



GCRO ANNUAL REPORT



# ANNUAL REPORT

2016/2017



GCRO | Gauteng  
City-Region  
Observatory

**A Partnership of:**



**GCRO ANNUAL REPORT 2016/17**

**Design:** Breinstorm Brand Architects

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**Published by** the Gauteng City-Region Observatory (GCRO), a partnership of the University of Johannesburg, the University of the Witwatersrand, Johannesburg, the Gauteng Provincial Government and organised local government in Gauteng (SALGA).

**Gauteng City-Region  
Observatory  
Annual Report 2016/17**







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Photograph (back) by **Clive Hassall** | Photograph (front) by **Siegwalt U. Kusel**





## **Preface and introduction**



# Foreword from the Chairperson of the Board of the GCRO

A number of developments, locally and internationally, serve to sharpen our appreciation of the need for an organisation like the Gauteng City-Region Observatory (GCRO). Internationally, there are major convergences at multilateral levels on the salience of cities in advancing global development priorities. The staging of the Habitat III conference in Quito, Ecuador, in October 2016, and its focus on Housing and Sustainable Urban Development, has unequivocally asserted the centrality of the urban in the future not only of human affairs but of the planet as a whole. How urban societies and economies adapt to the constraints of our environment will, in large measure, contribute to the sustainability of global livelihoods. Significantly, the Habitat III approved New Urban Agenda confronts not only issues of environment and climate, but also the other deep crises of our era,

including extensive socio-economic inequalities, resistant patterns of poverty and marginalisation, and trends of forced migration. In all of these, the function of urban contexts in ameliorating or deepening these pathologies is a persistent preoccupation. The Sustainability Development Goals (SDGs) approved in 2016 also seek to align dynamics of urbanisation with priorities for development. Together with the New Urban Agenda the SDGs present a qualitatively different challenge for urban governance. Firstly, they imply that the formal government of urban affairs needs to take on a changing set of purposes and methods than used in the past, and secondly, that the traditional structures of government are unlikely to be able to fulfil this agenda alone. Although formal government will always be a leading player, there is a need to generate alignment across various sectors and

Photograph by **Anaya Katlego**





agencies in urban societies to produce the dynamics of sustainability. It goes without saying that a prerequisite for alignment is shared information and insight into complex urban environments as the basis for debating alternatives for preferred urban futures.

In South Africa, this awareness of the need to pay more attention to the role of cities has resulted in a number of different policy measures and planning instruments, most recently the Integrated Urban Development Framework (IUDF). The IUDF provides a broad view of the function that urbanisation can have in addressing our pressing developmental priorities and resolving the current deficits that exist. Various approaches and objectives are outlined, and work is currently underway to conceptualise a set of implementation modalities suited to the complexity of these ambitions.

*“(W)hoever is charged with grasping the tiller of government, it is vital that analysis and decision-making are informed by comprehensive, high-quality data and credible analysis ...”*

The performances required from local and regional government structures are calibrated against an ever rising bar, and in South Africa we are aware that many of our approaches to urban governance are predicated on the needs of the past rather than the present or the future. Our urban contexts (Gauteng in particular, but others also) are moving targets, with continuing high levels of in-migration (often of poor job-seekers), widespread growth in informal housing, a lack of economic growth, and worrying social tensions. Urban planning can thus not be predicated on what we know about conditions today but should rather be working with projections for the future. This is far from straightforward, and inevitably there are divergent views on the kinds of approaches and solutions that would be appropriate. This situation is perhaps made even more challenging by the outcomes of 2016 local government elections, which indicated shifting tides of sentiment in urban populations and, in some cases, ushered in new administrations with different mandates and priorities.

Whatever frame of reference is used, however, and whoever is charged with grasping the tiller of government, it is vital that analysis and decision-making are informed by comprehensive, high-quality data and credible analysis of the urbanising dynamics of our context, and how these play out very differently across space. It is thus encouraging to note the increasing interest in the model represented by the GCRO – a partnership between universities and

Photograph by Darya Maslova



regional government with the purpose of informing public sector governance of urban environments. For example the GCRO was the subject of a case study published recently by the Department of Performance Monitoring and Evaluation in the Presidency, and it was profiled for senior experts in science and technology from across Africa at a DST/UNECA dialogue in November 2016. The GCRO was also presented as a key exemplar of university-government collaboration at the Habitat III Conference in Quito, and, in addition, STEaPP (a leading public policy unit based at University College, London) is profiling the GCRO as part of a comparative study of observatories across the globe.

Clearly the GCRO is proving to be a rewarding model, and the Board is aware of the burgeoning demands being made on its capacity, which, though recently improved, is still constrained. The research needs across the city-region are immense, and the GCRO attempts to direct its resources with care, maintaining the balance between generating scholarly insight into urban phenomena on the one hand, and providing insight for public policy on the other. The former enables the latter. The team at the GCRO continues to navigate these competing and not to be underestimated priorities with considerable skill, and this is the basis of the GCRO's credibility and success.

The Board notes with appreciation the progress and outputs reported across GCRO's various thematic priorities and, most importantly, the very large number of presentations given by the GCRO's researchers on their work, reflecting efforts to mediate

research insights for public sector audiences as well as academic and professional audiences locally and internationally. With the largest sample size, and thus the most granular results to date, the fourth iteration of the Quality of Life Survey attracted particular attention from a wide range of interested parties, and achieved unprecedented media coverage.

Making the work of the GCRO available to a wide range of audiences is just as important as producing the work in the first place. We are particularly pleased, therefore, to see the increased strength, navigability and appeal of the GCRO's website, which makes the full range of outputs freely available and provides easy-to-use access to GCRO data sets such as the Quality of Life Survey. The GCRO's work was deservedly nominated for a National Science and Technology Forum (NSTF) award and, although the award finally went to a much larger initiative, the number of affirmations the GCRO received from many quarters, both locally and internationally, were very pleasing.

This past year has been characterised by valuable achievements and seen important developments for the GCRO including strengthening of its staffing complement and relocation to new premises. We look forward to the organisation continuing to flourish in the future.

**Professor Zeblon Vilakazi**  
**Deputy Vice Chancellor (Research) –**  
**University of the Witwatersrand**  
**Chairperson of the Board of the GCRO**





Photograph by Jesse Harber

# Introduction and overview

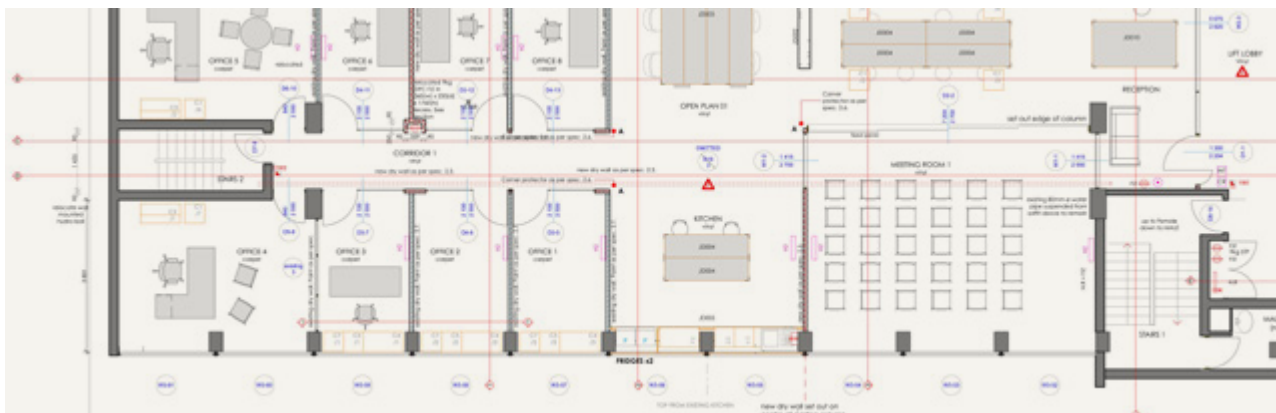
The Gauteng City-Region Observatory (GCRO) is a partnership between the University of Johannesburg (UJ), the University of the Witwatersrand (Wits), the Gauteng Provincial Government (GPG), and organised local government in Gauteng (SALGA). The GCRO is charged with helping to build the knowledge base that government, business, civil society and residents all need to make the Gauteng City-Region competitive, spatially integrated, environmentally sustainable and socially inclusive. This report covers the April 2016 to March 2017 financial year, and reports on the Observatory in the third year of its second full five-year cycle, which extends until 2019.

Central to the success of the GCRO has been the coupling of rigorous academic approaches, scholarly independence, and the sustained and reliable core funding provided by the Gauteng Provincial Government. These factors together ensure that the data and analysis produced by the GCRO, addressing key questions of the city-region, are of an exceptional standard. This is an important (and relatively rare)

example of university-government partnership: publicly-funded research, made publicly available, to inform the processes of development and democracy.

Important developments in the life of the GCRO have taken place during the period under review. Very pleasingly, we were able to address some of the significant staffing vacancies that had accumulated over the previous two years, and a number of talented individuals joined the organisation during this period. We have been able to strengthen our research capacity across a number of priority domains, and we were delighted to see how quickly the newly-arrived colleagues became productive, bringing fresh interests and skills to the organisation. Further, we are pleased to note that the GCRO now has more black South African researchers than at any point in its history. We also strengthened our administrative section through the appointment of a Director of Operations and Partnerships, to manage the greatly increased volume of contractual relationships, the expanded range of activity, and the internal complexity of the

The plans for the new GCRO offices on the 6th floor of University Corner, occupied March 2017





organisation's work. One disappointment, however, has been our inability to make a senior appointment to strengthen our economics research, not least because of salary expectations associated with this skill-set.

We look forward to experiencing the benefits of our enhanced staffing in the years ahead, in both the volume and diversity of insights into the function and future of the Gauteng City-Region.

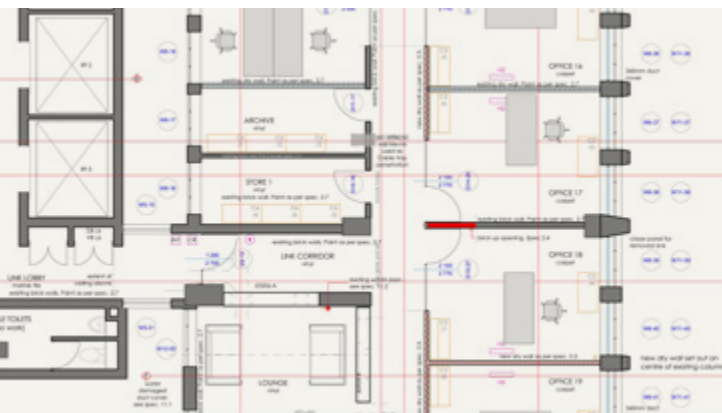
In June 2016, we launched the 2015/16 Quality of Life Survey at an event hosted at the University of Johannesburg. This fourth iteration of the survey, as usual, attracted a great deal of media attention, and significant interest in the government, civil society and academic domains. Representing insights derived from some 30 000 interviews across the city-region, the survey is now regarded as the flagship operation of the GCRO, and provides an unprecedented synopsis of life across this urban agglomeration. The data are freely available for non-commercial purposes to government, academic and civil society partners, and we glean considerable satisfaction from the growing variety of purposes that the data seems to serve.

As was noted in our previous Annual Report, we are undergoing a phase change in the functional role of the GCRO as a knowledge-intensive organisation. This is a widening of our role to include an intermediary or brokerage function, helping to bring together various bodies or organisations to achieve (often complex) priority purposes. Foremost among these has been the assembly of a loose consortium of economic researchers with an interest in

researching economic issues at the city-region level (as opposed to national or international economic flows, or sectoral specialisations, which tend to be the preoccupations of most economists). The relative scarcity of such researchers, and the realisation of the greatly increased salience of the need to steer economies at local and regional levels, have made the need for this kind of capacity increasingly urgent. Together with Professor Ivan Turok of the HSRC, we convened the deliberations of this consortium and brokered a collective approach to a Gauteng-based firm-level survey, responding to a call from the Gauteng Growth and Development Agency (GGDA) for work of this nature. A number of organisations will make contributions to this study, each bringing their distinctive strengths to the initiative.

Another intermediary role is reflected in an initiative driven by the Gauteng premier, David Makhura, to strengthen collaboration between the universities in the city-region and the provincial government. An MoU to this effect is being drafted and, following earlier requests for the GCRO to mediate these relationships, it is anticipated that we will be deeply involved in advancing this purpose.

Much of the GCRO's work involves partnerships with individual researchers or groups elsewhere, and this is a necessary and valued element that underpins the quality of our work. We anticipate that this will only grow in the future, especially as we take on increasingly complex and large-scale projects. However, this inevitably adds to the complexity of our



*“Central to the success of the GCRO has been the coupling of rigorous academic approaches, scholarly independence, and the sustained and reliable core funding provided by the Gauteng Provincial Government”*

activity, a necessary entailment of multidisciplinary and transdisciplinary work that not only addresses complex urban phenomena, but also has a concern for how the results of our work are absorbed and used in various quarters.

