-IBG Conference in Cardiff, Wales. An Occasional Paper entitled *Where do we draw the line: Graffiti in Maboneng* was also finalised and published in March 2019. Open Data Durban was contracted to develop an online application to publicly showcase spatially referenced examples of graffiti.

Hungry city-region

This project is a multidimensional analysis of the food insecurity challenges facing the GCR. The main focus has been a series of workshops on the governance of food security. The workshops form part of a series of engagements led by the DST-NRF Centre of Excellence on Food Security, which aims to reformulate the food

security research agenda. Three Food Governance Community of Practice meetings were hosted at the GCRO during 2018/19.

Post-apartheid social mixing

This project is developing into a larger study that aims to understand government's and residents' assumptions about class and space in the development of mixed-use, mixed-income mobility corridors. The major focus of the project during 2018/19 has been the drafting of two book chapters that explore various dimensions of segregation in Johannesburg. One chapter is part of an international volume comparing inequality and socio-economic segregation between world cities, and the other is part of a local volume entitled *Homes still apart*, which compares segregation trends between cities in South Africa since the advent of democracy.

Poverty and inequality in the GCR

This project aims to understand the nature and extent of poverty and inequality in the GCR, and to unpack its underlying causes, drivers and dynamics. The project culminated in the publication of the GCRO Research



Graffiti near Maboneng. Photograph by Alexandra Parker



Photograph by Amanda van der Walt

Report titled *Poverty and inequality in the Gauteng City-Region* online and in print in mid-2018. Some of the research results, including an updated Gauteng Multidimensional Poverty Index, were also separately published by the GCRO as a Map of the Month, and by EE Publishers in their magazine *Position IT*.

Poverty: A capabilities approach

This project builds on the 'Poverty and inequality in the GCR' research project. The aim of the project is to deepen our understanding of poverty and inequality in the GCR using Amartya Sen's capabilities approach. The terms of reference for the project partners were prepared and experts were contracted to undertake this analysis using GCRO QoL data. A draft report was submitted for internal review within the financial year.

Place and street renaming

Place and street renaming is one way of (re)branding post-apartheid cities in South Africa, but it is both welcomed and resisted by different stakeholders in different parts of the city-region. This research project seeks to unpack the reasons why place and street renaming is resisted in some areas and accepted in

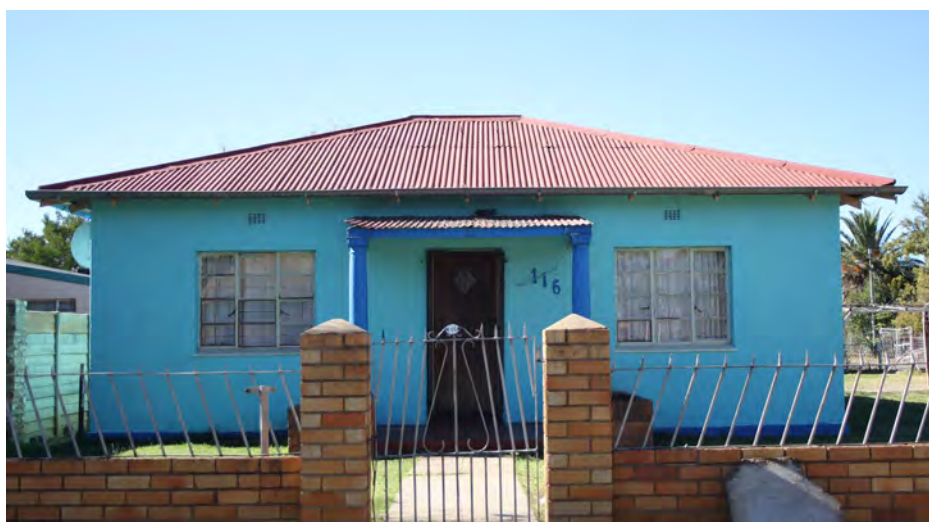
others. The focus during 2018/19 was on reviewing literature and collecting information about cases of place and street renaming in central Johannesburg and Pretoria. Interviews with city officials were invaluable in this regard.

Scale, belonging and exclusion

This research project examines the multiple scales at which 'community' is forged in Gauteng, with five case studies exploring the way in which people define their territories and relate to broader territories. During 2018/19, monthly reading group meetings continued in order to study literature on scale, belonging and exclusion while refining the write-ups of case studies. The research team also organised several internal workshops to review draft case studies.

Mothers in the city

This research project focuses on the experiences of mothers in the GCR, particularly related to their everyday activities and spatial footprints. During 2018/19, the project team was primarily focused on preparing for fieldwork to commence from June 2019. The methodology was designed and refined. This was



Photograph by Amanda van der Walt

submitted in an ethics application and approved. In addition, the project team expanded to include Lindsay Howe as a partner to assist with the mobility tracking, a key component of the project.

Gauteng's geographies of education

This ongoing research project examines the geography of education in Gauteng to gain a better understanding of the complexities that shape unequal education, as well as the policy directions that could make universal access to equitable education a reality. During 2018/19, the initial phases of the project focused on building partnerships with the Gauteng Department of Education (GDE), contributing to the meetings of

the Feeder Zone Task Team and reviewing literature related to the topic. Data from the GDE was used to publish a GCRO Map of the Month, which was also republished in *The Conversation Africa*.

Network for Gender and Urban Research

The Network for Gender and Urban Research was initiated with a one-day workshop in August 2018, where academics, government officials and practitioners gathered to discuss the intersections of gender and the urban. The project aims to build the network through seminars, workshops and special issues in journals.

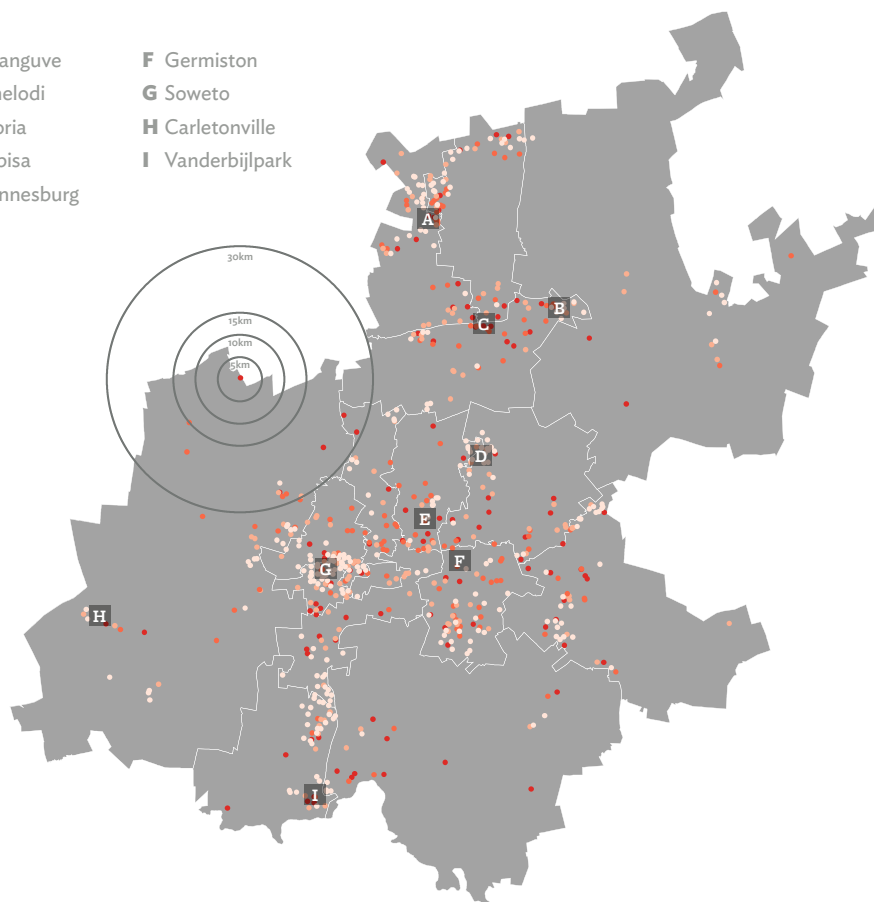
Graffiti near Maboneng. Photograph by Alexandra Parker



Gauteng's geographies of education | Detail from GCRO Map of the Month, May 2018

Secondary schools in Gauteng (2016)

- | | |
|-----------------------|-------------------------|
| A Soshanguve | F Germiston |
| B Mamelodi | G Soweto |
| C Pretoria | H Carletonville |
| D Tembisa | I Vanderbijlpark |
| E Johannesburg | |



Percentage of learners per school who travel more than 5km to school

- | | |
|---------------|-------------------------------|
| ● 0.0 - 35.0 | ● 75.1 - 100.0 |
| ● 35.1 - 55.0 | ● School districts in Gauteng |
| ● 55.1 - 75.0 | |

Data Source GDE, 2016

3. Rationalities of government and governance in the GCR

Research in this thematic area examines both government itself and the relations between government and society. It is vital to consider how government defines its objectives and organises itself in relation to these purposes (hence rationalities of government), and also to dig deeper into the administrative configurations that facilitate or hinder a more integrated and coordinated GCR. These ‘institutional ethnographies’ need to be complemented with deeper analysis of the expectations that residents have of government. How are these expectations framed, organised, mobilised and expressed? And how are they processed by government in a manner that is also constitutive of ‘society’s demands’?

