

GCRO ANNUAL REPORT



2015/2016



A Partnership of:









GCRO ANNUAL REPORT 2015/16

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Preface

The past year has been a turbulent one – locally and internationally – for various reasons. Profound global shifts have occurred, accompanied by the resurgence of worrying trends such as growing nationalism and a retreat from multilateralism. South Africa, too, has been in flux and we have seen an increasing focus on legacy issues that have been manifest in many ways, including at universities. The #RhodesMustFall and #FeesMustFall movements have placed considerable strain on university and government resources, as well as deepening critical scrutiny on the role of universities in society more broadly.

Against this backdrop, it is worth revisiting the nature and mandate of the GCRO as a unique and increasingly relevant institution. Launched in September 2008, the GCRO was conceived as a primary knowledge resource that would give definition to the idea of Gauteng as a 'global city-region' and provide insights that would inform efforts to steer the region into a more prosperous and equitable future. The GCRO is a relatively rare example of a productive partnership between academia and government, with the intention of providing information that could be used by government and other role-players in making decisions. This distinctive partnership places the GCRO in an interstitial position, mediating between the scholarly and regulatory worlds, drawing on the best research approaches to inform the complex business of governing a fluid and dynamic city-region. As a member of the GPG's Oversight Committee on the Premier's Office and the Legislature (OCPOL) said during an appraisal of GCRO in 2010:

"We did not set up the GCRO to be a consultancy to government – we set it up to carry the idea, the agenda, of the Gauteng City-Region".

With this in mind, and within this constantly transitioning global and local context, the GCRO often finds itself adjudicating challenging levels of ambiguity in respect of the complexity of its mandate, not least the competing expectations that the partners may have from time to time. In that regard, the GCRO is required to take responsibility for its own work and draw expertise from the academy to effect strategic



#FeesMustFall - Photograph by Wiki Commons

knowledge creation and, at the same time engage in processes and dialogues that will benefit government and society at large. The institution needs to sustain a wide accountability – being responsive to partners in government, adhering to the highest scholarly standards, and ensuring that its work reaches the widest possible audiences. This means that the GCRO is often juggling competing imperatives in a complex, constantly shifting environment. I would like to extend my personal appreciation to the primary partners in this enterprise, and to the leadership at the GCRO, for the high levels of mutual trust and respect that enable this relationship to continue with the standards of professionalism and integrity that are continuously displayed.

The fluidity of the broader context has been mirrored also by some internal flux in the staffing establishment of the GCRO during the past year. These changes have included:

- Professor David Everatt, the first Executive Director of the GCRO was appointed Head of the Wits School of Governance within the Faculty of Commerce, Law and Management. Dr Rob Moore, former Wits DVC: Advancement and Partnerships, took over from Professor Everatt in January 2016 as the second Executive Director of the GCRO. We thank David for his sterling stewardship of the Observatory and for growing its peerless reputation.
- Mr Chris Wray, GCRO's first dual-track appointee who fulfilled both academic and professional roles, left after a successful six-month stint as

acting Executive Director to take up a position in Germany.

- Dr Claudius Chikozho, GCRO's second Research Director, took up a prestigious position at the HSRC.
- Ms Kerry Bobbins, a researcher, departed to pursue an exciting PhD opportunity at University College London (UCL) in the United Kingdom.
 - The GCRO continued to strengthen its internal research capacity. It appointed Christian Hamann to its general internship programme, and Samkelisiwe Khanyile and Mncedisi Siteleke as GIS interns. This has also been the first year that the GCRO has appointed post-doctoral fellows, thanks to post-doctoral funding made available by the University of Johannesburg. Dr Aidan Mosselson joined the GCRO in December 2015, and Dr Sian Butcher will join in April 2016.