A further significant development has been the move into expanded and refurbished accommodation on the 6th floor of University Corner. The staff complement has expanded considerably since GCRO's inception, and although open-plan measures were used to optimise our available space, we had reached the functional limits of the original allocation. Wits University generously provided us with new space, effectively doubling the footprint available to us. The GCRO's Board approved a plan to use some accumulated reserves to refurbish this new space and, after careful planning and liaison with Wits' Campus Development Department (CPD), the new space was purpose-designed to suit the GCRO's activities and staffing. Among other measures, much of the previous old furniture (including cupboards and laboratory benches) was retained to achieve both cost-savings and a sense of continuity with the past. The entire operation was fulfilled within the budget approved by the Board, indeed, with some modest savings. On behalf of the GCRO, I would like to note our great appreciation and thank Wits for this accommodation, and for the hugely professional efforts of Wits CPD in contracting and overseeing the refurbishment.

With a freshly enlarged staff complement, and with new office accommodation, the GCRO is well-positioned to take on the many challenging features of its purposes, which include, on the one hand, taking advantage of the growing awareness in government circles of the implications of 'the urban turn' – the salience of cities in advancing development priorities – and, on the other hand, the possible shifts in governance approaches that might be occasioned as a consequence of the results of the 2016 local government elections.

**Dr Rob Moore**  
**Executive Director**  
**The Gauteng City-Region Observatory**



Photograph by Richard Ballard











## **Governance and organisational development**

# Governance and organisational development

2016/17 saw extensive change within GCRO's staff complement. The GCRO team said good bye to the following staff as they each went on to pursue exciting new opportunities:

- Caryn Abrahams took up a senior lecturer position at the Wits School of Governance;
- Guy Trangoš enrolled for a Doctorate of Design programme at the prestigious Harvard Graduate School of Design;
- Farah-Naaz Moosa took up a position in the City Institute at Wits University;
- Sally Peberdy relocated to the United Kingdom.

Having lost some key staff in late 2015 and early 2016, GCRO embarked on a substantial recruitment exercise in the first quarter of 2016/17. The lead advertisement was for multiple researcher positions. It resulted in an overwhelming 60 applications, many of which were very strong. After an extensive shortlisting and interview process the following were appointed to the GCRO team:

- Jesse Harber (Researcher)
- Gillian Maree (Senior researcher)
- Mamokete Matjomane (Junior researcher)
- Thembani Mkhize (Junior researcher)
- Ngaka Mosiane (Senior researcher)
- Alex Parker (Researcher)

We also welcomed Elaine Milton, previous Director of Employment Relations at Wits, as Director: Partnerships and Operations. Bronwen Stewart joined us on a temporary basis as administrator and receptionist after the departure of Farah-Naaz Moosa. Kate Joseph also provided GCRO with some much-needed additional capacity on a contract basis, first in the run-up to the launch of the Quality of Life

survey IV in June 2016, and then on various projects in the fields of governance and social cohesion, most notably the development of a social cohesion strategic framework project for the City of Johannesburg.

In addition, in February 2017, following a careful appointments process, three young researchers who had served as GCRO interns over the previous year were appointed as junior researchers. The addition of Samkelisiwe Khanyile, Mncebisi Siteleki and Christian Hamman brought the number of new appointments to ten. This effective doubling of the staff complement within the financial year represented an enormous increase in capacity, both in terms of the number and calibre of the staff.

We wish all of those who have left GCRO every success in their future careers, and we warmly welcome all of the new staff who are sure to make this an exciting new phase for GCRO.

2016 was also a good year for staff development and GCRO was delighted to congratulate three staff members on the attainment of their Masters' degrees:

- Samy Katumba: MSc in Geoinformatics (University of Pretoria) with a dissertation entitled, 'Empirical tests using search engine optimization techniques to compare the effectiveness of two metadata vocabularies for geospatial data discovery on the web';
- Samkelisiwe Khanyile: MSc GIS and Remote Sensing (Wits University School of Geography, Archaeology and Environmental Studies) with a dissertation entitled, 'Towards a digital mine: a spatial database for accessing historical data on mining and related activities';
- Mncedisi Siteleki: MSc GIS and Remote Sensing (Wits University School of Geography, Archaeology and Environmental Studies) with a dissertation



entitled, 'Detecting ash middens using remote sensing techniques: a comparative study in Southern Gauteng, South Africa'.

Ongoing professional staff development is a key organisational commitment for GCRO, and several staff members availed themselves of important development opportunities. These included:

- 'Going places with spatial analysis', short course by ESRI-South Africa, May 11-June 22, 2016 – Siân Butcher, Mncedisi Siteleki and Samkelisiwe Khanyile;
- African Centre for Cities (ACC) PhD seminar on 'Democratic practices of unequal geographies', 4-8 July 2016, University of Cape Town – Christina Culwick;
- 'Topics in spatial statistics', short course by ESRI-South Africa, August 2016 – Samy Katumba and Mncedisi Siteleki;
- Society of South African Geographers (SSAG) writing workshop, 28 September 2016 – Christina Culwick;
- 'Sustainable cities', a 55-session, 11-week course launched worldwide on 15th November 2016, produced by the SDG Academy and curated by the Indian Institute for Human Settlements (IIHS) – Alexandra Parker, Jesse Harber, Gillian Maree, Kate Joseph, Samkelisiwe Khanyile;
- Workshop on 'Conducting interviews for qualitative research', 10 March 2017, University of Cape Town – Christina Culwick.

GCRO staff breakaway, November 2016





Dr Rob Moore



Graeme Gotz



Adele Underhay



Dr Ngaka Mosiane



Mamokete Matjomane



Dr Richard Ballard



Dr Aidan Mosselson



Samkelsiwe Khanyile



Mncedisi Siteleki



Gillian Maree



Dr Koech Cheruiyot



Darlington Mushongera



Jesse Harber



Christina Culwick



Dr Alex Parker



Christian Hamann



Samy Katumba



Thembanani Mkhize



Elaine Milton



Dr Sian Butcher



Dr Caryn Abrahams



Guy Trangoš



Farah-Naaz Moosa



Dr Sally Peberdy





Developers workshop, Photograph by Christina Culwick



Habitat III, Photograph by Darlington Mushongera



QoL IV launch, Photograph by Victor Sguassero



Law and Water workshop, Arizona State University (ASU)





Photograph (back) by **Clive Hassall** | Photograph (front) by **Potsiso Phasha**





**Support to  
government**

# Support to government

In addition to its applied research work, which supports evidence-based policy making through information gathering, analysis and interpretation, GCRO is often asked to assist more directly in government policy and strategy development processes. A key focus of this support has historically been the Gauteng Planning Division (GPD) in the Office of the Premier in Gauteng. However, 2016/17 saw a significant uptick in requests from other parts of the Gauteng Provincial Government and municipalities in the province. Some of these requests were for major support on key policy initiatives; others were for more short term and ad hoc assistance.

- Through much of 2016/17, a team from GCRO led by Richard Ballard and Rob Moore supported a panel – the ‘Gauteng Champions for Nation Building and Social Cohesion’ – set up by the Gauteng Premier to formulate responses to growing concerns around social cohesion. The team drafted a conceptual ‘framework document’ to inform the work of the panel, and refined this after presenting it a number of times in various forums.
- In late 2016/17 GCRO was approached by the City of Johannesburg to support it in developing a strategic framework for social cohesion. The work started in this financial year but will be completed in 2017/18.
- In July 2016, the MEC for Economic Development requested GCRO to work with the Gauteng Growth and Development Agency (GGDA) in conducting a major firm level survey in the province, looking *inter alia* at the costs of doing business. GCRO developed a concept note and met with GGDA officials a number of times over late 2016 and early 2017 to clarify the focus for the survey. A full proposal for the survey was then developed for GGDA in February 2017. The survey will be implemented in 2017/18, involving a partnership between GCRO and GGDA as well as the Human Sciences Research Council (HSRC), and the University of Johannesburg’s Centre for Competition, Regulation and Economic Development (CCRED).
- Darlington Mushongera assisted the Gauteng Department of Economic Development (GDED) as a member of a steering committee to develop the Gauteng Economic Development Barometer.
- In the final quarter of 2016/17 GCRO was appointed by the City of Johannesburg to undertake the development of a greening and green infrastructure strategy for the City.
- Gillian Maree, Samkelisiwe Khanyile and Christina Culwick helped the Gauteng Department of Agriculture and Rural Development (GDARD) to review its 2006

*“2016/17 saw a significant uptick in requests for support from parts of the Gauteng Provincial Government and municipalities in the province”*



‘Pollution Buffer Zones Policy’. They prepared a major input into the review process, containing a spatial analysis of the effectiveness of pollution buffers and a literature review on the current international thinking around managing pollution buffers in urban areas.

- Christina Culwick and Gillian Maree were invited by GDARD to join the Steering Committee for the development of the Gauteng Environmental Outlook report.
- GCRO signed a letter of intention to collaborate with GDARD on a range of areas of common interest. It is hoped that this will evolve into a full Memorandum of Understanding covering ongoing work in partnership with the department.
- Via introductions from GPD, GCRO met a number of times with officials from and consultants working for the central information centre of GPG’s Service Delivery War Room. GCRO advised on various options for data collection including how the Quality of Life Survey could be of benefit.
- Darlington Mushongera assisted the Gauteng Planning Division as a member of a Bid Evaluation Committee (BEC) to evaluate its ‘Research Bodyshop’ tender.
- Christina Culwick participated in a workshop with the City of Johannesburg and the Wits School of Governance to define a capacity building

programme for the transport industry. She also worked with members of the Gauteng Transport Commission to help define a transport planning and management course for officials.

- On invitation, Sally Peberdy provided comments to the Department of Home Affairs on its Green Paper on International Migration.
- Thembani Mkhize and Aidan Mosselson provided research and advocacy support to the Johannesburg Development Agency (JDA) in its attempts to define approaches to urban upgrading and public space management which are pro-poor and which include measures to protect the rights of homeless people to public space.
- GCRO was asked to sit on the evaluation steering committee of GPD’s mid-term evaluation of the Premier’s Transformation, Modernisation and Revitalisation (TMR) agenda.
- Richard Ballard gave a presentation on Mega Human Settlements to the August 2016 meeting of the Gauteng Planning Forum.
- GCRO assisted GPD staff with preparing a number of presentations they needed to deliver to other forums, for example an introduction to GCRO and its work to the 5th International Knowledge Sharing Workshop organised by the National Department of Planning, Monitoring and Evaluation (DPME).



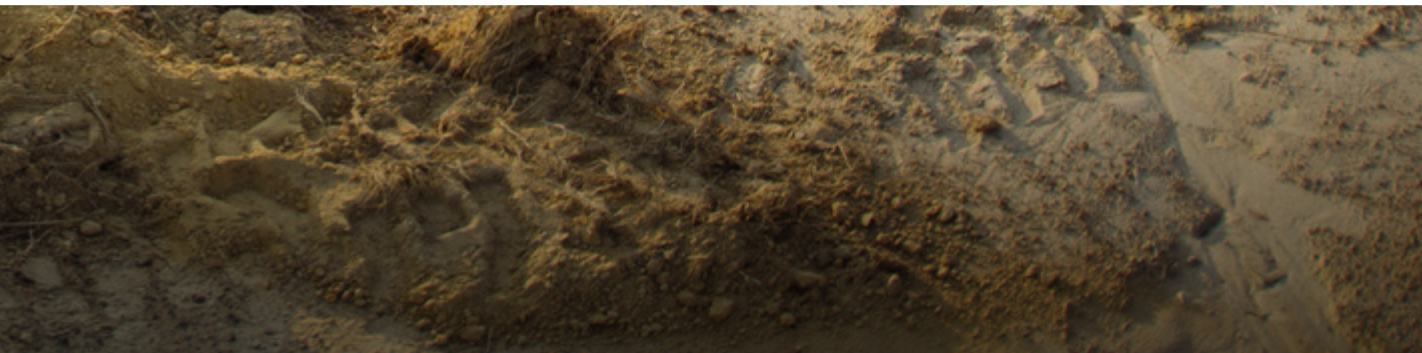
Photograph by Richard Ballard







## **Applied research**





# Applied research

## Overview

At the end of the 2014/15 financial year, the Board of the GCRO approved a new five year strategic plan. The plan was formulated to build on existing areas of strength, and also to take account of new strategic frameworks, notably the Gauteng Provincial Government's Transformation, Modernisation and Re-industrialisation (TMR) agenda for the 2014 to 2019 term of office. 2016/17 marked the second full year of implementation of the five year plan.

In terms of this five year plan, GCRO has arranged its project work into a number of thematic focus areas. There are seven themes that organize GCRO's applied research. Each theme is made up of a number of research projects.

In summary the 2016/17 workplan involved 39 projects across the seven applied research focus areas. Additional projects were undertaken on an ad hoc basis as part of an eighth area of work, 'Government support', as explained above.