Ethnographies of the state: The politics of service delivery planning

This project examines internal decision-making processes around development and service delivery planning and the practices of state officials in the City of Johannesburg. The GCRO project lead, Darlington Mushongera, spent six months conducting ethnographic fieldwork in City offices. The audio recordings of interviews and discussions were transcribed and prepared for analysis. The research supports the PhD currently being finalised by Mushongera, but it is also planned that this will be written up in a more abbreviated form as a GCRO Provocation.

Knowledge partnerships for urban futures

This project has two components. The first was the establishment of selected pilot strategic knowledge partnerships between government and universities, facilitated by the GCRO. The GCRO’s Executive Director, Rob Moore, together with officials from the Gauteng Planning Division (GPD), visited a number of universities in the province to explore possible avenues of collaboration. The discussions led to the identification of a key area of focus for future collaborative work on a Regional System of Innovation, work on which will continue in 2019/20. The GCRO also hosted a workshop on township economies that brought together researchers from a number of quarters, as well as representatives from the City Support Programme in National Treasury and the Gauteng Department of Economic Development.

The second component involved research into global and local practice in the domain of forging university-to-government knowledge partnerships, with the GCRO often being used as an example of a platform bridging the science–policy divide. Various GCRO staff collaborated with colleagues at University College London’s Department of Science, Technology, Engineering, and Public Policy (UCL STEaPP) in drafting a paper on urban observatories, with the GCRO as an illustrative case study. The paper was submitted for journal publication. The GCRO also chaired a panel on urban-level science



Photograph by Richard Ballard

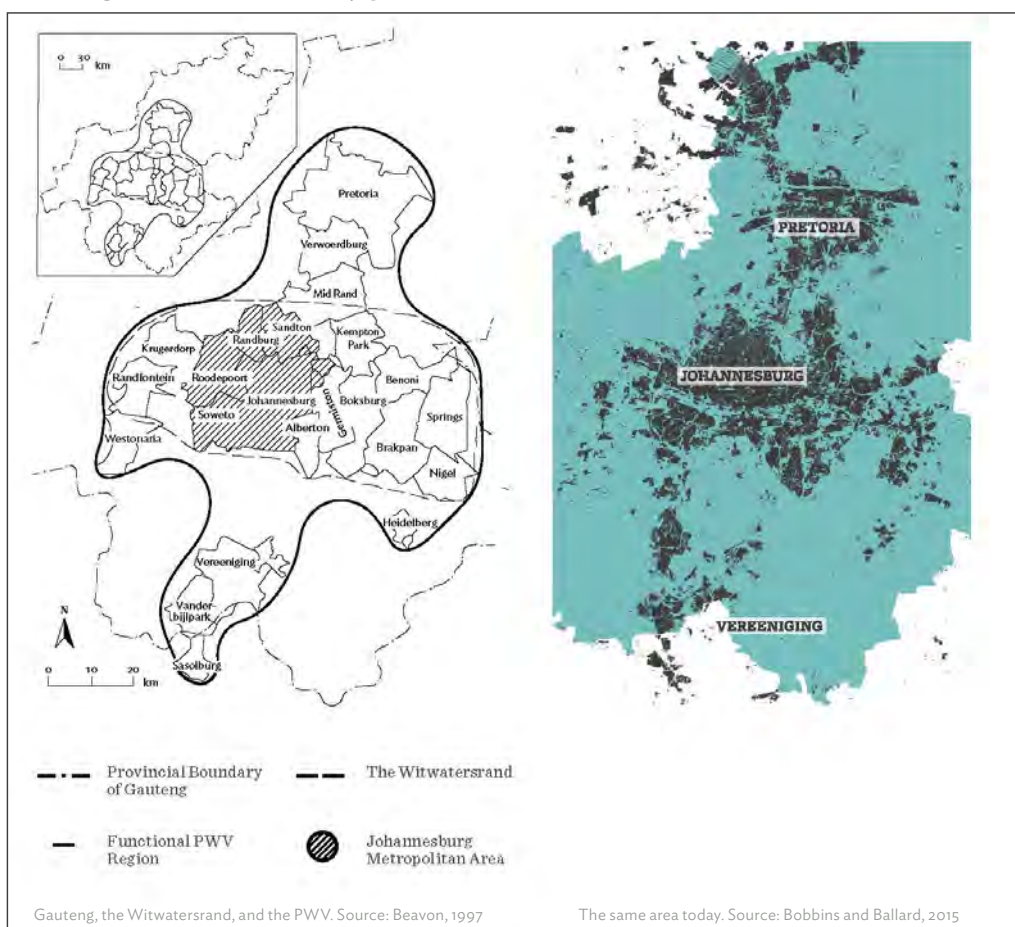
advice for government at the INGSA Conference in Japan. Following the conference, the GCRO, in collaboration with Dr Carla Washbourne from UCL, staged a workshop on multi-scalar governance for the advancement of the Sustainable Development Goals. Rob Moore was also invited to participate in delivering Master Classes on the urban science–policy nexus as part of the EU's Joint Research Centre programme of training for 150 policy researchers and government officers from Africa.

Governing the GCR: A Provocations series

The aim of this project is to advance the debate on how the GCR is to be governed, and indeed what the

GCR is, through questions of governance. The project takes the form of a series of short GCRO Provocations, each focusing on a particular aspect of governance in the GCR. The first Provocation, *Institutionalising the Gauteng City-Region*, was published in May 2018 and was well received, with author Jesse Harber being invited to present this work to the GPD. Drafts of a number of other Provocations in the same series are currently being developed, including ones on transit-oriented development in Johannesburg, metropolitan governance in Île-de-France, and development prospects and governance in the peripheries of the city-region.

Governing the GCR: A Provocations series | Figure from GCRO Provocation #03



4. Histories and futures of the GCR

The GCR has a long history that both shapes its current realities and informs its future possibilities. This thematic area addresses the need to expand and deepen the analysis of where the city-region is 'evolving to'. This requires a better sense of the region's history, and therefore its path dependencies, within a comparative perspective that situates its development in contrast to other places elsewhere in the world. The theme has made incremental progress over the last year with the main output an interactive multimedia exhibition at the Metropolis Annual General Meeting in Johannesburg in August 2018.

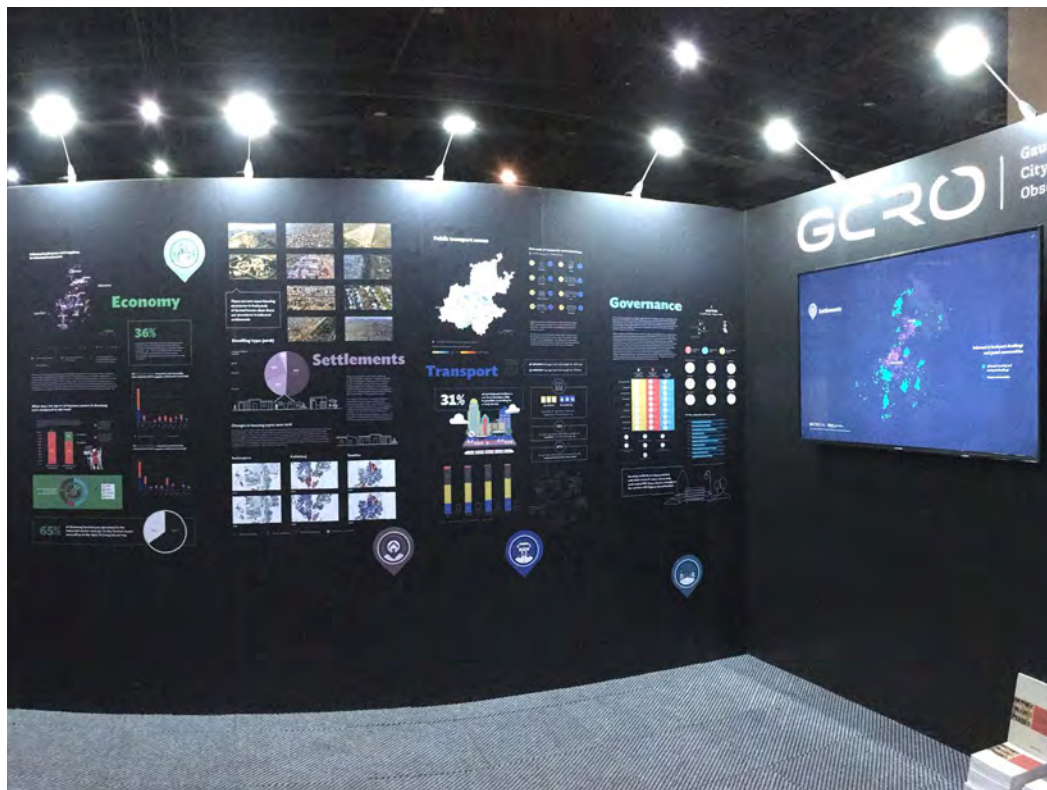
Futures of the GCR

This project entails commissioning an external specialist to write a GCRO Occasional Paper that provides a 'futures perspective', situating the GCR within projected long-term global urban trends and dynamics. Terms of reference were issued to Prof. Edgar Pieterse, identified as a key expert in the field. Unfortunately, his time commitments did not allow him to pursue the work.

What is the GCR?

A proposal and a conceptual frame were drafted for a book project, and presented to an internal GCRO Brownbag Seminar in the first quarter of 2018/19. In August, a major exhibition was staged at the Metropolis Annual General Meeting in Johannesburg. The exhibition, titled 'We are here', was a multimedia display covering several topics: population, diversity, economy, governance, settlements and transport.