In respect of staff development, it is worth noting that the organisation's staff have continued to excel and to attract external recognition. Dr Richard Ballard, principal researcher, was re-rated by the NRF from a C-rating to a B-rating, reflecting the international attention and acknowledgement that his work has attracted. Dr Sally Peberdy is also an NRF rated scholar and continues to produce ground-breaking research. Ms Kerry Bobbins, a researcher, was awarded the prestigious Green Talents award and as part of this took up a month long research stay at the German Institute of Urban Affairs (DifU) in May 2015. Also in 2015 she was selected as one Africa's 100 Brightest Young Minds (BYM), as one of the Mail & Guardian's Top



#RhodesMustFall - Photograph by Wiki Commons

200 Young South Africans, and by the International Social Science Council (ISSC) as one of 20 World Social Science (WSS) fellows.

Notwithstanding staffing changes, the GCRO continued to build its reputation as well as strengthen its ties and strategic collaborations in meaningful and productive ways. This has resulted in an upsurge in its research and policy advisory outputs:

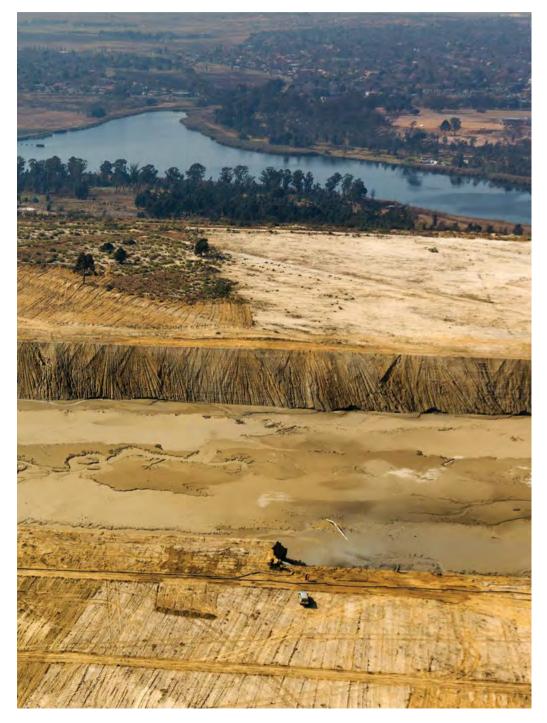
- Between April 2015 and March 2016 a total of 31 journal articles, book chapters or book reviews were published or are in press. An additional 11 journal articles and book chapters were submitted for review to various publications.
- Various applied research outputs were completed, including: two Occasional Papers, 'Acid Mine Drainage and its Governance in the GCR' and the 'the GCR Barometer 2014'; a Research Report, 'Quality of life survey 2013: City benchmarking report'; and a host of Vignettes and Maps of the Month.
- The core GCRO website and its interactive GIS website were completely overhauled and formally launched in August 2015 at the Smart | City | Region Symposium, together with the GCRO's updated brand. The event, which was part of the Wits Fak'ugesi Festival at the Digital Innovation Zone in Braamfontein, was accompanied by a successful and well received digital exhibition of the GCRO's data visualisation work.
- By the end of the financial year the fourth Quality of Life Survey was nearing completion despite difficulties being experienced with the contracted service provider. It must again be noted that Quality of Life Survey is unique in respect of the complexity and quantity of data that is analysed. The Survey will report on the results of 30 000 interviews, unprecedented for a provincial level survey in South Africa.
- The GCRO entered into important research partnerships during the year. The first of these was at the request of the City of Johannesburg to collaborate on the development of a Caring Cities Barometer as part of a Metropolis initiative. This collaboration saw two GCRO

researchers work with officials from the City of Johannesburg on a report that was presented in Buenos Aires (Argentina) in May 2015 and in Ramallah (Palestine) in August 2015. The concept paper co-generated by the GCRO and officials from the City of Johannesburg's Group Strategy Department was also presented at the South African City Studies Conference in Durban from 17-19 March 2016. The second partnership was at the request of the Brookings Institution's Metropolitan Policy Program to collaborate in the development of a 'Global City Profile' for the Gauteng City Region. This collaboration saw the finalisation of the city profile, which was formally launched in late November 2015 at an event addressed by Minister Pravin Gordhan and Premier David Makhura. The GCRO also presented the report on behalf of Brookings at a GPG economic development summit on 28 January 2016.