	Number of 2016/17 projects in each theme
1. Analytics, cartographies, visualisations	7
2. Changes in the social fabric / changing the social fabric	6
3. Rationalities of government and governance	5
4. Histories & futures of the GCR in comparative perspective	2
5. Landscapes in transition in the GCR	10
6. New regional economies	4
7. Sustainability transitions in the GCR	5
8. Government support	NA

## 1. Analytics, cartographies and visualisation

Primary data collection, as well as data analytics and visualisation, are key focus areas for GCRO. Projects in this theme encompass the biennial Quality of Life Survey and a range of open-data initiatives aimed at making information on the city-region more publicly available. This theme also includes research that deepens analysis of the available data.

### Data acquisition

During the 2016/17 financial year, the GCRO embarked on the process of revising its rich GIS database, containing more than 400 single records of geo-referenced datasets about the GCR. A number of datasets that needed to be acquired or updated were identified. Memorandums of Understanding to acquire medium- to high-resolution remote-sensing imagery and other relevant geo-referenced datasets from identified data custodians were drafted. New datasets acquired in the 2016/17 financial year included:

- Health facilities shapefiles obtained from the Gauteng Department of Health.
- New ward, municipal and district boundaries obtained from the Municipal Demarcation Board.
- Department of Home Affairs local offices shapefile obtained from the Department of Public Service and Administration.
- Department of Labour offices shapefile obtained from the Department of Public Service and Administration.
- SA Social Security Agency local offices shapefile obtained from the Department of Public Service and Administration.
- SA Police Service contact points shapefile obtained from the Department of Public Service and Administration.

- Thusong Centres shapefile obtained from the Department of Public Service and Administration.
- Election Voting Districts and Voting Stations layers obtained from the Independent Electoral Commission (IEC).
- Buffers around all pollution sources layer obtained from GDARD.
- Buffers around category 1a, 1b, 2, 3 and 4 industries layers obtained from GDARD.
- Buffers around mine dumps layer obtained from GDARD.
- Buffers around nuclear plants layer obtained from GDARD.
- Prevailing wind direction layer obtained from GDARD.
- Buffers around sewage plants layer obtained from GDARD.
- Buffers around slimes dams layer obtained from GDARD.
- Buffers around general waste sites layer obtained from GDARD.
- Buffers around hazardous waste layer obtained from GDARD.
- Landcover for 1990 layer obtained from GDARD.

GCRO's main interactive GIS Viewer is updated with new layers on a continual basis. The layers that were included in the viewer during the course of this financial year included:

- Quality of Life index, 2015/16.
- Percentage satisfied with government performance by ward, 2015/16.
- Percentage dissatisfied with government performance (local, national and provincial), 2015/16.
- New ward, municipal and district boundaries layers.

*“There are seven themes that organize GCRO’s applied research. The 2016/17 workplan involved 39 projects across the seven applied research focus areas”*

### Re-engineering the QoL Survey Viewer

This project entails the redevelopment of the current Quality of Life (QoL) Survey Viewer, which currently displays the 2009, 2011 and 2013/14 QoL Survey data, to also include the 2015/16 QoL data. The anticipated revamped viewer will consolidate all the QoL surveys into a single platform and provide analytics in the form of interactive tables, graphs and charts that are user-friendly and easy to understand. The emphasis is on giving the user interface a new look that is fresh, current and appealing, by using state-of-the-art technologies for interactive web-based visualisation and analytics. In late 2015/16 a team from the Johannesburg Centre for Software Engineering (JCSE) scoped what would be required to re-design the viewer. In this financial year GCRO took forward this work, engaging with a number of potential service providers to further explore software options, before moving to finalise a Terms of Reference to solicit formal proposals from possible bidders.

### Data-smart GCR

This project aims to provide background research, as well as ongoing policy support, to aid initiatives by the GIS unit in the Office of the Premier (Gauteng) and the Gauteng GIS Forum to establish a GIS Viewer and a geo-referenced data repository (a 'geoportal') for the GCR. The project draws inspiration from theories and best practices related to the notions of a smart city and Spatial Data Infrastructure (SDI). In 2016/17 GCRO commissioned experts in the field of SDI – Prof Serena Coetzee from the University of Pretoria and Dr Antony Cooper from the CSIR – to work side-by-side with GCRO's own Samy Katumba to undertake the work. As part of the project, the team members gave talks at various Gauteng GIS Forum meetings and conducted interviews with selected officials to obtain materials that reflect on the status-quo of GIS activities across the province. The year saw the completion of initial drafts of an Occasional Paper based on this research. Parallel to this Samy Katumba was involved in a policy task team convened to draft a policy that will regulate GIS activities across the province.

### Geo-visual analytics

This project aims to keep GCRO researchers up to date with current geo-visual analytics skills and knowledge. Research within this space informs the

production of various GCRO visualisation outputs, such as Maps of the Month and Story Maps. During the course of 2016/17, Samkelisiwe Khanyile and Mncedisi Siteleki started 'GeoViz', a reading group focused on exploring visualisation and analytics techniques. Dr Stefania Merlo from the School of Geography, Archaeology and Environmental Studies at the University of the Witwatersrand has been an active partner in establishing and guiding the reading group initiative.

### Advancing data visualisation

The aim of this project is to push GCRO's data visualisations to a new level. 2016/17 focused, in particular, on the development and launch of a visualisation that conveys key results from GCRO's Quality of Life IV (2015/16) survey, called 'Gauteng as a village of 100 people' (see more under 'Quality of Life Survey IV (2015/16)').

### Website and dissemination

2015/16 saw the comprehensive reconfiguration and modernisation of GCRO's main website. In 2016/17 work continued in terms of enhancing the website with new content and an ongoing programme of disseminating Maps of the Month, Vignettes and interactive visualisations. A tabulated summary of these outputs is included under 'GCRO outputs' below.

### Spatial statistical modelling

This project focuses on spatial statistical modelling of Quality of Life Survey data, with an initial focus on analysing patterns and trends in dissatisfaction with government performance. Background work towards an Occasional Paper was undertaken with a survey of literature intended to guide the selection of possible variables for modelling patterns of dissatisfaction. Quality of Life IV (2015/16) data was also prepared for analysis.

Two abstracts were submitted to and accepted for the 3rd ISIBalo CRUISE-Statistics South Africa Urban and Regional Science Conference 2017 (to be held in July 2017 at Stellenbosch University). The first paper is 'A geographical weighted regression approach to dissatisfaction with government performance in the Gauteng City-Region, South Africa', by Koech Cheruiyot and Samy Katumba. The second is 'Identifying spatial change in multi-dimensional





Premier David Makhura and Wits DVC for Research Prof. Zebulon Vilakazi at the QoL IV launch, Photograph by Victor Sguassero

poverty levels across the Gauteng City-Region: a comparison of the 2013 GMPI and 2015 GMPI', written by Samy Katumba, Darlington Mushongera and Koech Cheruiyot.

#### **Quality of Life Survey IV (2015/16)**

In 2009, GCRO commissioned a 6 600 sample survey to measure the quality of life, socio-economic circumstances, attitudes to service delivery, psycho-social attitudes, value-base and other characteristics of the Gauteng City-Region. 2011 saw a second QoL Survey being undertaken, this time with some 17 000 sample points across Gauteng. 2013 saw the third QoL Survey, this time with co-investment by municipalities, and a sample of 27 490.

2015/16 saw the investment from the three metros continuing, and the sample expanded to 30 000. After delays occasioned by several thousand interviews being rejected in the last quarter of 2015/16, fieldwork for the survey was finalised and the dataset cleaned and weighted in the first quarter of 2016/17. Analysis of the data started immediately on completion of the fieldwork, and initial results were presented to the Premier on 31 May 2016, and to the Provincial EXCO Lekgotla on 6 June 2016.

The formal launch of the QoL IV (2015/16) took place on 28 June 2016 at a very successful event held in the Council Chambers of the University of Johannesburg. The launch was addressed by the Premier, the Executive Mayor of Johannesburg (in his capacity as the Chair of SALGA Gauteng), the Wits Deputy Vice Chancellor (DVC): Research, and the UJ DVC: Academic. The launch garnered significant media and social media interest, including more than

40 online and print media articles, approximately 30 news broadcasts and radio interviews / podcasts, as well as some 82 000 'impressions' on Twitter.

Following the launch the QoL findings were presented to a wide variety of government departments, including: a Gauteng Planning Division "Deliverology" workshop (30 June 2016); a Gauteng Department of Economic Development senior management strategy session (1 July 2016); a strategic planning session for law enforcement agencies hosted by the Gauteng Department of Community Safety (13 July 2016); the GCR Monitoring and Evaluation Forum (22 July 2016); the Gauteng Enterprise Propeller (25 July 2016); a strategic planning session of the Gauteng Provincial Treasury (11 August 2016); and the Seibeng Mayoral Lekgotla (21 September 2016); amongst others.

Various final reports typically associated with QoL data – a technical report, data report and weighting report, as well as banner books – were produced during the third quarter, enabling the formal sharing of the QoL IV dataset.

GCRO finalised a major presentation of over 200 slides 'benchmarking' municipalities in Gauteng against one another in January 2017. Aspects of the presentation will be converted into an Occasional Paper.

Finally, GCRO produced a ground-breaking data visualisation, 'Gauteng as a village of 100 people' to present data from the QoL IV survey in an engaging, interactive online facility. The visualisation sees 100 figures moving around a city scene, clustering in a way that represents the percentage based responses (each person represents 1%) to specific QoL questions.

## 2. Changes in the social fabric/changing the social fabric

In this theme GCRO is undertaking a number of projects that look at the changing composition of neighbourhoods and society, as well as how the social fabric is torn by dynamics such as inequality, racism or xenophobia. We also consider what government is doing or should be doing about these challenges.

### **Poverty and inequality in the GCR**

This project aims to understand the nature and extent of poverty and inequality in the GCR, as well as unpack its underlying causes, drivers and dynamics. During the course of the year a final Research Report was assembled and put into the copy-editing and design process. The lead researcher, Darlington Mushongera, presented aspects of his research at the Human Development Capabilities Conference in Tokyo, Japan, in September 2016.

### **Caring cities**

The GCRO partnered with the City of Johannesburg to produce a Caring Cities Barometer as part of an initiative for Metropolis, an association of major cities and regions from across the world. A questionnaire to test residents' perceptions of whether their

city is 'caring' or not was developed and piloted in Johannesburg and Berlin. The revised questionnaire was then converted into an online tool by the Joburg Centre for Software Engineering (JCSE). The Bureau for Market Research at the University of South Africa was contracted to survey 500 Johannesburg-based respondents using the questionnaire. The results were analysed and an extensive report written for and submitted to the City of Johannesburg.

### **Reversing the resurgence of racism**

A team of researchers led by Caryn Abrahams has compiled a GCRO Research Report entitled 'Pathways to AntiRacism'. The report follows the launch of the AntiRacism Network of South Africa (ARNSA) and develops thinking about antiracism in a context where non-racialism is a more familiar term. The report engages with a number of key actors in South Africa to explore the idea of antiracism. It also offers an analysis of the South African government's responses to racism, and compares South Africa to what has been done by other countries following a call for national action plans at the 2001 UN World Conference against Racism. The report is in the final stages of production.



Photograph by Clive Hassall



An interim output for this project was the production of a video made up of a set of illustrative photographs, and titled 'Perspectives on race & racism: a view from the street'. The photographs will also appear in the final Research Report as a photo-essay.

### Understanding the objective of post-apartheid urban mixing

In what ways is the state concerned about promoting desegregation in urban areas? Should the state promote desegregation? To what end, and how would it do this? This project contains several components including a review of international experiences of promoting urban mixing, an analysis of neighbourhood mobility with a view to understanding white flight, as well as a project with Mike White from Brown University analysing changes to segregation at ward level over time.

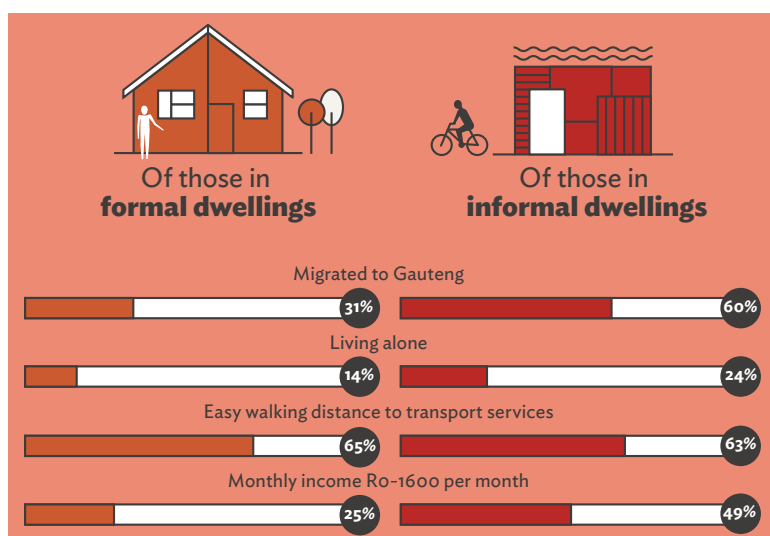
### Scale, belonging and exclusion in Gauteng

This new project examines the multiple scales at which 'community' is forged in the Gauteng City-Region, with a particular interest in the circumstances under which communities might be imagined or operationalised at larger or smaller scales. The project will lead to an

edited book containing a series of short chapters on key concepts, and longer chapters on new empirical studies. Fieldwork has begun on the case studies, including: a study of workers living in Diepsloot and commuting daily into nearby gated communities to labour as construction workers and landscape gardeners; an analysis of school catchment zones in Gauteng; a review of the 2015 Roodepoort Primary School crisis; a case study of a ward which straddles southern Johannesburg and northern Soweto; and a study of Mabopane, a township north of Tshwane which was originally incorporated into the bantustan of Bophuthatswana.