'We are here', GCRO exhibit at the 2018 Metropolis Annual General Meeting





Photograph by Alet Pretorius

5. Landscapes in transition

Issues of space and mobility have been a key focus for the GCRO since its establishment. The GCR is constantly facing spatial change but also fighting inherited spatial inequalities and settlement distortions left by apartheid. Research in this theme takes a ‘landscape view’ – considering the political, economic, social, environmental and other drivers and consequences of spatial change. The GCRO’s current research also supports the policy objective of ‘spatial restructuring’ through detailed multidimensional studies into particular landscapes.

Untangling transport

This project focuses on data previously gathered from a specially designed mobile app (myJozimoves) which tracked participants’ movements through Johannesburg. GIS colleagues Samkelisiwe Khanyile, Bonolo Mohulatsi and Samy Katumba joined the project team at the end of the 2018/19 financial year and began an initial exploration of the data. Mapping and analysis of the data is in its early stages. Once this analysis is concluded, an Occasional Paper will be finalised for publication.

Spatial imaginaries

This project brings together a collection of case studies on the way in which government and others imagine

and plan to develop space in Gauteng. One component of the work focused on the human settlements policy of megaprojects and catalytic projects. Following the publication of a special issue on megaprojects in the journal *Transformation* in the previous financial year, Richard Ballard and Margot Rubin were invited to contribute an op-ed piece in *The Conversation*. This was published on 23 May 2018. In addition to this work, a Research Report is being drafted to showcase the various case studies. In early 2019, an additional case study was offered by Sandiswa Mapukata, who also joined Richard Ballard as an editor of the Research Report.

Conceiving, producing and managing a neighbourhood

The Occasional Paper *Conceiving, producing and managing neighbourhoods: Comparing urban upgrading initiatives in Gauteng* was prepared and designed during this financial year. Authored by Thembani Mkhize and Dr Aidan Mosselson, the Occasional Paper focuses on the conceptualisation and management of two neighbourhood renewal programmes in the Johannesburg areas of Hillbrow and Norwood.

Building Gauteng

This comparative project examines the way in which developers of various kinds produce urban space.

It brings four studies based in Gauteng into conversation with studies in Toronto, London and Manila. Sian Butcher and Richard Ballard submitted a proposal to the journal *Environment and Planning A* to publish a themed issue on papers presented at a 2016 workshop on developers that was organised by the GCRO. The proposal was accepted and the guest editors worked with authors of particular studies to submit their papers for review.

A political economy analysis of transit corridors

This research project analyses the political economy of transit-oriented developments in Johannesburg, in partnership with colleagues at UCL. During 2018/19, the focus of the project partners was on drafting a GCRO Provocation that will be published as a joint output with the project 'Governing the GCR: A Provocations series'.

Landscapes of peripheral and displaced urbanisms

This project provides a broad visual and textual overview of the northern peripheries of the extended GCR. It explores how the ordinary people of selected sites in the Rustenburg and former KwaNdebele areas are remaking their lives and their landscapes. During 2018/19, a service provider (Progressus Research and

Development Consultancy) was appointed to conduct a survey with approximately 1 000 respondents, based on the QoL V (2017/18) questionnaire. Video and photographic materials were also collected. Part of the data from these research endeavours was used to write first drafts of a Provocation on *Governing the periphery of the Gauteng City-Region*. Additionally, the project team expanded to include a colleague from the Wits School of Architecture and Planning, focusing on how state land and land under traditional leadership is acquired for informal settlements. Dr Sally Peberdy, a former GCRO Senior Researcher, also joined the project team. She will be contributing written work on the idea of the periphery and the statistical analyses of such areas.

Taking streets seriously

This project examines the nature of streets in Gauteng, which are crucial not only for transport but constitute one of the city-region's major forms of public space. With a major report having been published in early 2018, this project had a number of concluding activities during the 2018/19 financial year. The first was an exhibition of content from the report at the Fassler Gallery, University of the Witwatersrand, in April 2018. In October 2018, Thembanani Mkhize attended a Streets Indaba in Cape Town hosted by Open Streets Cape Town.

Sebokeng. Photograph by Darya Maslova



Sebokeng. Photograph by Darya Maslova



Civic Tech Learning Network

During 2018/19, the Civic Tech Learning Network was established and received funding from the Omidyar Foundation. The aim of the Network is to draw on the knowledge already generated by Making All Voices Count – an internationally funded programme that

supported the development of innovative approaches to fostering accountable and responsive governance between 2013 and 2017 – to build a stronger community of practice among government and non-governmental organisations.



Photograph by Alet Pretorius

6. New regional economies

Research in this theme examines the GCR's changing economic geography since 1994 and how this is impacting the quality of life of its citizens. While the GCR has seen huge economic strides, notably in the mid-2000s, there remain key challenges across the region, including unemployment, poverty and inequality. The various research projects under this theme are geared towards informing the development of a GCR economy that is competitive, inclusive and sustainable.

Understanding Gauteng's urban space economy

This project aims to deepen understanding of how the urban space economy of Gauteng works, and interrogate how government has understood and taken up the challenge of intervening in the space economy over the last two decades. It investigates the distribution of economic activity in the GCR, with a particular focus on cities' spatial forms and how they are affected by changing economic activity. This involves an inquiry into how the GCR's space economy functions in various categories, such as economic opportunities, constraints and the changing nature of the economy. This project has been on hold, pending the results of the firm-level survey and other components of the project (the tradeable services analysis and the census of industrial areas), as reviewed above.

Township economies in the GCR

This project examines township economies in the context of the provincial government's policies on transforming, modernising and revitalising

township areas. The main focus is on how government interventions have impacted entrepreneurship in the province. In October 2018, the GCRO convened a Township Economies Workshop with government officials, academics and researchers from various institutions. A Map of the Month, spatially representing unemployment in two distinct ways (unemployment rate versus unemployment density), was produced in August 2018 and subsequently featured in the media. In December 2018, the project lead gave a presentation on township economies in the GCR in a strategic planning session of the City of Ekurhuleni's Strategy and Corporate Planning Department. A Provocation examining the usefulness and limitations of the 'township economies' concept is being drafted for publication.

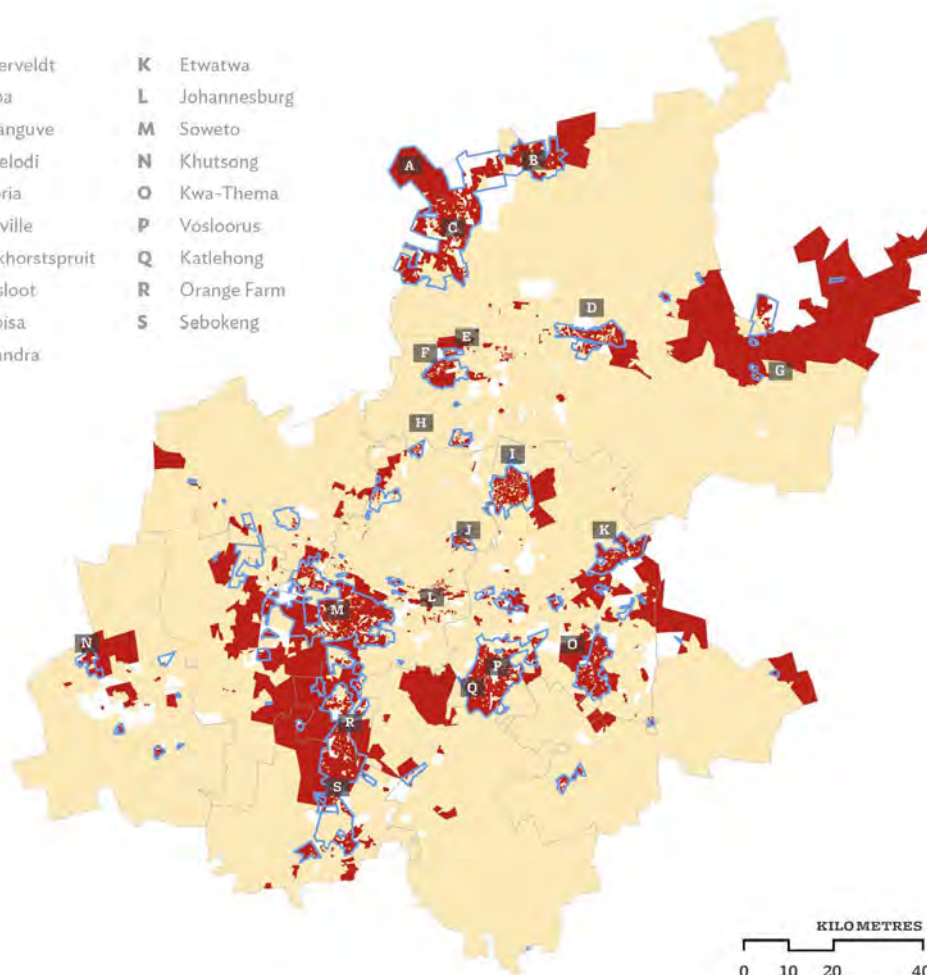
Methods for regional economic analysis

This project was conceptualised in the 2018/19 financial year with the objective of equipping Gauteng-based economic development practitioners in government with analytical capabilities to determine the regional consequences of policy initiatives. An abstract was submitted for potential inclusion in the journal *Cities*, special issue 'Urban agglomeration in global and local city-regions'. Other abstracts were submitted for conference proceedings during the course of 2019. Various academic articles were published as part of the project: some are under review (e.g. for the journal *Development Southern Africa*) and others are being finalised for submission (e.g. for the journal *Local Economy*). The project lead, Dr Koech Cheruiyot, attended a number of training sessions on macroeconomic modelling organised under the auspices of the Gauteng Department of Economic Development.