Noting these developments, it is clear that the GCRO continues to strengthen its position as a pre-eminent resource for understanding how the city-region functions. It is also clear that, as the GCRO continues to illustrate the value of high-quality insight into our urban context, so the appetite for this work continues to grow, reflected in the widening number of approaches that the GCRO receives. Its challenge in future years will be how to respond most strategically to these burgeoning needs without compromising a reputation for high quality academic and applied research work, and its very systematic *modus-operandi*.

Professor Zeblon Vilakazi Deputy Vice Chancellor: Research and Postgraduate Affairs University of the Witwatersrand, Johannesburg Chairperson of the GCRO Board

PREFACE



Photograph by Clive Hassall

Introduction and overview

This report covers the April 2015 to March 2016 financial year, and reports on the Observatory in the second year of its second full five-year cycle, which extends until 2019.

The Gauteng City-Region Observatory (GCRO) is a partnership between the University of Johannesburg (UJ), the University of the Witwatersrand (Wits), and the Gauteng Provincial Government (GPG), with local government in Gauteng also represented on the GCRO Board. 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.

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. In the 2015/16 financial year, GPG added a further discretionary amount to the budget which we trust will prove to be a sustained escalation of resourcing. These factors together (academic rigour and secure funding) ensure that the data and analysis produced by 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.

Several significant changes in the life of the GCRO have occurred during this reporting year, signalling a period of transition that will extend beyond this year.

First, the founding Executive Director, Prof David Everatt, concluded his term during 2015 and has left

"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."



a legacy of a highly functional and widely respected organisation. The distinctive character and strength of the GCRO owes much to his leadership. Thanks must also go to Chris Wray who for six months served as Acting Director and, with the backing of the GCRO Management Committee, steered the Observatory through this important transition period. This year also saw the departure of several talented staff – for all the right reasons – who have moved to take up very advantageous opportunities elsewhere, signalling the strong reputation of GCRO researchers both inside and outside of the academy. The Observatory is taking on new members of staff and the staff compliment is expected to grow as the GCRO expands the scope of its operations.

Second, in early 2016 a number of important initiatives were presented to the GCRO which signal a potentially significant extension of its form and function in the future, as it works to convene and coordinate larger research networks aimed at addressing pressing issues of the contemporary city-region. The GCRO has been requested by the Office of the Premier to serve as a platform for brokering relationships between GPG and research agencies in Gauteng more widely. In response to these signals, the GCRO is intensifying its engagement with issues of the economy, governance and social cohesion. These expanded functional areas (especially brokerage) necessitate an extension of the skills and capabilities of the GCRO. They are challenging roles, but also reflect the collaborative cross-sector engagement envisioned in the very notion of a city-region. These developments are expected to take effect over the next year or two, and represent a deepening complexity in the GCRO's work and an extension of its skill set. We are also seeing the metros and municipalities seeking to utilise the services of the GCRO, and national government departments have requested the GCRO's participation in significant initiatives. Managing this growing demand, while keeping its strategic priorities clearly in view, is the challenge for the next phase of the GCRO's trajectory.

This year saw the largest and most ambitious iteration of the Quality of Life (QoL) Survey – now in its fourth cycle. This latest 2015 QoL exercise saw unprecedented buy-in from the three metropolitan municipalities with requests to further deepen the granularity of data generated. Additional funding was also generously provided by the Gauteng Department of Health. The Quality of Life survey was almost concluded by the end of the financial year, although there have been some unanticipated hitches requiring fieldwork to continue beyond expected time-lines.