### Mothers in the city

This project is in partnership with Dr Margot Rubin from the SARChI in Spatial Analysis and City Planning. The research focuses on the experiences of mothers in the city-region, particularly on their everyday activities and spatial footprints. The project began in 2014 and has been brought to the GCRO by Alex Parker. An Occasional Paper has been drafted on the basis of the pilot study and is currently being developed for publication.



Detail from Vignette 29, Making a life in informal dwellings in Gauteng

### 3. Rationalities of government and governance

#### **Ethnographies of the state and State function in infrastructure planning**

These two complementary projects, led by Darlington Mushongera, offer ethnographic studies into the internal workings of the local state, using as a case study decision-making processes around water services in the City of Johannesburg. One of the two projects will lead to a GCRO Provocation and the other to an Occasional Paper. Mushongera spent time in the offices of the City of Johannesburg's Group Strategy Department. He attended a series of meetings, participated in strategic planning workshops, and extensively observed and interviewed City officials at various levels to understand state practices and bureaucratic processes. Mushongera presented findings from this project at the RC21 Conference that took place in Mexico City in July 2016. This work also forms part of Darlington Mushongera's PhD work which he is currently undertaking through the School of Architecture and Planning at the University of the Witwatersrand. A significant proportion of the work was written as part of a PhD proposal which Darlington Mushongera successfully defended in early 2017.

#### **Knowledge partnerships for urban futures**

This project has two main components. The first component, being run together with the Gauteng Planning Division, is to establish selected strategic knowledge partnerships between government and universities. The second is to conduct research into global and local practice in the domain of university to government knowledge brokering and partnerships, with GCRO itself serving as a local case study.

GCRO Executive Director, Dr Rob Moore, heads up this project.

Working together with Prof Ivan Turok from the HSRC, GCRO convened a group of researchers on key issues and opportunities for research in the area of city-region economics in May 2016. A preliminary concept note was drafted for the workshop, and then refined based on the discussions. Later in the year, through an opportunity presented by the Economies of Regions Learning Network (ERLN), GCRO, with Prof Turok, met with key people in the National Treasury and other colleagues with an interest in research into city-region economics. The group of researchers met again in March 2017 to take forward ideas around an expanded programme of city-region economies research.

GCRO hosted representatives from University College London's (UCL) Department of Science, Technology, Engineering and Public Policy (STePP). STePP specialises in issues of the university and government knowledge transfer and partnerships. Through a series of meetings GCRO and STePP agreed to deepen collaborations. The first step was a successfully co-organised and hosted Habitat III (Quito, Ecuador) event entitled 'Shaping informed cities: platforms for knowledge generation and use in urban decision-making'. The session included facilitation by Carla Washbourne (STePP), and presentations by Christina Culwick (GCRO) and Rashid Seedat (Gauteng Planning Division). The focus of this session is currently being written up as a co-authored STePP-GCRO paper. The collaboration between GCRO and STePP was further strengthened through a jointly

*“Through a series of meetings GCRO and STePP at University College London (UCL) agreed to deepen collaborations. The first step was a successfully co-organised and hosted Habitat III (Quito, Ecuador) event entitled ‘Shaping informed cities: platforms for knowledge generation and use in urban decision-making’”*



WC2 event, Berlin, Photographs by Jacek Ruta



conceptualised internship that will investigate global urban observatories.

Using the GCRO as a case study, Rob Moore presented a paper on knowledge brokering and partnerships at a conference organised by the World Universities, World Cities (WC2) network in Berlin during August 2016. Four GCRO staff members received grants to also attend the conference.

Dr Moore finalised a report – ‘The Gauteng City-Region Observatory: a case study’ – for the national Department of Performance Monitoring and Evaluation’s (DPME) Programme to Support Pro-Poor Policy Development (PSPPD). Drawing insights from the GCRO experience, Moore presented a paper on ‘adaptive governance’ at an international symposium on BRICS cities in Moscow in December 2016. Two new staff members, Thembani Mkhize and Jesse Harber, also presented papers at the same symposium.

### **Governing the GCR**

GCRO researchers Jesse Harber and Kate Joseph are leading this project, which aims to advance the debate on what the GCR is, and how it ought best to be governed. The project will take the form of a series of short GCRO Provocations, each of which is intended to

approach a particular facet of the issue.

Harber and Joseph are co-authoring the opening Provocation, ‘Institutionalising the Gauteng City-Region’, which frames the series. Subsequent Provocations will explore governance relationships in the north-eastern periphery of the city-region; inter-party politics over municipal demarcation in the Sedibeng Municipality; water governance across the GCR; and debates around the evolution of metropolitan governance in the Île-de-France region around Paris.

### **Civic Tech Learning Network**

This project is a partnership with Making All Voices Count (MAVC), a donor-funded organisation that studies and promotes the use of technology for transparency and accountability. The Learning Network will draw on the knowledge generated by MAVC, as well as other good practice, to build a community of practice among government and civil society organisations.

Initial engagements were held with Indra de Lanerolle of MAVC; a content developer was contracted by MAVC; and work got underway, including initial meetings with potential stakeholders and further partners.



## 4. Histories and futures of the GCR

Research in this theme considers the history of the region now known as the GCR, and its potential futures. This historical research and futures modelling is supported by – and in turn it supports – comparative analysis of emerging trends and dynamics in other city-regions elsewhere, as well as deeper theorising of what it means to be a city-region.

### **Futures of the GCR**

This project is currently being reframed and recalibrated. It is intended that an external specialist be commissioned to write a GCRO Occasional Paper that provides a ‘futures perspective’, situating the GCR within projected long-term global urban trends and dynamics.

### **What is the GCR?**

This multiyear project is designed to interrogate the Gauteng City-Region as a concept, construct, political device and mode of governmentality. It is a longer-term project with the eventual outcome envisaged as an LSE Cities ‘Endless City’-style book on the GCR. 2016/17 saw initial work in this direction by project lead, Alex Parker. A preliminary output was planned for a major exhibition at the Seoul Biennale on Architecture and Urbanism in October 2017. This will see the work of the GCRO presented on an international platform alongside fifty other global cities and city-regions. The exhibition is to include a physical display and a digital component, combining pre-existing GCR work with a range of new maps and data visualisations. The theme of the exhibition has been set as ‘Borders and Bridges’. It will explore the boundaries of the GCR and the various kinds of internal borders – social, economic and spatial – that define it, as well as the role of the GCRO in bridging the public sector and academic domains.

## 5. Landscapes in transition in the GCR

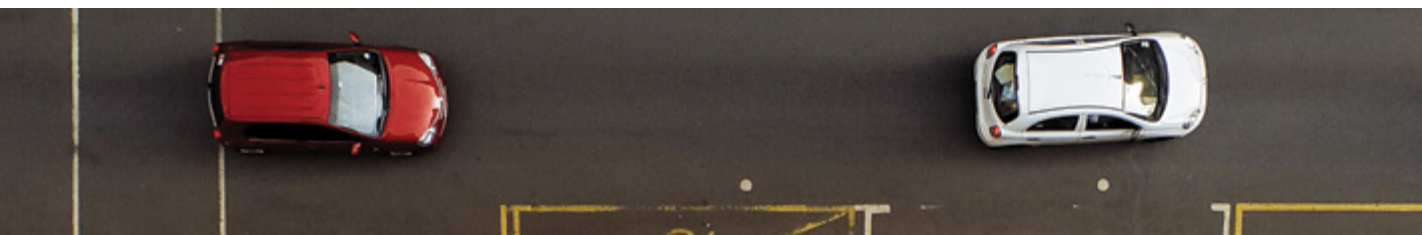
The Gauteng City-Region is undergoing remarkable spatial change, both at the macro-level of overall spatial structure and at the micro-level of the spatial fabric of neighbourhoods and streets. Research in this theme takes a ‘landscape view’ – considering the political, economic, social, environmental and other drivers and consequences of these spatial changes.

### **Peripheries and rural/urban transitions**

Small towns on the edge of the city region, large peri-urban and commercial farming areas, and huge zones of displaced urbanisation in ex-bantustans are all poorly understood. Yet there is evidence that they are undergoing rapid change. Some small towns and extended informal settlements on the edge seem to be attracting more migrants, leading some academics to call them ‘estuary zones’ where people who are between urban and rural lives try to access the benefits of the region’s core, while negotiating its costs. But there is also some data that indicates the depopulation of these peripheries, as people leave farms and declining small towns to get closer to opportunities in the larger economic centres of the GCR. This multi-year project, exploring these trends and dynamics, has been run in conjunction with the SARCHI in Spatial Analysis and City Planning (SA&CP) at the Wits School of Architecture and Planning. A major Research Report comprising of two parts – the first written by GCRO, the second by SA&CP – has been completed and is now in the design and production process. It will be published in mid-2017.

### **Mining landscapes of the GCR**

The extraction of gold along the Witwatersrand mining belt fundamentally shaped the Gauteng City-Region (GCR) over more than a century. The goldfields, that stretched across a vast area, were responsible



for the formation of Johannesburg and, over time, the development of large parts of the extended metropolis around it. This project is a multidisciplinary study (environmental, economic, social and spatial) of the changing mining landscapes of the GCR. It examines both the urban landscapes produced by the wealth from gold-mining, and the landscapes affected by mining, still identifiable today by toxic scars that traverse the city-region. A multi-chapter Research Report is nearing completion. A revised design of the Report was prepared and reviewed in this financial year, and it will be published in 2017/18.

### **Untangling transport**

During the second quarter, Lindsay Howe, a PhD student at ETH Zurich, was contracted to conduct research into commuter patterns across Gauteng using a specially customised mobile phone application, called 'myJoziMoves'. A project implementation plan was developed, including a social media and promotion strategy. A partnership with Planact was established to effect a plan to ensure the participation of lower income residents, who would not ordinarily be able to afford a smart phone. Following finalisation and testing of the myJoziMoves app, and publicisation via social media and GCRO's mailing list, data collection was undertaken during the period from October to December 2016.

A first draft of the report on results from the project was received in the final quarter of the year. It will be published, together with a mapping of the data collected, following a review process.

Under the auspices of this project Vignette 30, on 'Youth and Transport', was published, linked with the Gauteng Transport Commission's focus on youth during the 2016 October Transport Month.

### **Spatial imaginaries of the GCR**

This project examines how provincial and local governments are defining spatial visions for their areas, especially with regards to how they intend to develop human settlements, and what resources and tools they seek to mobilise to translate their visions into reality. At present the project is aiming to produce two major outputs: a special issue of the journal *Transformation*, edited by Richard Ballard, and a GCRO Research Report.

In this financial year significant progress was

made on the journal special issue. Five papers were submitted to *Transformation* for a special issue on the idea of mega-human settlements and its application in Gauteng. Two of the five papers were co-authored by Richard Ballard. Under the auspices of this project, Richard Ballard presented the paper being co-authored with Romain Dittgen, Phil Harrison and Alison Todes at a workshop at University College London on 21 April 2016. The title of the presentation was 'Contested spatial visions: mega projects in Johannesburg, South Africa'.

For the envisaged Research Report a draft introductory chapter was presented at an internal Brown Bag Seminar on 15 June 2016. Draft contributions to the Research Report were received from Sally Crompton, Aidan Mosselson, Alex Parker, Rosa Sully, and Richard Ballard. These were all subjected to at least one round of editing in the financial year.

### **The local city**

The local city project looks at the shifting dynamics of the city through selected Johannesburg inner-city buildings.

One component of this project was initiated as part of Guy Trangos' plan for 2016/17, but he started doctoral studies at the Harvard Graduate School of Design in August 2016, and so this component was re-oriented to the 'Taking streets seriously' project. A second part of this project involves support, in partnership with the African Centre for Cities, for a book on a unique building in the inner city of Johannesburg – August House – which has evolved as a remarkable artists' residence. In this financial year the book manuscript was finalised and submitted to the publisher, Fourthwall Books, for review. An MoU to govern the utilisation of the available funding and the benefit accruing to GCRO was developed and sent to Fourthwall.

### **Conceiving, producing & managing neighbourhoods**

The project compares processes of urban upgrading through precinct development in two parts of Johannesburg, one in the north-eastern suburbs and one in the inner-city. It follows two precinct development plans from their conception to implementation and ongoing operationalisation.