Township economies in the GCR | GCR Map of the Month, August 2018

Expanded unemployment rate

- | | | | |
|---|-----------------|---|--------------|
| A | Winterveldt | K | Etwatwa |
| B | Temba | L | Johannesburg |
| C | Soshanguve | M | Soweto |
| D | Mamelodi | N | Khutsong |
| E | Pretoria | O | Kwa-Thema |
| F | Saulsville | P | Vosloorus |
| G | Bronkhorstspuit | Q | Katlehong |
| H | Diepsloot | R | Orange Farm |
| I | Tembisa | S | Sebokeng |
| J | Alexandra | | |



● 0% - 27%

● 27,1% - 100%

Outline of townships in Gauteng

Local municipal boundary

Source: StatsSA Census (2011), GCRO (outline of townships in Gauteng)

Street trader organisations in policy processes

This project examines how street trader organisations play a crucial role in street trade governance in major cities of the GCR. It investigates the role of such organisations in urban governance, through a comparative study of the three main metro municipalities in the GCR and Ahmedabad in India. Project lead Mamokete Matjomane is working towards a PhD under this project and is making progress towards writing a full draft of the thesis. A number of outputs were informed by insights from extensive

fieldwork which was conducted in 2017 and 2018, including a six-week excursion to Ahmedabad. Various presentations were done at international and local conferences and workshops during the financial year. Several academic papers are in preparation for publication, including 'Losing battles and winning the war: Street traders' influence on policy-making in India' and 'Acting like the state? Participation of leaders in street trade management'.



Photograph by Alet Pretorius



Photographs by Mamokete Matjomane



Photograph by Clive Hassall

7. Sustainability transitions in the GCR

This research theme centres on the argument that the GCR faces a future crisis (economic, social and otherwise) unless it can find ways to limit unsustainable use of resources, and depart from past paths of externalising costs to future generations. The various projects within this theme build on the research required to support a comprehensive, government-led transition towards sustainability across society and the economy in the GCR. This research theme focuses on the difficult political-economy choices entailed in a move towards greater sustainability; prospects for infrastructure transitions; resource security challenges; green infrastructure; and the green economy.

Metabolic flows and infrastructure transitions

This multi-year project investigates the prospects for reducing resource consumption and waste flows through the transformation of infrastructure networks in the GCR. The aim has been to trace the throughput of water, energy, biomass (food and non-food), waste and, if possible, other materials resulting from economic and human activity in the GCR, as well as to analyse the infrastructure that conducts flows of these inputs and waste outputs into, around and out of the city-region. The 2018/19 financial year saw initial steps to commission external experts to work with GCRO staff to write an Occasional Paper on the governance of metabolic flows.

Green assets and infrastructure

This multi-year project, initiated in 2011/12, examines the current state of green infrastructure (the network of ecological systems and features) in the GCR. The project's overall objective is to influence the approach to green asset management by assessing the extent to which green infrastructure has been valued by various stakeholders in the city-region, and by demonstrating ways to incorporate green infrastructure into government budgeting and planning processes. The project has developed swiftly from the first report, which was published in 2013/14, progressing from establishing the theoretical potential of green infrastructure for the GCR, to exploring ways in which the green infrastructure approach could be practically applied in this context.

During the 2018/19 financial year, significant work was done towards preparing and editing the content for the third green infrastructure report, *Towards applying a green infrastructure approach in Gauteng*. This report builds on the foundations laid in earlier phases of the project. It demonstrates how green infrastructure has been implemented and provides practical guidance for applying a green infrastructure approach more systematically in Gauteng. The first full draft was completed by the end of the financial year and will undergo peer review and be published in 2019/20.

In 2017/18, the project team helped guide and support a group of UCL STEaPP Masters students in compiling a report on the role of urban agriculture in Gauteng's green infrastructure network. During 2018/19, Hannah Benn was appointed to translate the STEaPP Masters project into a format ready for publishing as a GCRO output. The revised draft of this output was finalised by the end of the financial year.

The project's second report, *A framework for a green infrastructure approach in the Gauteng City-Region*, won the Research in Sustainability award in the 2017/18 Afrisam-SAIA Awards for Sustainable Architecture + Innovation. The award ceremony was held on 26 October 2018 at the Zeitz Museum of Contemporary Art Africa in Cape Town.

In the 2018/19 financial year, research related to this project was presented at two conferences – the INSAKA 2018 Symposium (June 2018) and the Urbio 2018 Conference (September 2018).

City transitions to a green economy

Green economies have gained traction in recent years, both locally and internationally, with increasing emphasis on a sustainable economic growth trajectory. The overall project objectives are to critically review: the institutional infrastructure that inhibits or supports green economy transitions; the status of national, provincial and local government coordination of green economy commitments; and the decision-making processes affecting green economy projects in the GCR. The project was on hold for most of the financial year due to capacity constraints.



Photograph by Kgao Mashego

Water security in the GCR

Water security, a critically important issue, is high on the GCR agenda. This project explores the region's water security challenges and seeks to understand both the critical biophysical and the governance factors at play in the GCR urban water management landscape. A more immediate focus is on how to respond to future drought conditions and ways to deal with water quality challenges. The project is especially relevant in the context of the recent 'Day Zero' water crisis in Cape Town.

Following a number of presentations on Gauteng water security risks at key provincial events in the last quarter of 2017/18, including the February 2018 Executive Council Lekgotla and the Premier's Coordinating Forum, the GCRO received funding in mid-2018 from the Gauteng Provincial Government (GPG) for the development of a water security plan for the city-region. A final draft of the report, prepared jointly with contracted experts and provincial officials, was handed over to the GPG in August 2018.

Gauteng as a long-term ecological study site

Work on the 'Metabolic flows and infrastructure transitions' project has demonstrated the difficulty in analysing urban ecological systems. The ability to effectively engage with sustainability issues within the city-region requires deeper knowledge and analysis into socio-ecological systems, processes and drivers. A long-term ecological research (LTER) project, as it has been applied in other parts of the world, in theory provides data that will answer questions about the structure and function of urban ecosystems, and contribute to the knowledge base for sustainability in the GCR. This project explores what an LTER for the GCR might look like, as well as who the key role-players, contributors and partners are. The research will result in a concept note and plan for developing the LTER. During 2018/19, the GCRO experienced challenges in finding the appropriate stakeholders and government role-players with whom to engage, and project work was largely limited to literature and case study searches.

Justice and sustainability transitions

This research project explores the potential for urban development and infrastructure transitions to meet the growing demand for urban-based amenities, while building a more just and sustainable city-region. The project has worked over time to develop a set of case studies that explore the trade-offs between social justice and environmental sustainability objectives. It interrogates how governments in the GCR juggle these two often opposing agendas, and begins to unpack some of the complexities inherent in the decision-making processes.

In the previous financial year, a research collective was established with each participant using a case study to explore a different aspect of the complexity around navigating social justice and environmental sustainability imperatives. During the 2018/19 financial year, the collection of case studies was written up, and these will be included as chapters in a GCRO Research Report. Each of these chapters, including the draft framing and concluding chapters, was reviewed and discussed at a workshop held at the GCRO in July 2018. It is anticipated that the full report will undergo external peer review in the 2019/20 financial year.

Christina Culwick, the project lead, is working towards her PhD under the umbrella of this project. During this financial year she made progress towards the literature review and obtained ethics approval for her fieldwork. Towards the end of 2018, after conducting initial site visits and drafting the questionnaire, she undertook a set of pilot interviews in her two case study areas, Lufhereng and Pennyville. Based on these pilot interviews, she refined the questionnaire and completed all of the required interviews in Pennyville. She will conduct the bulk of the interviews in the first quarter of 2019/20, followed by a set of key informant interviews.

During the fourth quarter of 2018/19, Christina worked on a journal article that explores the intersection of justice and sustainability concerns related to government housing in Gauteng. This paper was reviewed at the British Academy Writing Workshop in January 2019, and she plans to submit it to a journal in the 2019/20 financial year.





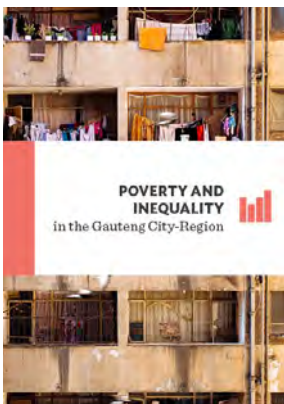
**GCRO outputs,
academic publishing,
presentations and
academic citizenship**



GCRO outputs, academic publishing, presentations and academic citizenship

GCRO outputs and events

- Mushongera, D., Tseng, D., Kwenda, P., Benhura, M., Zikhali, P., & Ngwenya, P. (2018). *Poverty and inequality in the Gauteng City-Region*. GCRO Research Report 9. June 2018.
- Harber, J., & Joseph, K. (2018). *Governing the GCR series 1: Institutionalising the Gauteng City-Region*. GCRO Provocation 3. May 2018.
- Culwick, C. (2018). *Quality of Life IV Survey (2015/16): City benchmarking report*. GCRO Occasional Paper 12. September 2018.
- De Kadt, J., & Hamann, C. (2018). *Quality of Life IV Survey (2015/16): Health Data Brief*. GCRO Data Brief 9. December 2018.



Other key outputs

- Exhibition: 'We are here', Metropolis Annual Meeting Exhibition, Sandton Convention Centre, Johannesburg, South Africa, 27–29 August 2018.
- Video: 'What is the GCR?', August 2018.