In the digital arena, the GCRO has continued to reinvent itself. The updated GCRO website was launched in August 2015 establishing a new

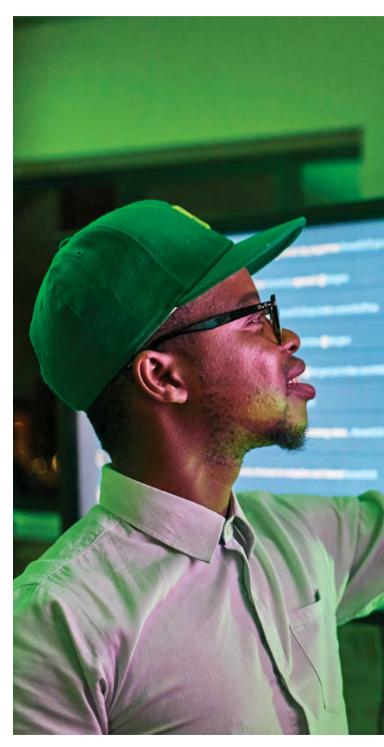
Photograph by Clive Hassall

identity and accentuating the strong visual brand that characterises the contemporary GCRO. Via the website, data is now made available in various new innovative interactive applications such as the second generation of the GIS *Interactive Website*, the *Urban Observatory Website* and the *Ward-profile Viewer*. Data was also visualised in the highly popular Maps of the Month, Vignettes and Interactive Visualisations. These measures take the accessibility of the GCRO's data and insights to new levels, a vital part of our mission.

To launch the new online and interactive products, and to go hand-in-hand with current global conversations, the GCRO hosted a symposium and exhibition on 'Smart Cities' entitled Smart | City | Region during 2015. It has become increasingly important for the GCRO to begin researching such approaches as Gauteng and its municipalities explore advanced technologies in order to streamline service delivery, enhance revenue collection, and better manage urban environments.

Academic output this year also has been significant. As part of their research and scholarship, GCRO research staff regularly publish academic and policy support work. This year saw a major uptick in peer-reviewed academic outputs, with publication numbers increasing three-fold. This reflects the talents, and the high quality of the research produced by GCRO staff.

During the seven years of its life, the successes, staffing and budget of the GCRO has grown, and the Observatory faces continuing encouragement to further expand its activities. While the Observatory is expanding in its capability and scope there is also a physical transition ahead; in early 2017, the GCRO will move to expanded premises, bringing relief to the current congested conditions. The year of 2015/16 has certainly been a year of transitions, and one in which we have been offered a glimpse into the form of the GCRO's future.



Photograph by Anthea Pokroy





Governance and organisational development

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Governance and organisational development

The legal status of GCRO is captured in an agreement which was signed by representatives of the respective parties at the GCRO launch in 2008. The GCRO Founding Document together with policies pertaining to the management of public finances were revised and signed by all partners in 2013 in contemplation of another five-year cycle for the GCRO. As stipulated in the agreement, Wits continues to host the GCRO offices and remains responsible for its funds and attendant financial administration.

The GCRO is overseen by a Board which is the most important governance structure. The Board is comprised of two representatives from UJ - Prof Tshilidzi Marwala, Deputy Vice-Chancellor:

Research, Innovation and Post Graduate Studies, and Chair of the GCRO Board; and Prof Fiona Tregenna from the Economics department; two representatives of Wits, Prof Zeblon Vilakazi, Deputy Vice-Chancellor: Research, and Prof Anne McLennan from the Wits School of Governance. The Head of the Gauteng Planning Commission (GPC), Mr Rashid Seedat, serves on the Board alongside Mr Khululekile (Khulu) Mase, Deputy Director-General from the Planning Commission. The local sphere has been represented by SALGA Gauteng through Mr Dan Mashitisho, Municipal Manager of Mogale City, and Councillor Pinky Mkhonza from Ekurhuleni.