Fieldwork began in 2016/17 and first rounds of key-informant interviews with government, local residents' associations, community organisers, business owners and informal car guards were conducted. On-site observations and a literature review were also completed. Researchers attended several community meetings and participatory planning workshops in the two areas being researched. Analysis and write-up will proceed in 2017/18.

### **Building Gauteng**

This project builds on the 'Spatial imaginaries' project and examines the assumptions, behaviours, practices and systems of developers driving large scale developments in Gauteng and elsewhere in the world.

The key activity for this project in 2016/17 was a major workshop entitled 'Understanding the role of urban developers'. The workshop was organised for 26-27 July 2016 with 50 delegates participating. Speakers included notable international academics such as Jenny Robinson (UCL), Christian Schmid (ETH-Zurich), Gavin Shatkin (Northeastern University, USA), Donald Leffers (York University), and Liza Weinstein (Northeastern University, USA). Richard Ballard and Siân Butcher submitted a proposal for a special issue to the journal *Environment and Planning*, based on some of the papers presented at the conference.

### **A political economy analysis of transit corridors**

In partnership with the African Centre for Cities (ACC) and colleagues at University College London (UCL), this project analyses the political economy of Transit Oriented Development (TOD) plans being executed in Johannesburg.

GCRO staff met with ACC's Edgar Pieterse in October 2016 and again in March 2017 to define the project more sharply and the comparative work to be undertaken. New researcher Jesse Harber agreed to take a lead on the project. Barbara Lipietz and

Daniel Oviedo from UCL visited Johannesburg in late March 2017 to finalise terms of the partnership, and contracting is now underway on this basis. During their week-long visit the two UCL researchers conducted some 30 interviews, making substantial progress on their components of the research.

### **Landscapes of peripheral and displaced urbanisation**

This project will substantially extend the research undertaken as part of the 'Peripheries and rural/urban transitions' project into the edges of the city-region. It emanates from the need to situate the trends and dynamics shaping Gauteng within a wider frame – the platinum belt in the west, the coal and energy economies in the east and south, and most notably a vast swathe of city-sized populations forced by past policies into inefficient and inappropriately located not-quite-urban and not-quite-rural settlement forms on Gauteng's northern periphery.

During the fourth quarter of the financial year preliminary research was conducted in selected areas of possible focus. The first phase of a more structured research is planned for 2017/8, with a second phase following in 2018/19.

### **Taking streets seriously**

This project, through a series of thematic/conceptual studies, will offer a cultural reading of the street, focused on the experience(s) of people at street level and their engagement with particular local neighbourhoods in the city-region. The project will also seek to develop a guide to 'intervention', mobilising data and insight for practitioners who wish to move in the direction of promoting 'open streets'.

Getting the project underway, GCRO planned a one-day symposium called 'Taking Streets Seriously' to be held in April 2017. The symposium is intended to bring together the project contributors, more than a dozen other presenters, and a substantial audience to discuss the hidden potential of Gauteng's streets.

*“The key activity for the Building Gauteng project in 2016/17 was a major workshop entitled ‘Understanding the role of urban developers’, with 50 delegates participating”*



Photograph by Richard Ballard



## 6. New regional economies

Projects in this thematic focus area focus on the changing economy of the Gauteng City-Region. While there are many relevant concerns and questions here, our research concentrates mainly on the region's economic geography, as well as how local economies connect to emerging opportunities in other parts of the world.

### Urban space economy

'Urban space economy' is shorthand for the distribution of economic activity in space, considering: how the spatial form of cities is structured by dynamic changes in economic activity; how economic opportunities and constraints are structured by spatial form, fabric and function; and the changing nature of economic space itself (changing industrial areas, suburban office parks, etc.). This project aims to deepen understanding of how the urban space economy of Gauteng works, and to interrogate how government takes up the challenge of reshaping it.

Research for various parts of what is intended as a GCRO Research Report continued in this financial year. For example GCRO staff members, working in collaboration with a UJ academic, drafted an analysis of de-industrialisation and industrialisation patterns in Gauteng using a shift-share analysis.

As highlighted above under 'Government Support', GCRO was asked to work with GGDA on undertaking a major firm level survey in Gauteng. This will be a multi-pillar initiative building on the strengths and interests of various partners. Discussions with GGDA culminated in March 2017 with a proposal for interlocking studies to be led respectively by GCRO, HSRC and CCRED. GGDA has allocated R1 000 000 towards the work. The results of these studies will be incorporated, together with earlier commissioned work, into an envisaged Research Report once they are completed.

### Trade in the GCR

This project examines trade flows into and out of the GCR – in particular that resulting from less formal trading activities that connect the GCR into Africa – and aims to establish the potential contribution of this trade to the GCR economy. The project involved a collaboration with the South African Migration Programme (SAMP), the African Centre for Cities (ACC), and Eduardo Mondlane University in Maputo.

GCRO collaborated with SAMP to publish two reports based on extensive survey work completed in 2014/15. The first, published in May 2016, was titled 'International migrants in Johannesburg's informal economy'. The second 'Competition or co-operation? South African and migrant entrepreneurs in Johannesburg', was published in March 2017.

Research under this project was presented to a range of forums including the Gauteng Enterprise Propeller and the ELLA (Informality and Inclusive Growth Learning Alliance) Summit on Informality and Inclusive Growth in October 2016.

### Economic geography of the GCR

This project, led by Dr. Koech Cheruiyot, has entailed the commissioning of various chapters – to be fitted together as an edited book volume – on various aspects of the changing GCR economy. All chapters for the book were submitted and reviewed during 2016/17. Following further editing and consolidation the full book manuscript will be submitted to the publishers Springer International in mid-2017.

### Methods for regional economic analysis

This project entails a facilitated process of empowering government officials working in the field of economic development with tools and techniques to better understand trends and dynamics in the regional economy. The project was conceptualised in this financial year, and will get underway in earnest in 2017/18.

## 7. Sustainability transitions in the GCR

In this theme GCRO researches key factors likely to affect the environmental sustainability of the city-region, as well as path-breaking new approaches that may drive a transition to greater sustainability.

### Green assets and infrastructures

The multi-year Green Assets and Infrastructures (GAI) project, which was initiated in 2012, examines the current state of green infrastructure (GI) networks and aims to promote and inform a GI planning approach in the GCR. The momentum of the project was maintained in 2016/17 through the finalisation and publication of the second GAI Research Report entitled 'A framework for a green infrastructure approach in the Gauteng City-Region'. In line with GCRO's objective of enhancing the accessibility of research beyond academia, a short explainer video on 'Green infrastructure in the Gauteng City-Region' was developed and launched at the ICLEI Locs4Africa 2017 Congress in March 2017.

Three commissioned studies will provide the primary substance of a third GAI Research Report. A series of new green infrastructure maps will accompany these studies, and initial work on this was done in the financial year. The 7th GI CityLab was held on 6 May 2016, where two of the studies that were commissioned in 2015/16 were presented. Some 22 people from government, academia and other sectors

participated actively in the CityLab.

Over the course of the year researchers actively contributed thinking derived from GCRO's green infrastructure work in support of various government processes. This included a review of pollution buffers in Gauteng by GDARD, contributions to the Gauteng Environmental Outlook Report, and a presentation to the Gauteng Planning Forum. Various future collaboration opportunities were explored with Wits, the City of Johannesburg (CoJ), ICLEI and GDARD. Towards the end of the 2016/17 financial year CoJ appointed GCRO to undertake the development of a Greening and Green Infrastructure Strategy for the City, which will be started in the 2017/18 financial year.

During 2016/17 researchers presented GCRO's green infrastructure work at a range of forums. GCRO participated extensively in the ICLEI Locs4Africa 2017 Congress in March 2017, including hosting a session on GI.

The strategic collaboration started in 2015/16 between GCRO and UCL's Department of Science, Technology, Engineering and Public Policy (STePP) came to fruition in 2016/17. Carla Washbourne, a lecturer at STePP spent a month at GCRO working closely with Christina Culwick on the GAI project. A range of collaborative projects were initiated including a jointly authored journal article on urban



Habitat III



observatories, which uses the GI project as a case study of GCRO's transdisciplinary methodologies. Along similar lines, GCRO and STEaPP co-hosted a Habitat III Urban Future event in Quito (Ecuador) in October 2016. Another notable collaboration is between GCRO and a UCL STEaPP Masters programme, where a group of students will research urban agriculture as part of the GI network in the GCR. The final output is expected by the third quarter of 2017/18.

### **Metabolic flows and infrastructure transitions**

This project builds on the argument that it is no longer possible for cities to grow while assuming access to unlimited resources, and instead examines the prospects for reducing resource consumption and waste flows through the transformation of infrastructure networks in the GCR. The study involves tracking the throughput of water, energy, biomass (food and non-food), waste and if possible other materials in economic and human activities in the GCR – the 'urban metabolism' of the city-region – as well as analysing the infrastructure that conducts flows of these inputs and waste outputs into, around and out of the city-region. In addition, the study provides a different view on how to conceptualise the GCR through the lens of its resource 'footprints', and in turn a basis for benchmarking it with other regions where similar studies have been undertaken. Towards these objectives, Christina Culwick participated in a workshop arranged by Simon Marvin (University of Sheffield) and Mark Swilling (Stellenbosch University) towards developing a research network to collectively examine the 'Resource requirements of Future Urbanisation' (REFURB). A journal article has been submitted to a special issue of *Environmental Research Letters*, co-edited by Mark Swilling. In the article a team of GCRO staff reflected on GCRO's experience in undertaking urban metabolism research in the GCR.

### **Green economy**

GCRO's policy support work around a green economy in 2010/2011 provided the initial motivation for this project, which aims to build empirical research on the nature of the emerging green economy in the GCR. This project moves beyond advocating for the importance of a green economy into reflecting on the current state of the green economy in the GCR.

It examines the successes and failures, as well as the possibilities for and limitations of a future green economy. An Occasional Paper, led by Claudious Chikozho and focusing on 'City transitions to a green economy', was finalised for review.

### **Water security in the GCR**

Current water security challenges in the GCR range from inadequate water supply and sanitation infrastructure, pollution, flooding, and unmet infrastructural upgrade requirements. The severe drought in 2016 focused attention on these challenges. Although investments in the Lesotho Highlands Water transfer scheme reflect a sense of urgency in trying to address the city-region's water resource constraints, water security concerns are likely to increase in the near future, mainly due to household growth in the context of limited, and sometimes poorly managed, supply and sanitation systems, as well as greater climate variability. This project seeks to unravel the water security challenges in the GCR's major urban centres, by examining the critical biophysical, socio-economic and governance factors at play in the GCR urban water management landscape. This financial year saw the submission of first drafts of a scoping study commissioned in 2015/16. It is intended that this will be refined and then published as an Occasional Paper.

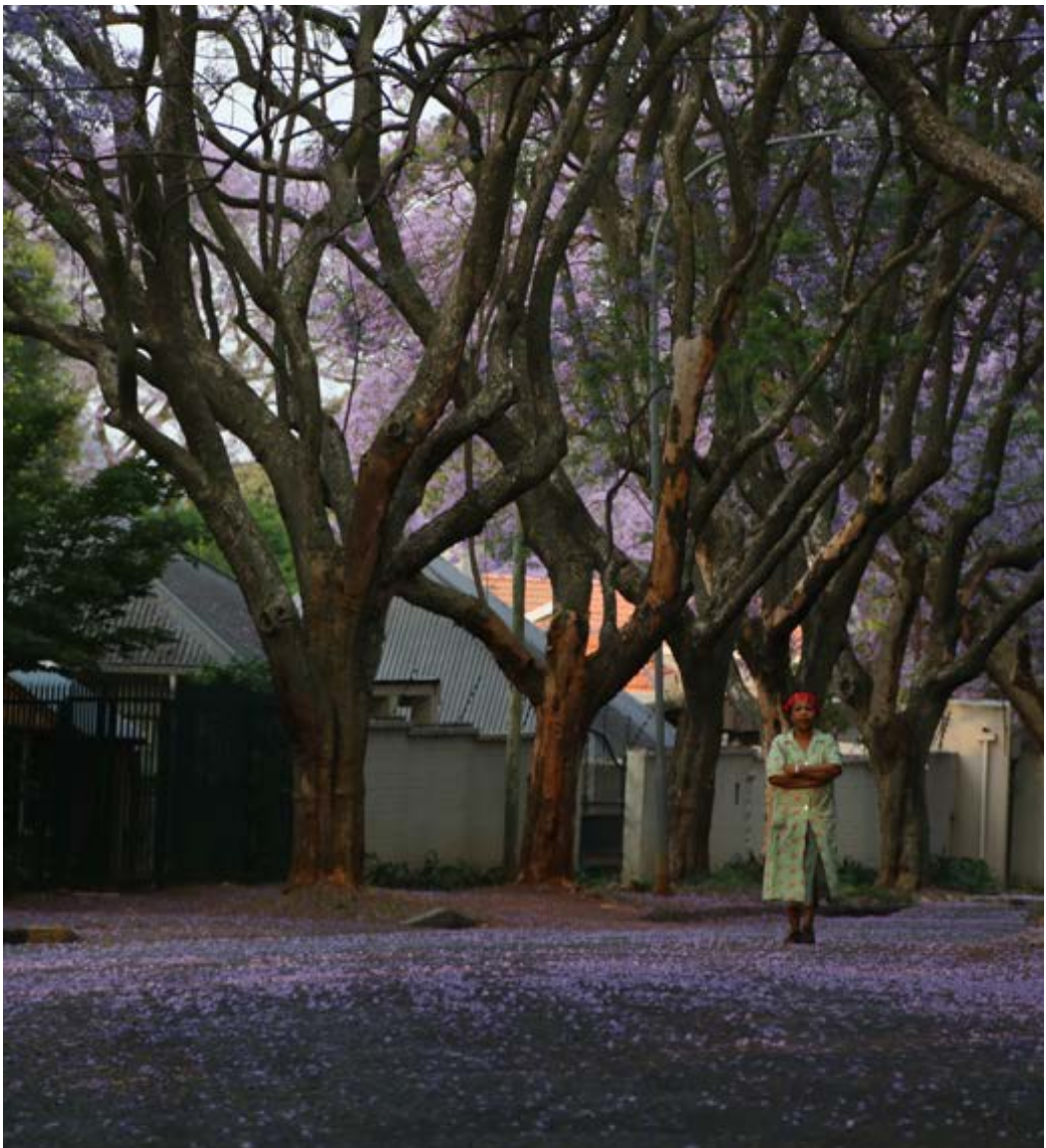
### **Justice and sustainability transitions**