GCRO data outputs

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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Map of the Month

April 2018: Support for bringing back influx control May 2018: The long and short of school commutes June 2018: Multidimensional poverty in the GCR (2015/16 data)	July 2018: Commutes through Mabopane Station August 2018: Mapping unemployment September 2018: Shopping malls and centres in Gauteng	October 2018: Change in residential buildings November 2018: Mapping debt	January 2019: Population concentration: night vs day February 2019: Gauteng's ward-level racial diversity: 2018 March 2019: The use of public services in Gauteng
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Vignettes

April 2018: Vignette 34 – 'Government services 1: Inadequate access to services' Vignette 35 – 'Government services 2: Best rates services per municipality' June 2018: Vignette 36 – 'Satisfaction with local government by dwelling type' Vignette 37 – 'Quality of life in Gauteng'			
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Interactive visualisations

	September 2018: Ten years of GCRO outputs	November 2018: The evolution of the Quality of Life questionnaire Academic outputs using the Quality of Life data The company we keep: The Quality of Life Survey compared	
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Conferences, seminars and symposia organised by the GCRO

The GCRO continued to co-organise the Faces of the City Seminar Series with the NRF Chair of Spatial Analysis and City Planning, the Wits City Institute and the Centre for Urban and Built Environment Studies (CUBES).

Other events included:

- The GCRO hosted the Gauteng Food Governance Workshop at the GCRO on 17 May 2018 as part of a series of initiatives organised by the University of the Western Cape and PLAAS. The workshop was aimed at developing an understanding of food governance in the GCR. The GCRO hosted the Second Gauteng Food Governance Workshop on 25 September 2018.
- Alexandra Parker, together with Margot Rubin, initiated the Gender and Urban Research Network to connect people working on gender-related issues in urban contexts. The first meeting was held in August 2018.
- An Inclusive Economies Workshop on the township economy was convened at the GCRO on 29 October 2018.

Published books, journal articles, book chapters and conference proceedings

Academic and other publications are critical for an academic institution, particularly those appearing in peer-reviewed journals, which are key to maintaining standards and pushing researchers to reach (and exceed) international standards.

- Cheruiyot, K., Katumba, S., & Wray, C. (2019). Patterns and correlates of dissatisfaction with government performance in the Gauteng city-region, South Africa: A comparison across three government spheres. *The Review of Regional Studies*, 49, 1–26.

- Mosiane, N.B. (2019). Informal housing. In T. Orum & S. Smiley (Eds), *The Wiley Blackwell encyclopaedia of urban and regional studies* (pp.1–10). London: Wiley-Blackwell. doi:10.1002/9781118568446.eurs0536
- Tseng, Y., Griffiths, F., de Kadt, J., Nxumalo, N., Rwafa, T., Malatji, H., & Goudge, J. (2019). Integrating community health workers into the formal health system to improve performance: A qualitative study on the role of on-site supervision in the South African programme. *BMJ Open*, 9(2), https://bmjopen.bmj.com/content/9/2/e022186
- Culwick, C. (2019). Disasters and disaster risk management in South Africa. In J. Knight & C.M. Rogerson (Eds), *The geography of South Africa: Contemporary changes and new directions* (pp.295–304). World Regional Geography Book Series. Cham: Springer International Publishing.
- Mosiane, N.B. (2019). Credit, cash transfers, and distributive neoliberalism. *African Studies* 78(1), 152–164. doi: 10.1080/00020184.2018.1495388
- Mosselson, A. (2018). Everyday security: Privatized policing, local legitimacy and atmospheres of control. *Urban Geography*, 40(1), 16–36. doi: 10.1080/02723638.2018.1482091.4
- Parker, A. (2018). Film and urban space: Critical possibilities. Book review. *Screen*, 59(3), pp. 394–397. doi:10.1093/screen/hjy037
- Mosselson, A. (2018). *Vernacular regeneration: Low-income housing, private policing and urban transformation in inner-city Johannesburg*. London: Routledge.
- Katumba, S. (2018). Spatial statistical analyses to assess the spatial extent and concentration of multidimensional poverty in Gauteng using the South African Multidimensional Poverty Index. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, XLII-4/W8, 85–92. doi:10.5194/isprs-archives-XLII-4-W8-85-2018
- Harber, J. (2018). The transformation of Eveline Street, Windhoek: Transit-oriented development in practice. *Arch SA*, 91.
- Parker, A. (2018). The spatial stereotype: The representation and reception of urban films in Johannesburg. *Urban Studies*, 55(9), 2057–2072. doi: 10.1177/0042098017706885



'We are here', GCRO exhibit at the 2018 Metropolis Annual General Meeting

- Katumba, S. (2018). Spatial statistical analyses to assess the spatial extent and concentration of multidimensional poverty in Gauteng using the South African Multidimensional Poverty Index. *Free and Open Source Software for Geospatial (FOSS4G) Conference Proceedings*, Dar es Salaam, Tanzania, 2018.
- Parker, A. (2018). The ghetto in the cities and films of Johannesburg and Cape Town. *Journal of African Cinema*, 10(1+2), 65–80. doi: 10.1386/jac.10.1-2.65_1
- Butcher, S. (2018). Making and governing unstable territory: Corporate, state and public encounters in Johannesburg's mining land, 1909–2013. *Journal of Development Studies*, special issue 'Informal practices of the state in the governance of cities: Views from southern Africa'. doi: 10.1080/00220388.2018.1460464
- Mkhize, T. (2018). Urban crime and grime: Lessons from Hillbrow's eKhaya Residential City Improvement District. In P. Harrison & M. Rubin (Eds), *Urban innovations: Documenting innovative responses to urban pressures* (pp.66–97). Pretoria: Department of Planning, Monitoring and Evaluation.

Presentations

GCRO staff present to academic and other audiences on a regular basis, as part of academic citizenship and scholarship.

- Richard Ballard (March 2019). 'Quality of Life in the GCR: QoL survey 2017/18'. Annual Safety Summit, Emperors Palace, 29 March 2019.
- Rob Moore (March 2019). 'Associative governance for economic inclusion'. Gauteng Provincial Government Poverty and Urban Hunger Eradication Summit, 28 March 2019.
- Gillian Maree (March 2019). 'Poverty, hunger and the environment: How intertwined are they?' Gauteng Provincial Government Poverty and Urban Hunger Eradication Summit, 28 March 2019.
- Graeme Götz (March 2019). 'Poverty, inequality and social mobility'. Gauteng Provincial Government Poverty and Urban Hunger Eradication Summit, 28 March 2019.
- Christian Hamann and Richard Ballard (March 2019). 'Socioeconomic segregation and income inequality in the City of Johannesburg'. GCRO Brownbag Seminar, 27 March 2019.
- Graeme Götz (March 2019). 'QoL V (2017/18) Survey: Key governance insights'. Gauteng Office of the Premier: Executive Management Team, 18 March 2019.
- Graeme Götz (March 2019). 'Overview of GCRO research and selected data sources'. Lecture to Wits School of Architecture and Planning third-year students, 18 March 2019.
- Julia de Kadt (March 2019). 'Quantitative research: GCRO's Quality of Life Survey'. Guest Lecture for the Wits School of Architecture and Planning Masters Research Methods Module, Wits University, 15 March 2019.
- Samkelisiwe Khanyile (March 2019). 'Spatial analytics'. Lecture to Wits Geography Honours students, 15 March 2019.
- Samy Katumba (March 2019). 'Understanding the spatial patterns of racial diversity over time in Gauteng province (South Africa)'. Statistics for the 4th Industrial Revolution, Gauteng Province ISibalo Symposium, 13 March 2019.
- Richard Ballard, Gareth Jones and Makale Ngwenya (March 2019). 'Trickle out urbanism: Are gated communities good for poor neighbours?' Faces of the City Seminar, 12 March 2019.
- Graeme Götz (March 2019). 'Quality of Economy Survey: Phase 1 results'. Gauteng Growth and Development Agency EXCO, 11 March 2019.
- Graeme Götz on behalf of all GCRO staff (March 2019). 'QoL V (2017/18) survey: Preliminary results'. Gauteng COGTA Head of Department and Municipal Managers' Forum, 7 March 2019.
- Graeme Götz (February 2019). 'Quality of Economy Survey: Phase 1 results'. Gauteng Department of Economic Development Executive Management Team, 28 February 2019.
- Rob Moore (February 2019). 'Deepening evidence-informed economic development: Next steps for GGDA-GCRO partnership'. Gauteng Department of Economic Development Executive Management Team, 28 February 2019.
- Graeme Götz and Christian Hamann (February 2019). 'Poverty, inequality and social mobility'. GCRO Brownbag Seminar, 27 February 2019.
- Alexandra Parker (February 2019). 'How well do you know Gauteng?' Hacks/Hackers Africa, Johannesburg, 26 February 2019.
- Graeme Götz (February 2019). 'Quality of Economy Survey: Phase 1 results'. Gauteng Department of Economic Development and Gauteng Growth and Development Agency Business Breakfast, 20 February 2019.
- Graeme Götz (February 2019). 'Overview of GCRO research and selected data sources'. Lecture to Wits Architecture and Planning Honours students, 13 February 2019.
- Alexandra Parker (February 2019). 'Johannesburg's landscapes of film'. University of Johannesburg FADA third-year Architecture lecture, Johannesburg, 11 February 2019.
- Samkelisiwe Khanyile (February 2019). 'Overview of GCRO geospatial data and data visualisation'. Lecture to Wits Geography Honours students, 11 February 2019.