Prof Tshilidzi Marwala



Mr Rashid Seedat



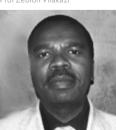
Prof Fiona Tregenna



Mr Khululekile (Khulu) Mase



Prof Zeblon Vilakazi



Mr Dan Mashitisho





Councillor Pinky Mkhonza

Prof Anne McLennan

"While Wits and UJ serve as GCRO's anchor institutions, our mission involves the harnessing of a range of academic and intellectual resources in Gauteng. The Research Advisory Committee (RAC), which is made up of senior academics and public intellectuals from a range of academic and other institutions, remains an important sounding board and quality assurance mechanism for the GCRO."

The Board meets quarterly in order to receive, consider and debate an annual work plan and associated budget, which sets out the work of the Observatory for each twelve-month period. Annual work plans and budgets in turn reflect the medium term strategic plan approved by the Board at the outset of each cycle. The Board also assesses the financial and progress reports submitted by the Executive Director and the reports from the independent auditors appointed to conduct an annual financial audit.

During 2014, GCRO developed a new 5-year strategy at the request of the Board. This was approved in the last Board meeting of 2014/15, ensuring that there is alignment between the expectations of GPG and the local sphere on the one hand, and GCRO's own-defined work on the other. 2015/16 was the first year of implementation of this five year plan.

While Wits and UJ serve as GCRO's anchor institutions, our mission involves the harnessing of a range of academic and intellectual resources in Gauteng. The Research Advisory Committee (RAC), which is made up of senior academics and public intellectuals from a range of academic and other institutions, remains an important sounding board and quality assurance mechanism for the GCRO. Various members of the RAC continue to have ongoing individual engagements with GCRO researchers on various projects.

The following are members of the RAC: Prof Fethi Ahmed (Wits); Neeshan Bolton (Director: Ahmed Kathrada Foundation); Prof Thea de Wet (UJ), Rudi Dicks (Presidency); Prof William Gumede (Wits); Dr Lulu Gwagwa (Private Sector); Prof Phil Harrison (Wits); Prof Alan Mabin (Wits); Prof Bhekie Mamba (UJ); Prof Seeraj Mohamed (Wits); Prof Michael Muller (Wits); Prof Noor Nieftogodien (Wits); Prof Edgar Pieterse (UCT); Prof Chris Rogerson (UJ); Michael Sachs (National Treasury); Dr Aurelia Segatti (ILO); Mfanufuthi Tsela (Dept of Communications); Prof Rex van Olst (Wits); Dr Christo Venter (University of Pretoria); Lisa Vetten (Wits - WISER); and Prof Colleen Vogel (Wits).

GCRO is a publicly funded unit, answerable to the anchor universities, local and provincial governments and to the residents of the GCR. The work we do with our grant is open to all and shared free of charge with anyone who wants it. For example, the raw data from all the 'Quality of Life' surveys is given to a range of individuals and research agencies, and a data viewer allows anyone to run online cross-tabulations and download the results. The only condition we place on our data is that it is used not for profit, but for teaching or research. Wherever possible, when we purchase datasets, we try to ensure that the licence extends to students and academics at both our partner universities so that they can be used for both teaching and research/publication purposes, student projects and the like. In essence, GCRO is strongly committed to making data as widely available as possible.

Staff and structure

The GCRO is led by an Executive Director. The Executive Director is supported by Research Director **Mr Graeme Gotz** as well as the Financial and Office Manager **Mrs Adele Underhay**.

Professor David Everatt who led the GCRO from its inception in 2008 left the GCRO in July 2016 to take up the position of Head of the Wits School of Governance. **Mr Chris Wray**, Senior Systems Analyst, stepped into the void left by the departure of Prof Everatt until his resignation from the GCRO in December 2015 to take up a position as a GIS professional in Germany.

Professor Everatt was replaced by **Dr Rob Moore** who was appointed as the Executive Director of the GCRO in January 2016.

Dr Claudius Chikozho, the GCRO's second Research Director, left the GCRO to join the HSRC at the end of March 2016.

Ms Kerry Bobbins, a researcher, left the GCRO in January 2016 to take up an exciting PhD opportunity at UCL.