While 'sustainability' and 'equity' are each noble development objectives in their own right, there are instances in which they are not mutually compatible and mutually reinforcing. For example, although improved access to urban services is vital in meeting human rights objectives, the current development trajectory in the GCR is very consumptive, and more and more consumption of limited resources is not consistent with sustainability goals. This project furthers GCRO's research around the 'green agenda' by exploring the justice implications of sustainability transitions in the GCR. The 2016/17 financial year saw initial work towards identifying potential case studies for an edited book or GCRO Research Report. By the end of the year, six case studies had been identified and the commissioning processes, where applicable, were well underway. These studies include investigations into transport and spatial transformation, water

metering and pricing, the interplay between developmental and environmental objectives in conservancies, and going off-grid agendas in wealthier suburbs, amongst others.

To deepen the theoretical underpinning of the research, Christina Culwick attended the

ACC's course on 'Democratic practices of unequal geographies: the aesthetic and the political', held 4-8 July 2016. This project interlaces with Christina Culwick's PhD research, which she is undertaking through the Environmental and Geographical Sciences Department at the University of Cape Town.



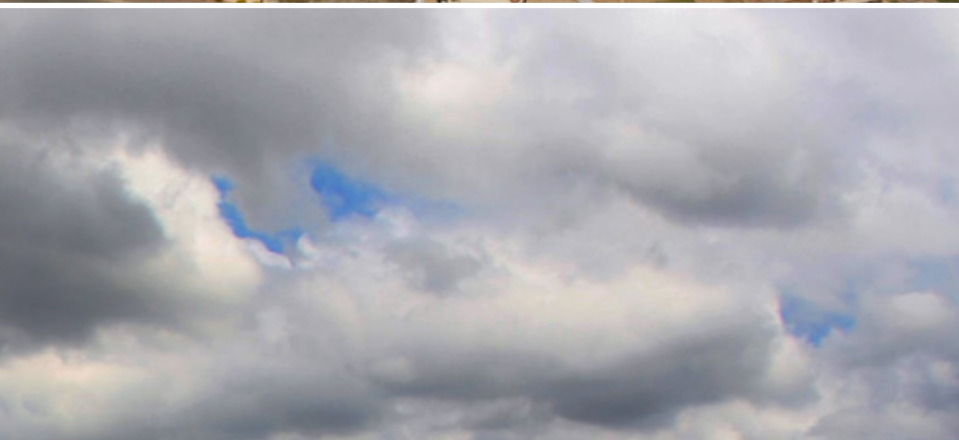
Photograph by Christina Culwick





Photograph (back) by **Clive Hassall** | Photograph (front) by **Darya Maslova**





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



# GCRO outputs, academic publishing, presentations and academic citizenship

## GCRO outputs and events

### GCRO published reports

- Peberdy, S (2016). *International migrants in Johannesburg's informal economy*. Joint GCRO and South African Migration Programme (SAMP) Occasional Paper. May 2016.
- Culwick, C. and Bobbins, K (2016). *A framework for a green infrastructure planning approach in the Gauteng City-Region*. GCRO Research Report #4. September 2016.
- Peberdy, S (2016). *Competition or co-operation? South African and migrant entrepreneurs in Johannesburg*. Joint GCRO and South African Migration Programme (SAMP) Occasional Paper. March 2017.

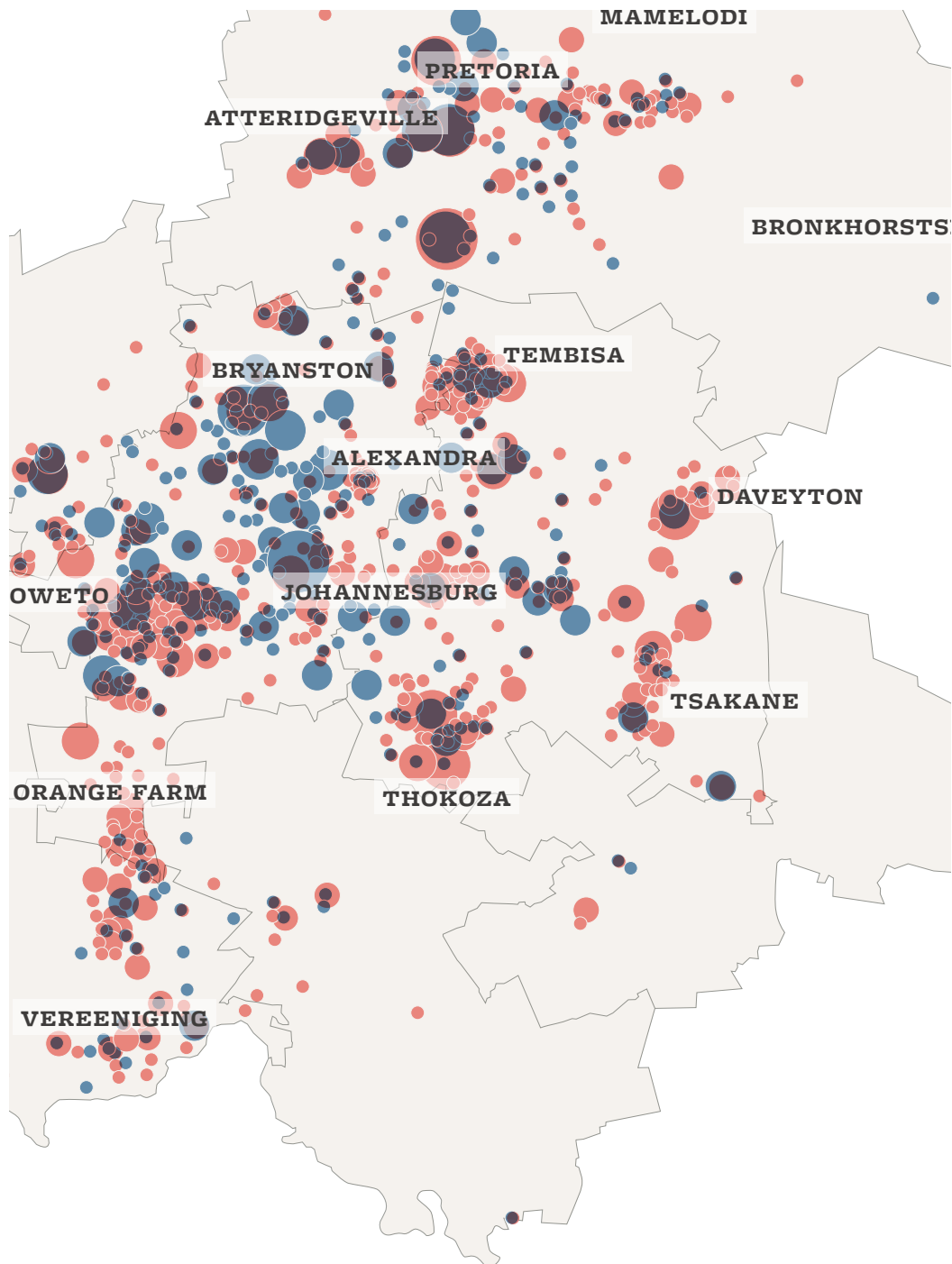


Detail from 'Village of 100 people'

**GCRO data outputs**

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<b>MAP OF THE MONTH</b>	<b>April 2016:</b> Tertiary education qualifications and median household income in Gauteng		<b>October 2016:</b> Development of human settlements and mining activities: 1956–2013 <b>November 2016:</b> Concerns about drugs and other community problems <b>December 2016:</b> Voting patterns in the 2016 local government elections	<b>January 2017:</b> 2015 Quality of Life (QoL) index by ward <b>February 2017:</b> Location of formal and informal businesses and their suppliers <b>March 2017:</b> Attitudes on the acceptability of violence towards foreigners
<b>VIGNETTES</b>		<b>September 2016:</b> Vignette 29 – ‘Making a life in informal dwellings in Gauteng’	<b>October 2016:</b> Vignette 30 – ‘Youth and transport in the GCR’ <b>December 2016:</b> Vignette 31 and 32 – a double vignette giving two perspectives on issues raised by the #FeesMustFall protests	
<b>WEBSITES AND INTERACTIVE VISUALISATIONS</b>	<b>April 2016:</b> GCRO’s Ward Profile Viewer launched as a beta version		<b>October 2016:</b> GCRO’s Ward Profile Viewer relaunched with updated QoL 2015 data	<b>March 2017:</b> Gauteng as a Village of 100 People interactive visualisation for QoL 2015 data
<b>VIDEOS AND PHOTO-ESSAYS</b>		<b>July 2016:</b> Perspectives on race & racism: a view from the street, video		<b>March 2017:</b> Green infrastructure in the GCR, animated explainer video





Detail from February 2017 Map of the Month: Location of formal and informal businesses and their suppliers

### Other

For the launch of the Quality of Life Survey IV (2015/16) data, GCRO prepared eight headline briefs highlighting key findings from the survey, on the following topics:

1. Quality of life indexes
2. Livelihoods & poverty
3. Health
4. Headspace & happiness
5. Neighbourhood
6. Transport
7. Entrepreneurship
8. Inequality.

### Conferences, seminars and symposia organised by GCRO

- GCRO continued to co-organise a seminar series with the NRF SARChI in Spatial Analysis and City Planning, the Wits City Institute and the Centre for Urban and Built Environment Studies (CUBES). The seminar series is called Faces of the City. GCRO organised the seminar sessions in the second quarter of 2016. The speakers here were Siân Butcher, Gavin Shatkin, Marcus Walton, Anokhi Parikh, and Aidan Mosselson.
- The Green Infrastructure City Lab was held on 6 May 2016.
- Two workshops were held with a view to building a programme of research around city-region economies, the first on 10 May 2016, the second on 24 March 2017.
- A public lecture by Premier David Makhura, 'Africa Rising? The role of cities and city- regions in Africa's new industrial revolution', was co-hosted with the Wits School of Governance on 19 May 2016.
- A thought leadership seminar, co-organised with the City of Johannesburg on *Gated Communities*, was presented on 31 May 2016.
- A seminar by Professor Ronald Wall, 'Global nexus: Johannesburg's position within global, regional and local economic networks', was hosted on 30 June 2016.
- GCRO postdoc Aidan Mosselson coordinated a special session at the RC21 conference in Mexico City, 21-23 July 2016, entitled, 'Ethnographic explorations of urban policy-making and implementation processes'.

- A major workshop, 'Understanding the role of developers', was held on 26-27 July 2016.
- GCRO and STEaPP co-organised and hosted a Habitat III Urban Future event entitled 'Shaping informed cities: platforms for knowledge generation and use in urban decision-making', Quito (Ecuador), 19 October 2016.
- Stephen Graham was hosted by GCRO and presented at the Faces of the City Seminar series at Wits on 23 March 2017. The title of his paper was 'Luxified Skies: how vertical urban housing became an elite preserve'.