- Julia de Kadt (February 2019). 'QoL V (2017/18) Survey'. Gauteng Provincial Treasury Board Management Team Meeting, University of Johannesburg Bunting Road Campus, 7 February 2019.
- Graeme Götz on behalf of all GCRO staff (January 2019). 'QoL V (2017/18) Survey: Preliminary results'. Gauteng Planning Division (Office of the Premier) Strategic Planning Workshop, 17 January 2019.
- Ngaka Mosiane (January 2019). 'Governing the periphery of the Gauteng City-Region'. Urban Annual Research Conference at the Indian Institute for Human Settlements, 10–12 January 2019.
- Mamokete Matjomane (December 2018). 'Township economies in the GCR'. City of Ekurhuleni Strategy and Corporate Planning Department Strategic Planning Session, Kempton Park, 12 December 2018.
- Rob Moore (December 2018). 'Appraising the urban and territorial realities in Africa: The Gauteng City-Region Observatory'. Presentations for the EU-funded Evidence-Informed Policy-Making Master Classes for policy-makers and policy researchers in Africa, Pretoria, 9–11 December 2019.
- Julia de Kadt (December 2018). 'GCRO's 5th QoL Survey (2017/18): Ekurhuleni'. City of Ekurhuleni Knowledge Sharing Session, Ekurhuleni Old Council Chambers, 6 December 2018.
- Gillian Maree (November 2018). 'Planning for a water secure Gauteng City-Region'. Presentation to the SALGA: Water and Sanitation Working Group meeting, 23 November 2018.
- Richard Ballard (November 2018). 'Terms of inclusion: Residents of Diepsloot who are constructing high-end golf estates in Johannesburg'. Gated Communities and Townhouse Complexes, Public Affairs Research Institute (PARI) Workshop, Wits University, 14 November 2018.
- Graeme Götz on behalf of all GCRO staff (November 2018). 'QoL V (2017/18) Survey: Launch results'. 5th GCRO Quality of Life Survey (2017/18) Launch, 13 November 2018.



QoL presentation to Gauteng Provincial Government Cabinet Lekgotla, October 2018

- Alexandra Parker (November 2018). 'Telling stories in research'. Intimate Partner Violence Workshop, School of Public Health, 9 November 2018.
- Rob Moore and Carla Washbourne (November 2018). Facilitated a workshop on multi-scalar governance approaches to addressing the implementation of the Sustainable Development Goals, 8 November 2018.
- Rob Moore (November 2018). 'Multilevel governance for pro-poor economic inclusion: A case study from South Africa'. INGSA Conference, Tokyo, 8 November 2018.
- Rob Moore (November 2018). 'What makes cities "smart"? Knowledge for urban governance'. INGSA Conference, Tokyo, 7 November 2018.
- Mamokete Matjomane (November 2018). 'The politics of informal trader representation'. Practices of the State in Urban Governance Seminar, Wits University, 2 November 2018.
- Darlington Mushongera (November 2018). 'Poverty and Inequality in the GCR'. Poverty Policy Dialogue – Towards an Integrated Poverty Eradication Strategy for Gauteng, GDED/GDARD Forum, 22 November 2018.
- Rob Moore (October 2018). 'The "land question" understood in the context of urbanisation'. Presentation at the Common Purpose Annual Alumni Conference, Gauteng, 30 October 2018.
- Ngaka Mosiane (October 2018). 'Mobility, displaced urbanisms, and the remaking of Tshwane, South Africa'. Spaces and Flows Conference, Heidelberg University, Germany, 24–26 October 2018.
- Ngaka Mosiane (October 2018). 'Mobility, displaced urbanisms, and the remaking of Tshwane'. Spaces and Flows: Ninth International Conference on Urban and Extra Urban Studies, Maesilius Kolleg, Heidelberg University, Germany, 25–26 October 2018.
- Samy Katumba (October 2018). 'Spatial statistical analysis to assess the spatial extent and directional trends in multidimensional poverty in Gauteng based on Quality of Life Survey data'. GISSA student event, University of Johannesburg, 25 October 2018.
- Graeme Götz on behalf of all GCRO staff (October 2018). 'QoL V (2017/18) Survey: Preliminary results'. Gauteng Provincial Government Cabinet Lekgotla, 17 October 2018.
- Graeme Götz on behalf of all GCRO staff (October 2018). 'Quality of Life (QoL) V Survey (2017/18): Report to the City of Ekurhuleni'. Private briefings to Ekurhuleni's Office of the City Manager and to the Executive Mayor, 16 October 2018.
- Graeme Götz on behalf of all GCRO staff (October 2018). 'Quality of Life (QoL) V Survey (2017/18): Report to the City of Ekurhuleni'. City of Ekurhuleni Strategy and Corporate Planning Department, 10 October 2018.
- Gillian Maree (October 2018). 'Urban liveability dynamics within the Gauteng City-Region'. 11th Green Building Convention, Century City Conference Centre, Cape Town, 4 October 2018.
- Richard Ballard (October 2018). 'Precarious belonging: Residents of Diepsloot who are constructing high-end golf estates in Johannesburg'. Society of South African Geographers Biennial Conference, Bloemfontein, 2 October 2018.
- Graeme Götz on behalf of all GCRO staff (October 2018). 'Quality of Life (QoL) V Survey (2017/18): Report to the City of Johannesburg'. City of Johannesburg Extended Executive Management Team (EEMT) Workshop, 1 October 2018.
- Darlington Mushongera (September 2018). Framework for analysis of Actor Network Theory. School of Architecture and Planning PhD Symposium, Wits University, 28 September 2018.
- Mamokete Matjomane (September 2018). 'The role and influence of informal trader organisations in policy and practice'. School of Architecture and Planning PhD Symposium, Wits University, 27 September 2018.
- Gillian Maree and Samkelisiwe Khanyile (September 2018). 'Air pollution in Gauteng'. International Toxic Air Pollution in Megacities Conference, Ramphal Institute, 27 September 2018.



Researcher Jesse Harber presents at the Royal Geographical Society Conference, Cardiff, August 2018

- Richard Ballard (September 2018). 'A "Marshall plan" for human settlements: How mega projects became South Africa's housing policy'. Guest Lecture for third-year Wits Planning students, 25 September 2018.
- Koech Cheruiyot (September 2018). 'A social accounting matrix approach to measuring the size and linkages of the real estate sector in the Gauteng City-Region, South Africa'. African Real Estate Society Conference, Integrating African Real Estate: An Agenda, Abeokuta, Nigeria, 11–14 September 2018.
- Gillian Maree (September 2018). 'Evidence-based policy for water security in the GCR'. Presentation to Watershed: Art, Science and Elemental Politics, Water Futures, Digital Imaginations, 13 September 2018.
- Gillian Maree (September 2018). 'Contextualising water security in the Gauteng City Region'. Presentation to Watershed: Art, Science and Elemental Politics, 13 September 2018.
- Christina Culwick (September 2018). 'Sprouting, tending and pruning the research process: Critical reflections on a green infrastructure project'. 2018 International URBIO Conference, 13 September 2018.
- Graeme Götz (September 2018). 'Quality of Economy Survey pilot: Preliminary results reporting'. Gauteng Growth and Development Agency (GGDA) Board, 12 September 2018.
- Alexandra Parker (September 2018). 'Telling stories in research'. Guest Lecture, third-year BSc URP, Wits University, 11 September 2018.
- Christina Culwick (September 2018). 'Developing and applying a green infrastructure approach in Gauteng'. Wits Architecture first-year course lecture, 10 September 2018.
- Graeme Götz (September 2018). 'Quality of Economy Survey pilot: Preliminary results reporting'. Gauteng Growth and Development Agency (GGDA) Board Subcommittee on Trade and Investment, 7 September 2018.
- Christina Culwick (September 2018). 'Urban development in the Gauteng City-Region'. SASAC Emerging Researchers Programme, 4 September 2018.
- Samkelisiwe Khanyile and Alexandra Parker (August 2018). 'Where do we draw the line?: Graffiti in Maboneng, Johannesburg'. Royal Geographical Society Conference, Cardiff, Wales, 31 August 2018.
- Richard Ballard (August 2018). 'Reflections on marginality'. Security at the Margins Project (Wits and Edinburgh), workshop held in Johannesburg, 27–28 August 2018.
- Gillian Maree (August 2018). 'Environmental justice in the Gauteng City-Region'. Presentation to the Metropolis Annual General Meeting parallel session on Environmental Justice, Sandton Convention Centre, 27 August 2018.
- Gillian Maree (August 2018). 'The GCRO: An urban observatory'. Presentation to the 4th Meeting of the Information Management and Systems (IMS) Committee, 16 August 2018.