Two post-doctoral fellows, **Dr Aidan Mosselson** and **Dr Sian Butcher**, kindly funded by our partner the University of Johannesburg, have joined the GCRO. Dr Mosselson started at GCRO in December 2015 and Dr Butcher will formally start in June 2016.

The GCRO has always been proud of its ability to 'grow its own timber' by providing internship opportunities for promising young scholars and the 2015/16 year was no exception. **Mr Christian Hamman** commenced an internship in January 2016, followed by the appointment of **Samkelisiwe Khanyile** and **Mncedisi Siteleki** as GIS interns, starting in April and May 2016 respectively.

The GCRO will further increase its staff complement in 2016/7

Staff development

The GCRO Board and Executive Director encourage staff development and skills enhancement through formal study and attendance at, and participation in, conferences and other academic activities. The GCRO's academic partners provide opportunities to all GCRO staff through fee subsidies.

During the 2015/16 financial year the following staff development activities occurred:

Christina Culwick

(Researcher) completed a six week online course in Water for Liveable and Resilient Cities (Monash University).

Darlington Mushongera

(Researcher) registered for a PhD in the Faculty of Engineering and the Built Environment.

Farah-Naaz Moosa

(Receptionist) continued her BA studies parttime at Wits Plus.

Kerry Bobbins

(Researcher) visited the German Institute of Urban Affairs in Berlin in her capacity as a Research fellow on the Green Talents Programme.

Samy Katumba

(Junior Researcher – GIS) is busy completing his MSc in Geoinformatics at the University of Pretoria.