## Published works

### Published books, journal articles, book chapters and conference proceedings

- Mosselson, A (forthcoming 2017). 'Caught between the market and transformation: urban regeneration and low-income housing in inner-city Johannesburg'. In Smets, P. and Watt, P. (Eds.) *Social Housing and Urban Renewal: A Cross-National Perspective*. Emerald Books. (in press).
- Harber, J. (forthcoming 2017). 'Immobilities and the development of South Africa's political economy'. In T. Priya Uteng & K. Lucas (Eds.) *(Im)mobilities in the city – creating knowledge for planning cities in the Global South and postcolonial cities*. New York: Routledge. (in press).
- Coetzee, S., Steiniger, S., Köbben, B, Iwaniak, A., Kaczmarek, I., Rapant, P. Cooper, A.K., Behr, R-J., Schoof, G., Katumba, S., Vatseva, R., Sinvula, K. and Moellering, H. (forthcoming 2017). 'The Academic SDI – Towards understanding spatial data infrastructures for research and education'. In Peterson, M. (Ed.) *Advances in Cartography and GIScience - Selections from the International Cartographic Conference 2017*, Springer. (in press).
- Abrahams, C. (forthcoming 2017). 'Making the nation twenty years after democracy'. In Lefko-Everett, K. and Govender, R. (Eds.) *Twenty Years of reconciliation, A Review of the South African Reconciliation Barometer*. Institute for Justice and Reconciliation (in press).
- Parker, A (2017) 'The Spatial Stereotype: The Representation and Reception of Urban Films in

- Johannesburg'. *Urban Studies*. Online first DOI: 10.1177/0042098017706885.
- Ballard, R. (2017). 'Development and governance'. In Douglas Richardson, Noel Castree, Michael F. Goodchild, Audrey L. Kobayashi, Weidong Liu Richard Marston (Eds.) *The International Encyclopaedia of Geography: People, the Earth, Environment, and Technology*. London: Wiley-Blackwell. DOI: 10.1002/9781118786352.wbieg0643.
  - Mosselson, A. (2017) "'It's not a place I like, but I can live with it": ambiguous experiences of living in state-subsidized housing in inner-city Johannesburg'. *Transformation: Critical Perspectives on Southern Africa*. 93, 142-169.
  - Mushongera D. (2017). 'Beyond GDP in assessing development in South Africa: The Gauteng City-Region Socio-Economic Barometer'. *Development Southern Africa*. 34(3) 330-346.
  - Culwick, C. and Patel, Z. (2017). 'United and divided responses to complex urban issues: insights on the value of a transdisciplinary approach to flooding risk'. *Area*. 49(1), 43-51.
  - Chikozho, C. & Mapedza, E. (2017). 'Free-market economics and developmental statism as political paradigms: implications for water governance theory and practice in developing countries'. In Karar, E. (Ed.), *Freshwater Governance for the 21st Century*. Springer International Publishing. 51-79.
  - Moore, R. (2016). 'The Gauteng City-Region Observatory – a case study'. Occasional paper for Programme to Support Pro-poor Policy Development. South African Department of Planning, Monitoring and Evaluation (DPME). October 2016.
  - Ballard, R. (2016). 'Review of Falkof, Nicky (2015). Satanism and Family Murder in Late Apartheid South Africa: Imagining the End of Whiteness'. *Journal of Southern African Studies*. 42(5), 1021-1022.
  - Ballard, R., Nel, W., Hill, T., & Maharaj, B. (2016). 'South African Geography at 100'. *South African Geographical Journal*. 98(3), 403-404.
  - Vogel, C., Scott, D., Culwick, C. and Sutherland, C. (2016). 'Environmental problem solving in South Africa: Harnessing creative imaginaries to address 'wicked' challenges and opportunities'. *South African Geographical Journal*. 98(3), 515-530.
  - Moore, R. (2016). 'Connective cognition: transdisciplinarity in a precarious world'. *Quaderna: Disciplines and Transdisciplinarity*, 3. The Art of Disciplines.
  - Abrahams, C. (2016). 'South Africa 20 years after democracy: missing solidarity'. In Senén Florensa (Ed.). *The Arab transitions in a changing world. Building democracies in light of international experiences*. European Institute of the Mediterranean (IEMed). Barcelona. May 2016.
  - Chikozho, C. (2016). 'The disjuncture between economic growth, poverty reduction and social inclusion in South Africa'. In *Inclusive Growth and Development Issues in Eastern and Southern Africa*. OSSREA / McMillan Publishers.



Photograph by Gareth Pon



**Works submitted and under review**

- Ballard, R. and Rubin, M. 'A 'Marshall plan' for human settlements: How mega projects became South Africa's housing policy'. Submitted to *Transformation* (Under review).
- Ballard, R., Dittgen, R., Harrison, P. and Todes, A. 'Mega Projects and Urban Visions: Johannesburg's Corridors of Freedom and Modderfontein'. Submitted to *Transformation* (Under review).
- Parker, A. 'The Ghetto in the cities and films of Johannesburg and Cape Town'. Submitted to *Journal of African Cinema* (Under review).
- Bobbins, K. and Culwick, C.E. 'Building urban resilience through a green infrastructure approach in the Gauteng City-Region, South Africa'. Submitted to *Urban Ecosystems* (Accepted subjected to revisions).
- Butcher, S. Governing unstable territory: corporate, state and public encounters in Johannesburg's mining land, 1909-2013. Submitted to *Journal of Development Studies*. For potential special issue on 'Exploring Informal Practices of the State in Urban Governance: Crossing Indian and Southern African perspectives' (Revisions made and re-submitted).
- Peberdy, S. 'De-bunking myths. Cross-border migrant and South African informal sector entrepreneurs in Gauteng'. Submitted for consideration in F. Fourie and C. Skinner (Eds.) *Tackling unemployment and poverty in South Africa: The contribution of the informal sector*, HSRC Press (Under review).
- Cheruiyot K., Wray C. and Katumba S. 'Patterns and correlates of dissatisfaction with government performance in the Gauteng City-Region, South Africa: a comparison across three government spheres.' (Revised and re-submitted to *Urban Affairs Review Journal*).
- Mosiane, N.B. 'Informal Housing'. Submitted to A. M. Orum, et al (Eds.). *The Wiley Blackwell Encyclopaedia of Urban and Regional Studies*. London: Wiley-Blackwell (Accepted subjected to revisions).
- Mosiane, N. B. "Creative spaces of South African cities: competing registers of value". Submitted to *Stichproben: Vienna journal of African Studies* (Accepted subjected to revisions).
- Mushongera, D. and Culwick, C. 'Walking the new

urban agenda through evidence-based planning: A Gauteng City-Region Observatory approach'. Submitted to *International Development Planning Review* (Under review).

- Culwick, C., Götz, G., Butcher, S., Harber, J., Maree, G. and Mushongera, D. 'Doing more with less: complexities of resource flow analysis in the Gauteng City-Region'. Submitted to *Environmental Research Letters* (Under review).

**Presentations**

Note: a number of core Quality of Life survey presentations were done by various GCRO staff. These are not listed here, but a selection is included as part of reporting on the project above.

1. Christina Culwick (March 2017). 'GCRO's Quality of Life IV (2015) Survey: analysing social attitudes, service delivery & quality of life in Gauteng'. University of Pretoria 3rd year lecture. Pretoria, 31 March 2017.
2. Samy Katumba (March 2017). 'GCRO's Quality of Life IV (2015) Survey: spatial analysis of quality of life in Gauteng'. University of Pretoria 3rd year lecture. Pretoria, 31 March 2017.
3. Gillian Maree (March 2017). Panelist in session on 'Climate solutions through integrated urban planning and development'. ICLEI LoCS4Africa congress, Ekurhuleni, 24 March 2017.
4. Gillian Maree (March 2017). Panelist in session on 'Climate solutions through integrated urban planning and development'. ICLEI LoCS4Africa Congress, Ekurhuleni, 24 March 2017.
5. Christina Culwick (March 2017). 'The Gauteng and Ekurhuleni context'. ICLEI LoCS4Africa Congress, Ekurhuleni, 24 March 2017.
6. Christina Culwick (March 2017). 'Laying the foundations for a green infrastructure approach in the GCR'. ICLEI LoCS4Africa Congress, Ekurhuleni, 23 March 2017.
7. Gillian Maree (March 2017). Facilitated GCRO panel session on 'Green Infrastructure for African Cities', ICLEI LoCS4Africa Congress, Ekurhuleni, 23 March 2017.
8. Aidan Mosselson (March 2017). 'Building Johannesburg: the praxis of urban regeneration'. BU!LD Johannesburg workshop co-organised

- by Urban Think Tank, ETH Zurich and UJ Architecture Department. Museum of African Design, 21 March 2017.
9. Graeme Gotz (March 2017). 'Dialogue of the deaf: competing spatial visions and infrastructure plans in the Gauteng City-Region'. Masters in infrastructure lecture, University of Cape Town, 16 March 2017.
  10. Gillian Maree (March 2017). 'Sustainability transitions for South African Cities'. Gauteng Department of Agriculture and Rural Development (GDARD) Brown Bag Session, 10 March 2017.
  11. Thembanani Mkhize (March 2017). 'Beyond creative consumption and destructive display in South Africa's marginalised urban areas: lessons from the Izikhothane Youth Movement'. Symposium on Identity and Consumption in African Cities, University of Cape Town, 9-10 March 2017.
  12. Mncedisi Siteleki (March 2017). 'The applications of GIS and RS: the cases of MARA and the GCRO'. Guest lecture, Department of Historical Studies, National University of Lesotho, 9 March 2017.
  13. Samkelisiwe Khanyile (March 2017). 'Database design'. University of the Witwatersrand, School of Geography, Archaeology and Environmental Studies, Hons Geog 4015 class, 8 March 2017.
  14. Christina Culwick (March 2017). 'Negotiating competing priorities in urban planning & the case of Gauteng's mega-human settlements'. Environmental Policy & Practice UCT Honours course, Cape Town, 8 March 2017.
  15. Samkelisiwe Khanyile (March 2017). 'Geospatial Data Management'. University of the Witwatersrand, School of Geography, Archaeology and Environmental Studies, Hons Geog 4015, 6 March 2017.
  16. Darlington Mushongera (March, 2017). 'Difficulties in acquisition of water usage data'. GPG seminar on the impact of water on job creation for the Gauteng economy, 2 March 2017.
  17. Christina Culwick (March 2017). 'QoL survey 2015: city benchmarking'. GDID inter-governmental relations workshop, Vanderbijlpark, 2 March 2017.
  18. Samy Katumba (February 2017). 'Gauteng City-Region Observatory: spatial data, spatial analysis, geovisualisation and mapping'. University of the Witwatersrand, GIS Honours lecture, Johannesburg, 17 February 2017.
  19. Christian Hamann (February 2017). 'Migration and livelihoods'. Gauteng Migration Strategy Session, Johannesburg, 16 February 2017.
  20. Richard Ballard (February 2017). 'Inclusive Gauteng: a framework document on social cohesion'. Workshop with Gauteng Champions for Social Cohesion, Gauteng Department of Education, Johannesburg, 16 February 2017.
  21. Christina Culwick (February 2017). 'GCRO's green infrastructure research'. Sociology in Sciences Po (Paris) Masters Seminar, Johannesburg, 15 February 2017.
  22. Graeme Gotz (February 2017). 'Understanding the GCR and its key development issues'. Sociology in Sciences Po (Paris) Masters Seminar, Johannesburg, 15 February 2017.
  23. Darlington Mushongera (February, 2017). 'Multidimensional indicator for vulnerability'. Provincial lecture on resilience and disaster risk reduction. Wits School of Governance, 15 February 2017.
  24. Thembanani Mkhize (December 2016). 'Beyond creative consumption and destructive display in South Africa's marginalised urban areas: lessons from the Izikhothane Youth Movement'. BRICS+ City Lab Youth in Governance Colloquium, Moscow, 9 December 2016.
  25. Rob Moore (December 2016). 'Adaptive governance: the importance of the concept'. BRICS+ City Lab II Colloquium, Moscow, 9 December 2016.
  26. Jesse Harber (December 2016). 'The Gauteng City-Region Observatory: providing the evidence for evidence-based policymaking'. BRICS+ City Lab II Colloquium, Moscow, 8 December 2016.
  27. Christina Culwick (November 2016). 'Johannesburg perspective: metabolic flows and futures'. REsource FUTures for sustainable URbanisation (REFURB) workshop, Sheffield (UK), 22 November 2016.
  28. Graeme Gotz (November 2016). 'Quality of Life in the GCR: QoL survey 2015/16'. Gauteng Planning Division, 17 November 2016.
  29. Rob Moore (November 2016). 'Development, governance and performance: the Gauteng City-Region as a hub of innovation'. Department of

- Science and Technology (DST) and United Nations Economic Commission for Africa (ECA) 2016 Senior Experts Dialogue on Science, Technology and Innovation and the African Transformation Agenda, Pretoria. 3 November 2016.
30. Sally Peberdy (October 2016). Discussant at a session on 'Human movement and its impact on society'. Independent Philanthropy Association, Johannesburg, 25 October 2016.
  31. Graeme Gotz (October 2016). 'An introduction to GCRO and core GCR issues'. Delegation of visiting University of York Masters in Planning students, 20 October 2016.
  32. Christina Culwick (October 2016). 'The Gauteng City-Region Observatory'. Shaping informed cities, Habitat III Urban Future event, Quito (Ecuador), 19 October 2016.
  33. Siân Butcher (October 2016). 'The production of 'affordable suburbia' on Johannesburg's southern edges: reading Walker's (1981) theory of suburbanization in the postapartheid city'. Workshop on Africa's New Suburbanisms, JIAS, Johannesburg, 18 October 2016.
  34. Christina Culwick and Darlington Mushongera (October 2016). Invited panelists on 'Leaving no one behind: challenges of urban water governance in the global south'. Decision Centre for a Desert City (DCDC), Arizona State University, 13 October 2016.
  35. Siân Butcher (October 2016). "'SA's best-kept investment secret": the making of the 'affordable' housing market on Johannesburg's edges'. Invited presentation to City of Johannesburg's City Transformation and Spatial Planning Directorate, 10 October 2016.
  36. Christina Culwick (September 2016). 'Applying a green infrastructure approach in the Gauteng City-Region'. Keynote address at the 2016 ILASA Conference, Pretoria, 30 September 2016.
  37. Christian Hamann (September 2016). 'The central-south citadel and the dynamic periphery: (de)segregation and inequality in the City of Tshwane, South Africa'. Society of South African Geographers biennial conference, Stellenbosch, 28 September 2016.
  38. Christina Culwick (September 2016). 'Making a life in Gauteng: changing economic and household arrangements in a context of rapid urbanisation'. Society of South African Geographers biennial conference, Stellenbosch, 28 September 2016.
  39. Richard Ballard (September 2016). 'Imagining Gauteng'. Society of South African Geographers biennial conference, Stellenbosch, 26 September 2016.
  40. Siân Butcher (September 2016). 'Urban Geography, meet Economic Geography: tracking a sub-disciplinary dialogue'. Society of South African Geographers biennial conference, Stellenbosch, 26 September 2016.