- Richard Ballard, Gareth Jones and Makale Ngwenya (August 2018). 'Precarious belonging: Residents of Diepsloot who are constructing high-end golf estates in Johannesburg'. UNISA Geography departmental seminar, 15 August 2018.
- Samkelisiwe Khanyile and Alexandra Parker (August 2018). 'Where do we draw the line?: Graffiti in Maboneng, Johannesburg'. Faces of the City Seminar, 14 August 2018.
- Samkelisiwe Khanyile (August 2018). 'Where do we draw the line'. Graffiti in the City Workshop, Open Data Durban, 3 August 2018.
- Richard Ballard (August 2018). 'From social cohesion to targeted interventions on specific problems'. Gauteng Treasury BMT meeting, University of Johannesburg, 2 August 2018.
- Gillian Maree (August 2018). 'A green infrastructure strategy for Johannesburg'. Presentation to the COJ EISD Breakaway Meeting, Joburg Zoo, 2 August 2018.
- Christina Culwick (July 2018). 'Developing and applying a green infrastructure approach in the Gauteng City-Region'. GI Strategy Workshop, 26 July 2018.
- Gillian Maree (July 2018). 'Process and method to develop the Gauteng water security plan'. Presentation to the Gauteng Technical Water Room, Gauteng Provincial Government, 24 July 2018.
- Rob Moore (July 2018). 'Tshwane: Key trends and challenges for the future'. City of Tshwane Councillors Strategic Breakaway, 19 July 2018.
- Alexandra Parker (July 2018). 'We are here: GCRO at Metropolis Exhibition 2018'. GCRO Brownbag Seminar, 11 July 2018.
- Richard Ballard (July 2018). 'From social cohesion to targeted interventions on specific problems'. Social Cohesion Champions meeting with provincial departments, Midrand, 10 July 2018.
- Jesse Harber (July 2018). 'Institutionalising the Gauteng City-Region'. Presentation for Gauteng Planning Division, 10 July 2018.
- Alexandra Parker (June 2018). 'The moral geographies of mothers in Greater Johannesburg'. Sonke Gender Justice Public Transport and Safety Seminar, Cape Town, 26 June 2018.
- Jackie Klopp, Jesse Harber and Magnus Quarshie (June 2018). 'A review of metropolitan governance, bus rapid transit and minibus systems in African cities'. VREF Research Network Workshop, Dar es Salaam, 25 June 2018.
- Samy Katumba (June 2018). 'Web GIS'. Masters in GIS and Remote Sensing Guest Lecture, Geography, Wits University, 22 June 2018.
- Richard Ballard (June 2018). 'Transnational urbanism interrupted: Chinese investors seeking approval to build the "New York of Africa" at Modderfontein, Johannesburg'. Seminar, Urban Futures Centre, Durban University of Technology, 18 June 2018.
- Aarathi Gangalekshmy, Thembanani Mkhize, Oluwafemi Olajide and Du Shenghong (2018). 'Making "world-class cities": Politics of urban development in the global South'. Governance and Development in the Age of Globalization Institute, Brown International Advanced Research Institutes (BIARI), Watson Institute, Brown University, 15 June 2018.
- Christina Culwick (June 2018). 'Developing and applying a green infrastructure approach in the Gauteng City-Region'. 2018 Insaka Symposium, 12 June 2018.
- Graeme Götz (June 2018). Spoke as part of a roundtable, 'Embedded or engaged research? Confronting the messiness of researching the local state'. Practices of the State in Urban Governance International Workshop, 8 June 2018.



- Darlington Mushongera (June 2018). “City intelligence?” or “City ignorance?” Water data and strategic planning of service delivery in the City of Johannesburg’. Practices of the State in Urban Governance International Workshop, 8 June 2018.
- Graeme Götz (June 2018). ‘Managing bad buildings in inner city Johannesburg: Government practice and the agency of systems’. Practices of the State in Urban Governance International Workshop, 7 June 2018.
- Mamokete Matjomane (June 2018). ‘Losing battles and winning the war? Street traders’ influence on policy making in India’. PSUG International Workshop, Wits University, 6 June 2018.
- Richard Ballard (June 2018). ‘Intentionality and social change: Rethinking “direction setting” by authority figures’. Practices of the State in Urban Governance International Workshop, Wits University, 6 June 2018.
- Christina Culwick (June 2018). ‘A framework for a green infrastructure planning approach in the Gauteng City-Region’. AfriSam SAIA Awards adjudication, 3 June 2018.
- Darlington Mushongera (June 2018). “City intelligence?” or “City ignorance?” Water data and strategic planning of service delivery in the City of Johannesburg’. Sheffield Institute of Development Studies PhD Conference – Development in an Uncertain World, 7 June 2018.
- Darlington Mushongera (May 2018). ‘The role of data and knowledge in urban governance: Managing water service delivery in the City of Johannesburg’. ‘Development’ in an Uncertain World: The 9th SIID PGR Conference, Sheffield Institute of Development Studies PhD Conference, 9 May 2018.
- Julia de Kadt (May 2018). ‘10 years of QoL review: Preliminary thoughts’. GCRO Brownbag Seminar, 23 May 2018.
- Rob Moore (May 2018). ‘Steering urban futures: The case of the Gauteng City-Region Observatory’. Presentation for the Masters in Architecture class at the University of Johannesburg, 15 May 2018.
- Christina Culwick (May 2018). ‘Mapping vulnerability in Gauteng’. Gauteng Climate Change Forum, 11 May 2018.
- Christian Hamann (April 2018). ‘The geography of education in Gauteng’. GCRO Brownbag Seminar, 25 April 2018.
- Gillian Maree (April 2018). ‘Water security in the GCR’. Plenary presentation to the Emfuleni Water Summit, Vanderbijlpark, 24 April 2018.
- Samy Katumba (April 2018). ‘Spatial extent and spatial directional trends in multidimensional poverty in Gauteng based on Quality of Life data’. Gauteng Department of Social Development MEC Lekgotla, Vaal (Riverside), 20 April 2018.
- Themba Mkhize (April 2018). ‘Unpacking everyday management in an improvement district: Property caretakers as street-level bureaucrats in Ekhaya neighbourhood CID, Hillbrow, Johannesburg’. WITS-TUB Urban Lab, Wits University, Johannesburg, 17 April 2018.
- Christina Culwick (April 2018). ‘Urban mobility in Gauteng’. Cities Support Programme Emerging Leadership Programme, 10 April 2018.
- Christina Culwick (April 2018). Panelist, ‘Transport justice as conceptual framework for understanding transport burden and exclusion’. INTALInC Workshop, Cape Town, 5 April 2018.
- Samy Katumba (February 2018). ‘Web GIS’. Honours in GIS and Remote Sensing Guest Lecture, Geography, Wits University, 18 February 2018.

Media publications and appearances

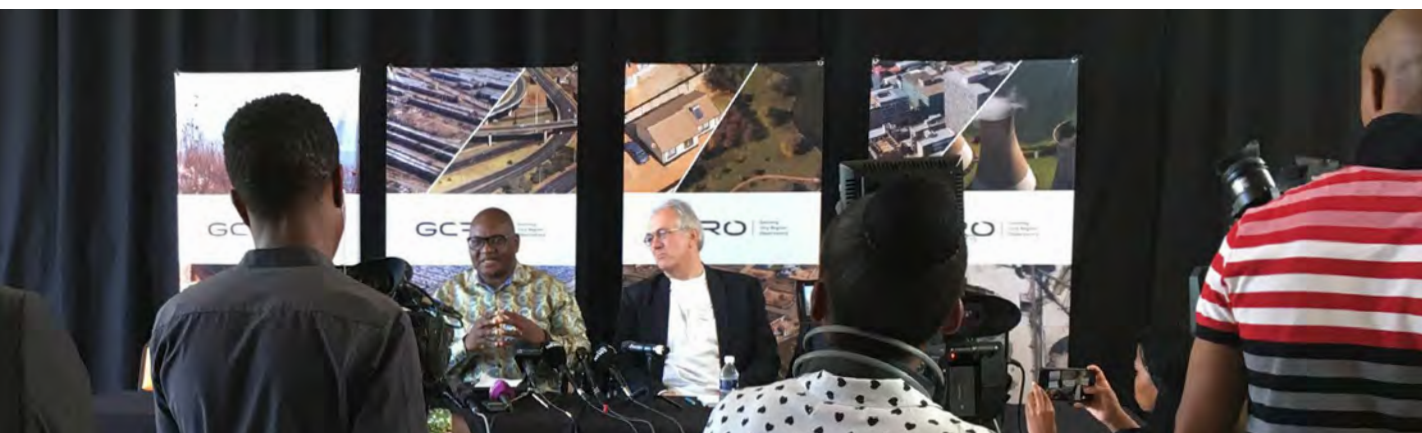
GCRO staff wrote the following media articles:

- Rob Moore wrote an article for the *Daily Maverick*, 'Evidence-based governance is essential to improving quality of life', 13 November 2018.
- Julia de Kadt, Alexandra Parker and Christina Culwick wrote an article for *The Conversation Africa*, 'Life in South Africa's economic hub is improving – but big challenges remain', 13 November 2018.
- Mushongera, D. and Katumba, S. (2018). Multidimensional poverty mapping of the Gauteng City Region. *Position IT*, July 2018.
- Alexandra Parker, Julia de Kadt and Christian Hamann wrote an article for *The Conversation Africa*, 'The long and short of South African school commutes: A case study', published on 1 July 2018 and republished by eNCA on 2 July.
- Jesse Harber wrote an article 'What Johannesburg's pointsmen tell us about governance, politics, and urban incompetence', *Daily Maverick*, 11 June 2018.
- Culwick, C. (2018). Enhancing knowledge for thinking differently about future African cities. *Akanani: Urban development magazine*. South African Local Government Association (SALGA). pp. 14–16.
- Richard Ballard and Margot Rubin wrote an article for *The Conversation Africa* titled 'Why megaprojects to deliver houses in South Africa might not work', published on 23 May 2018 and republished in the *Mail and Guardian*.
- Katumba, S. and Coetzee, S. (2018). Making geospatial data discoverable online. *Position IT*, April/May 2018.
- Alexandra Parker wrote an article 'Mothers in motion: Mums navigate cities with their kids' needs in mind', *The Conversation Africa*, 17 April 2018. She also spoke to Kwena Moabelo on PowerFM about the research project on 19 April 2018. The article was republished on a number of online news platforms including the *Huffington Post*.