GOVERNANCE AND ORGANISATIONAL DEVELOPMENT







Professor David Everatt

Dr Richard Ballard



Chris Wray



Dr Aidan Mosselson



Mncedisi Siteleki



Dr Koech Cheruiyot



Samy Katumba







Dr Caryn Abrahams



Christina Culwick



Dr Sally Peberdy



Darlington Mushongera



Kerry Bobbins



Farah-Naaz Moosa

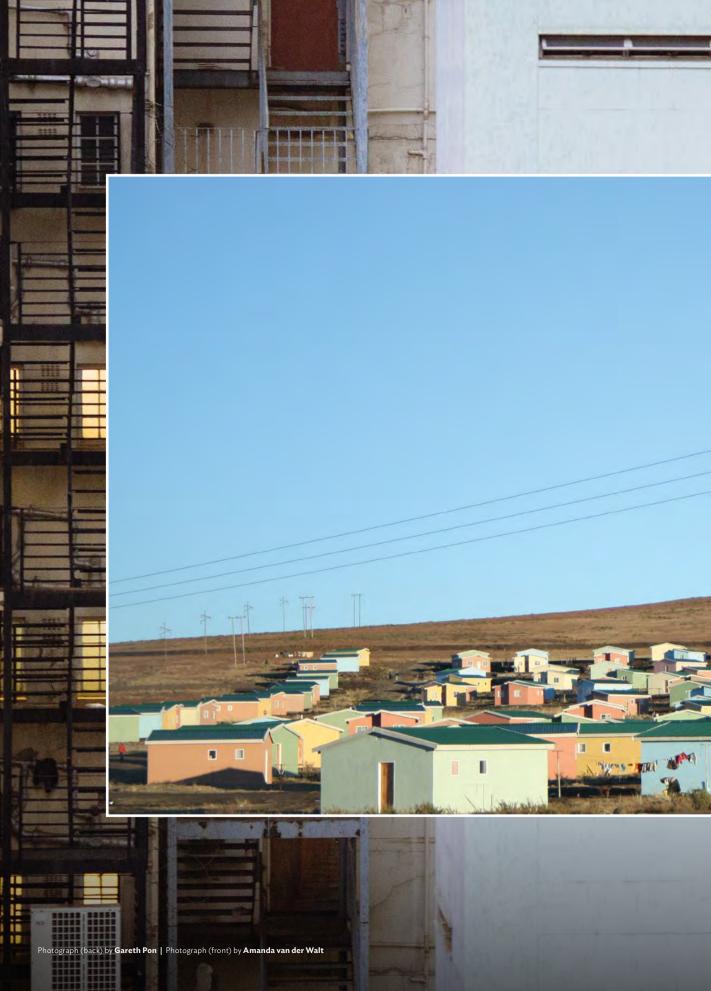


Guy Trangos





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Support to government

On an ongoing basis GCRO's information collection, analysis and interpretation is meant to assist evidence-based policy making and strategic decision making in government. However, GCRO is also regularly called upon to contribute more directly to the work of national, provincial and local government. This is often in the form of requests for research support for particular processes, or technical assistance in formulating specific strategies. Some of this support is to the Gauteng Planning Division (GPD) in the Office of the Premier in Gauteng, but it is increasingly being widened to accommodate requests from other parts of provincial government, municipalities in Gauteng, and national departments.

Strategic support to the Gauteng Planning Division

GPD asked GCRO to assist with two projects identified at the October provincial Lekgotla, one on the 'institutionalisation of the GCR', and the other on aligning GPG outcome indicators with the new Sustainable Development Goals (SDGs). On the former GCRO participated in a number of meetings to plan the project, but the bulk of the work on this was scheduled for the 2016/17 financial year. On the latter, GCRO staff participated in the process led by the Executive Mayor of the West Rand, and managed by the GPD, with the results presented to the Premier in the last quarter of the financial year.

On request by the GPD for its preparatory work on a provincial spatial development framework, GCRO produced a presentation of key maps and data on 'mega trends' shaping the city region.

Various GCRO staff participated in or contributed presentations to forums or workshops convened by GPD as part of policy development processes, including: a Gauteng Spatial Development Framework 2030 charette; a Gauteng City Region Spatial Planning Summit in November 2015; a GPG economic development summit in January 2016, workshops of the GPG GIS forum and the Gauteng Ntirhisano Service Delivery War Room.





Partnership with the City of Johannesburg on a Caring Cities Barometer for Metropolis

GCRO was requested by the City of Johannesburg to partner with it on spear-heading a 'Caring-Cities' initiative for the international network of cities. Metropolis. The task was to formulate a Caring Cities Barometer to assess how cities in different parts of the world related to their residents. Initial conceptual work was presented by GCRO to a Metropolis event in Argentina in May 2015. Working together with City of Johannesburg officials GCRO staff then developed a detailed background paper, a draft of which was presented in Ramallah, Palestine, in August 2015. A version of the paper was also presented, under joint authorship of GCRO and City of Johannesburg staff, at the South African City Studies Conference in Durban in late March 2016. The work is to be taken forward in 2016/17 with the development of an online application that collects and compares residents' opinions across Metropolis' participating cities.

Other support

Some other smaller or more ad hoc government support projects included the following:

 Through much of the financial year, Caryn Abrahams participated in the Department of Justice and Constitutional Development's Steering Committee on a National Action Plan against Racism, Xenophobia and Related Intolerances