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41. Richard Ballard (September 2016). 'Inclusive Gauteng': draft framework document on social cohesion'. Gauteng Social Cohesion Champions Group, 23 September 2016.
42. Graeme Gotz (September 2016). 'Quality of Life in the GCR: QoL survey 2015'. Sedibeng Mayoral Lekgotla, 21 September 2016.
43. Christina Culwick (September 2016). 'Enhancing urban resilience through green infrastructure'. Wits University Interdisciplinary Global Change Studies masters course, 15 September 2016.
44. Darlington Mushongera (September 2016). 'A multidimensional poverty index for Gauteng: evidence from Quality of Life Survey data'. 2016 Human Development Capabilities Association (HDCA) conference, Tokyo, Japan, 2 September 2016.
45. Siân Butcher (September 2016). 'Private equity 'discovers' Johannesburg's housing backlog after the crisis'. RGS-IBG Conference, London, 1 September 2016.
46. Richard Ballard (September 2016). 'Scaling (back) up: South Africa's policy references to "Mega Human Settlements"'. RGS-IBG Conference, London, 1 September 2016.
47. Aidan Mosselson (August 2016). 'Habitus, capital and the production of space: the spatial praxis of inner-city regeneration'. Faces of the City Seminar, 23 August 2016.
48. Richard Ballard (August 2016). 'How did we get here? Mega human settlements as an emerging policy idea'. Gauteng Planning Forum. 18 August 2016.
49. Graeme Gotz (August 2016). 'Quality of Life in the GCR: QoL survey 2015/16'. Gauteng Provincial Treasury, 11 August 2016.
50. Rob Moore (August 2016). 'Institutionalising a city-region: knowledge for urban futures'. WC2 Summer Symposium, Berlin, 9 August 2016.
51. Christina Culwick (August 2016). Participated in a panel discussion on the New Urban Agenda. WC2 Summer Symposium, Berlin, 8 August 2016.
52. Siân Butcher (July 2016). 'Old monopolies, new money: producing affordable suburbia on Joburg's edges'. Understanding the role of urban developers workshop, Johannesburg, 27 July 2016.
53. Richard Ballard and Phil Harrison (July 2016). 'Transnational urbanism: Chinese investors seeking approval to build the 'New York of Africa' at Modderfontein'. Understanding the role of urban developers workshop, Johannesburg, 26 July 2016.
54. Darlington Mushongera (July 2016). 'Bureaucratic experiences in the City of Johannesburg and Mogale City municipalities'. RC 21 Conference, Mexico, 22 July 2016.
55. Aidan Mosselson (July 2016). 'Ethnographic explorations of urban policy-making and implementation processes: an introduction'. RC 21 Conference, Mexico, 22 July 2016.
56. Siân Butcher (July 2016). 'The making of the affordable housing market: a research reflection'. Wits City Institute, 21 July 2016.
57. Sally Peberdy (July 2016). 'Cross border migrant and South African informal sector entrepreneurs in Gauteng'. Meeting of RED13x3, Cape Town, 21 July 2016.
58. Siân Butcher (July 2016). 'SA's best-kept investment secret: the making of the affordable housing market'. Faces of the City Seminar, 19 July 2016.
59. Sally Peberdy (July 2016). 'The state, nationhood, belonging, exclusion and business in South Africa.' International Association for the Study of Forced Migration, Poznan, Poland, 15 July 2016.
60. Richard Ballard and Mncedisi Siteleki (July 2016). 'Quality of Life in the GCR: QoL survey 2015/16'. Gauteng Department of Community Safety strategic planning session for law enforcement agencies, 13 July 2016.
61. Guy Trangoš (July 2016). 'Deepening division in Johannesburg', Contested Cities Conference, Universidad Autónoma de Madrid, 6 July 2016.
62. Siân Butcher (June 2016). 'Greenfield affordable housing'. Urban Design (UDISA) conference, Tshwane, 13 June 2016.
63. Guy Trangoš (June 2016). 'Introducing the Gauteng City-Region'. Washington University, St. Louis, Master of Urban Design study trip to South Africa, 8 June 2016.
64. Richard Ballard (June 2016). 'Imagining Gauteng'.



- GCRO Brown Bag Seminar, 8 June 2016.
65. Graeme Gotz and Christina Culwick (June 2016). 'Quality of Life in the GCR: QoL survey 2015/16'. Gauteng Provincial EXCO Lekgotla, 6 June 2016.
  66. Graeme Gotz and Christina Culwick (May 2016). Preliminary presentations on the 2015/16 Quality of Life Survey results to the GCRO breakaway, 25 May 2016, and the Premier, 31 May 2016.
  67. Guy Trangoš (May 2016). 'Introducing the Gauteng City-Region', Northeastern University undergraduate study trip to South Africa, 16 May 2016.
  68. Graeme Gotz (May 2016). Participated in a panel discussion at the SALGA national Executive Management Team (EMT) Lekgotla, 12 May 2016.
  69. Sally Peberdy (May 2016). 'Xenophobia and homophobia in the GCR'. Gauteng Provincial Government Eminent Persons Group on Social Cohesion and Nation Building, 25 April 2016.
  70. Graeme Gotz (April 2016). 'A context of spatial inequality and division'. Gauteng Provincial Government Eminent Persons Group on Social Cohesion and Nation Building, 25 April 2016.
  71. Richard Ballard, Romain Dittgen, Phil Harrison, Mike Makwela and Alison Todes (April 2016). 'Contested spatial visions: mega Projects in Johannesburg, South Africa'. University College London (UCL), 21 April 2016.
  72. Guy Trangoš (April 2016). 'Visualising the Gauteng City-Region', University of Johannesburg Bachelors of Technology class, 7 April 2016.
  73. Darlington Mushongera (April 2016). 'Data and knowledge production in the City of Johannesburg'. Sheffield Institute for International Development (SIID) Conference, Sheffield, 6 April 2016.

## Media publications and appearances

The Quality of Life survey IV (2015/16) launch had extensive media coverage ranging across all platforms (television, radio, print, online). The social

media impact of the launch was significant with the hashtag (#gcroQL4) holding the top trending position nationally on Twitter for the day of the launch. Various staff members were interviewed for television, radio and online media.

The momentum on the social media platforms (primarily Facebook and Twitter), established during the QoL IV launch, was taken forward to increase awareness of GCRO's other work. Thandi O'Hagan worked closely with GCRO to guide its social media presence.

GCRO staff wrote a number of pieces for various media outlets:

- Khanyile, S. N. (2016). 'Digital platform for mining activity data'. *PositionIT*. July 2016, 46-47
- Moore, R. (2016). 'How a deep dive into people's lives helps to separate fact from fiction'. *The Conversation Africa*. 27 June 2016.
- Peberdy, S. (2016). 'How informal cross border trade extends the reach of Johannesburg's retail and wholesale sectors'. *UrbanAfrica.net*. 30 May 2016.

## Wider academic citizenship

- Guy Trangoš taught 'Mapping technologies for Architects' as part of the Advanced Digital Applications course for Wits Master of Architecture (Professional) class.
- Guy Trangoš provided feedback for a number of Bachelor of Architecture Studies research reports for the Wits School of Architecture and Planning.
- Richard Ballard supervised two honours students in the Wits Geography Department (Vicky Phiri and Sipiwe Silinda) during 2016. He is also supervising two masters students: Abraham Ajibade (Masters, Planning, Wits) and Genevieve Tebelia (Masters, Environmental Science, Wits). He is also co supervising Busani Ngcaweni (UJ PHD, Anthropology and Dev Studies). Two of his PHD students at UKZN (Dorothee Holscher and Efe Isike) have completed their PhDs. A masters student, Makhosi Wiese (UKZN Dev Studies), submitted and graduated in April 2017.

- Richard Ballard was external examiner for a proposal development masters module in the Wits School of Architecture and Planning, and also for the University of Cape Town's Human Geography undergraduate and honours programme. He examined a series of dissertations including a PHD for WISER and a Masters Dissertation for the University of Pretoria's Anthropology Department.
- Richard Ballard taught a session to Human Settlements officials attending the Certificate course on Housing policy at the Wits School of Governance for government human settlements (20 June and 12 October). Richard also taught this session to 3rd year planning students at Wits.
- Siân Butcher did two guest lectures by skype for a UCLA Geography class on 'Making racially- and spatially-just cities after apartheid: notes from Johannesburg', on 17 May and 25 October 2016.
- Siân Butcher taught a third-year block in the Wits School of Geography, Archaeology and Environmental Studies on 'City Cultures' (GEOG 3022).
- Siân Butcher is supervising one honours student, Ivanna Katz, in the Wits School of Geography, Archaeology and Environmental Studies.
- Sally Peberdy met with Africa Check several times regarding migration and migration statistics. She has also met with DFID regarding migration statistics.
- Samy Katumba taught 'Web GIS' as part of the Advanced Applied Geographical Information Systems course for the Wits Masters of GIS and remote sensing class.
- Samkelisiwe Khanyile taught 'Geospatial data management' as part of the GEOG 2013: Methods Models and Geographic Information Systems course for second year Geography students.
- Mncedisi Siteleki was involved in assessing students in the GEOG 2013: Methods Models and Geographic Information Systems course for second year Geography students
- Mncedisi Siteleki taught Wits archaeology students during the 2nd year Rock Art field school in Clarens, Free State.
- Alexandra Parker supervised two honours (BSc URP) students in 2016 from the Wits School of Architecture and Planning (Maria Jokudu Guya and Minenhle Maphumulo), and one in 2017 (Tiisetso Mokgopo). She is also supervising one masters student (Nohlanhla Maluleke) and one honours student (Bonolo Mohulatsi) from the Wits School of Geography, Archaeology and Environmental Studies.
- Samkelisiwe Khanyile taught 'Geospatial data management' and 'Database design' as part of the GEOG 4015 course for Honours Geography students.
- Samkelisiwe Khanyile taught 'Fundamentals of geospatial database design and introduction to PostgreSQL(PostGIS)' and 'Spatial database design' as part of GEOG 7045: Advanced Geographical Information Science for Masters in GIS and remote sensing students.
- Koech Cheruiyot teaches statistics and introductory econometrics to students in the Wits School of Construction Economics and Management.
- Darlington Mushongera reviewed a research report on youth unemployment for the School of Public Management, University of Pretoria.
- Aidan Mosselson reviewed articles for *Journal of Urban Affairs*, *Thesis Eleven* and *Housing Policy Debate*.
- Christina Culwick reviewed articles for *Landscape and Urban Planning*, *Local Environment* and the *Journal of Applied Geography*.
- Siân Butcher organized and led a fieldtrip to Johannesburg South for a delegation of visiting University of York Masters in Planning students, 21 October 2016.
- Richard Ballard was a co-guest editor of a special issue of the *South African Geographical Journal* marking 100 years of Geography in South Africa.
- Richard Ballard was external examiner for a UJ Anthropology and Development Studies DEV8X07 course on Class, Inequality and Development: New Dimensions.
- Samy Katumba was invited to be an adjudicator for the GeoJozi challenge organised by COJ, JCSE and ESRI South Africa.
- Ngaka Mosiane reviewed articles for the journals *Theoria* and *Development Southern Africa*.
- Jesse Harber, Alexandra Parker, and Mncedisi Siteleki have been engaged as 'outside experts' for UJ MArch students, and participated in a review of those students' work.





Photograph by **Brian Boshoff**



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