GCRO research was cited in the following media:

- GCRO's Quality of Life V 2017/18 Survey results are mentioned in an opinion article 'Democratic Alliance governance in shambles' by Lebogang Maile, *Daily Maverick*, 25 February 2019.
- GCRO's January 2019 Map of the Month on shifting day and night populations was featured in an article 'This is how many people travel into Sandton, Centurion and Midrand every day', *Business Tech*, 31 January 2019.
- GCRO's Quality of Life V 2017/18 Survey is mentioned in an opinion article 'The way to improve SA throughput and quality' by Rabelani Dagada, *Business Day Live*, 16 January 2019.
- The Quality of Life V 2017/18 Survey continues to be featured in the media: Lee Mwti, '10 things we didn't learn at Africa Check this year', *Africa Check*, 31 December 2018; and Rabelani Dagada, 'Today is better than yesterday in Gauteng', *News 24*, 22 January 2019.
- Quality of Life V 2017/18 Survey data featured in an article about drugs: Shaun Smillie, 'SA nation worries about drugs', *Saturday Star*, 4 December 2018.
- Gauteng Premier David Makhura wrote a column about the Quality of Life V 2017/18 Survey, 'Gauteng province is improving people's lives – premier', *Sowetan Live*, 3 December 2018.
- GCRO prepared a Water Security Plan for Gauteng for Gauteng government and this was featured in a number of articles in late 2018: Graeme Hosken, 'Troops battle Vaal sewage "invasion"', *Sunday Times*, 2 December 2018; 'Gauteng is facing a water crisis', *My Broadband*, 2 December 2018; Graeme Hosken, 'Gauteng, you're overdue for a water wake-up call', *Times Select*, 5 December 2018; 'Gauteng facing "day zero" water crisis', *Business Tech*, 2 December 2018.
- The Quality of Life V 2017/18 Survey launch received extensive media coverage.
- GCRO's October 2018 Map of the Month on residential building change was written up in several articles: 'Here's how many more shacks and security estate homes have been built in Gauteng over the last 17 years', *Business Tech*, 1 November 2018; 'How the backyard boom is leaving Gauteng squashed', *Times Select*, 5 November 2018;

- 'Gauteng separates into shacks and gated estates', *New Frame*, 12 November 2018, republished in *Mail and Guardian* as 'Gautengers move to shacks and gated estates', 12 November 2018.
- The June 2018 Map of the Month on multidimensional poverty is featured in a *Times Live* article by Graeme Hosken, 'Misery by numbers: Gauteng's dimensions of poverty', 7 November 2018.
 - Koech Cheruiyot spoke with Graeme Hosken of *Times Live* on the August 2018 Map of the Month 'Mapping unemployment'.
 - GCRO's research on a framework for a green infrastructure planning approach in the Gauteng City-Region is highlighted in an article about the '14 projects shortlisted for AfriSam-SAIA Award 2017/2018' in *Creamer's Media Engineering News*, 2 October 2018.
 - GCRO data and the April 2018 Map of the Month on influx control is cited in an article in *Business Tech*, 'Concerns raised over mass migration to Johannesburg – here's how many South Africans are moving', 24 September 2018.
 - GCRO's August 2018 Map of the Month was featured in *Business Tech* online, 'This incredible map shows where the highest levels of unemployment are in Gauteng', 23 September 2018.
 - Gillian Maree is cited on the Gauteng Water Security Plan in an article by Sheree Bega, 'How to head off Day Zero', originally published in *The Saturday Star*, 22 September 2018.
 - GCRO's Thembani Mkhize participated in the Open Streets Indaba which was profiled in the *Cape Argus* by Sukaina Ishmail, 'Open Streets Indaba gives voice to kids', 20 September 2018.
 - Dr Julia de Kadt and the research on Gauteng's geography of education is cited in 'Boats, donkeys and their own two feet: How kids around the world get to school' by Jacqueline Howard on *CNN.com*, 7 August 2018.
 - GCRO's June Map of the Month, 'Multidimensional poverty mapping of the Gauteng City-Region', was republished by *Position IT* on 10 July 2018.
 - Alexandra Parker discussed the June 2018 Map of the Month, 'The long and short of school commutes', on Radio 702 with Azania Mosaka on 2 July 2018 and on SAfm with Bongzi Gwala on 3 July 2018.
 - Christina Culwick and the March 2018 Map of the Month on mapping vulnerability in Gauteng is cited in 'Climate change report: SA's cities urged to prepare for heat waves and floods' by Shaun Smillie in *Business Day*, 25 June 2018.
 - Christina Culwick was interviewed on Kaya FM about the QoL IV data presented in Vignette 35 regarding 'Best rated services per municipality', 15 May 2018.
 - Richard Ballard was interviewed on Radio Islam on Thursday 10 May 2018 regarding the April Map of the Month on influx control.
 - Graeme Götz was interviewed on Stephen Grootes' Sunrise Breakfast show on SAfm in connection with the April 2018 Map of the Month on attitudes to bringing back influx control, 8 May 2018.
 - GCRO's April 2018 Map of the Month was written up in several articles: 'Apartheid lite?: Gautengers say yes to influx control', *The Times*, 7 May 2018; "'Too many people are coming to Gauteng' – and a lot of residents want influx-control back', *Business Tech*, 7 May 2018.



Academic citizenship

Where appropriate, GCRO staff will contribute to the teaching and learning work of various universities, predominantly through lecturing and supervision:

- Samy Katumba is co-supervising one MSc student in GIS and Remote Sensing (Wits) and two BSc (Hons): one in Geoinformatics (University of Pretoria) and one in GIS and Remote Sensing (Wits).
- Samy Katumba has externally examined two MSc dissertations in GIS and Remote Sensing from Wits.
- Samy Katumba gave a lecture on Web GIS to a class of MSc students in GIS and Remote Sensing at Wits.
- Alexandra Parker is supervising two BSc (Hons) URP, and one MSc DP student, Wits.
- Julia de Kadt is supervising Hlologelo Malatji, PhD candidate in School of Public Health, Wits.
- Koech Cheruiyot supervised two students (one MSc and one PhD) in Building Science/Property Studies, Wits. Both students to graduate in July 2019.
- Koech Cheruiyot teaches Introductory Econometrics, as a sessional lecturer, at the Wits School of Construction Economics and Management.
- Darlington Mushongera supervised one Honours student, Lerato Sepuru, in the School of Architecture and Planning at Wits.
- Jesse Harber gave a lecture on 'Architects in capitalism' to Masters in Architecture students from the University of Johannesburg
- Thembani Mkhize externally examined an undergraduate (second-year) Planning students' presentation titled *Tracing protest: A video presentation* at Wits University, on Monday 9 October 2017. The presentation formed part of the 'Histories, Theories and Futures of Planning' course facilitated by Nqobile Malaza.
- Thembani Mkhize was, for the second semester, a sessional lecturer at the Wits School of Architecture and Planning, particularly taking second-year Planning students for the 'Histories, Theories and Futures of Planning' course.
- Following a series of lectures to IHS, Erasmus University students, MSc Specialisation: Urban Competitiveness and Resilience, in February–March 2017, GCRO is providing ongoing support to the students to access data for thesis work.
- Koech Cheruiyot supervised two MSc students at the IHS, Erasmus University, Rotterdam, The Netherlands, specialising in 'Urban Competitiveness and Resilience'. Both students graduated in September 2018.
- Gillian Maree is co-supervising one Masters student, IHS, The Netherlands.
- Alexandra Parker is supervising one Masters student, IHS, The Netherlands.
- Richard Ballard is supervising three PhD students at UKZN: Ndwa Tshishonga, Clive Greenstone and Danford Chibvongode; and co-supervising two PhD student at Wits (also staff at the GCRO) with Prof. Claire Benit-Gbaffou: Mamokete Matjomane and Darlington Mushongera.
- Richard Ballard is supervising the following Masters students: Geniver Tebeila, Carla Soudien, Aubrey Musetha, Baleseng Mokoena (at Wits).
- Richard Ballard is the external examiner of the UCT Human Geography undergraduate and postgraduate programme and examined first-semester modules in this quarter.
- Richard Ballard is the external examiner for a module called 'Education and Development' at UKZN, Pietermaritzburg.
- Mamokete Matjomane is co-supervising two BSc (Hons) Urban and Regional Planning students, Wits.
- Ngaka Mosiane is reviewing a National Research Foundation research outputs and standing rating application.

Network for Gender and Urban Research inaugural meeting, August 2018



- Christina Culwick gave a lecture on 'Urban dynamics' to the South African Systems Analysis Centre Emerging researchers programme at Wits on 4 September 2018.
- Christina Culwick gave a lecture on 'Green infrastructure' to the Wits first-year Architecture students on 10 September 2018.
- Gillian Maree is supporting two MSc students with their research work at the Wits Global Change Institute.
- Gillian Maree gave interviews in support of a joint UCT/NCL research project, 'Sustainable consumption, the middle class and agri-food ethics in the global South'.
- Gillian Maree was the external examiner for an MSc student at the Wits Global Change Institute.
- Christina Culwick, external examination, Wits Masters student.
- Samkelisiwe Khanyile is co-supervising one MSc student in GIS and Remote Sensing (Wits), Wits Digital Mine group.
- Christina Culwick has played an advisory role in the CSP's Resilient Cities project.



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