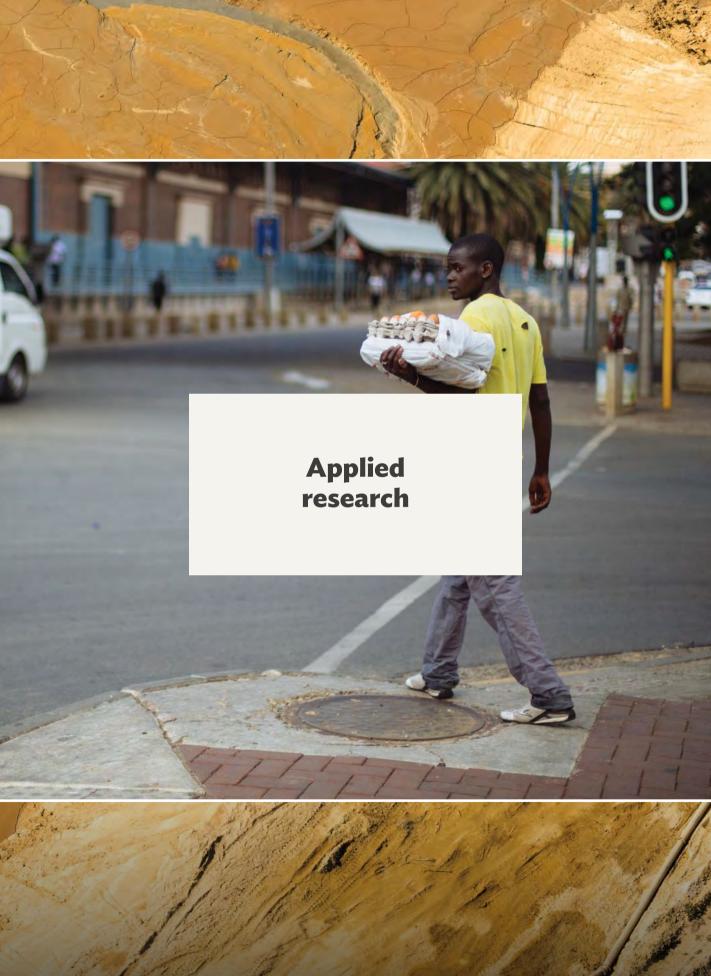
- Based on her previous work with the municipality Christina Culwick assisted officials from the Ekurhuleni Metro with content for a presentation they were due to provide to a ICLEI resilience conference in Bonn
- Sally Peberdy was asked to contribute to a Department of Home Affairs International Migration Policy Colloquium hosted by the Minister of Home Affairs in June 2015
- Sally Peberdy assisted a member of staff from the research department of the Gauteng Department of Human Settlements (GDHS), inter alia providing data for a report on migration and human settlements
- Rob Moore, Darlington Mushongera and Christina Culwick attended a meeting convened by MEC Qedani Mahlangu on strengthening relations between GPG and universities/research councils in Gauteng. GCRO developed core ideas from the meeting into a concept note for how to enhance interactions between GPG and the universities, with GCRO playing a possible 'brokerage' role on key areas of focus
- Richard Ballard worked with the SARChI in Spatial Analysis and City Planning, as well as officials from the Gauteng Department of Human Settlements, to arrange a half day symposium on mega human settlements in September 2016.



"GCRO was requested by the City of Johannesburg to partner with it on spear-heading a 'Caring-Cities' initiative for the international network of cities, Metropolis. The task was to formulate a Caring Cities Barometer..."



Photograph (back) by Clive Hassall | Photograph (front) by Gareth Pon



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 2014-19 term of office.

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 2015/16 workplan involved 35 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 2015/16 projects in each theme
1. Analytics, cartographies, visualisations	7
2. Changes in the social fabric / changing the social fabric	5
3. Rationalities of government and governance	3
4. Histories & futures of the GCR in comparative perspective	1
5. Landscapes in transition in the GCR	6
6. New regional economies	4
7. Sustainability transitions in the GCR	7
8. Government support	NA

"In summary the 2015/16 workplan involved 35 projects across the seven applied research focus areas. Additional projects were undertaken on an ad hoc basis as part of Government support..."



Photograph by Gareth Pon

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 the analysis of the available data.

A key function of the GCRO is to use spatial analysis to interpret and visualise economic, social and political trends in the GCR. Our spatial analysis is underpinned by a growing geo-referenced database, which includes our quality of life surveys, GIS mapping and analysis work, and purchased datasets. During 2015/16, GCRO continued to negotiate access to, acquired and/or held GIS data from a variety of public and private sector sources.

The new layers include:

- GTI Gauteng Demographics (2014 beta release): spatial demographic distribution of population per enumeration area (EA) in Gauteng
- Zones outlined by the Environment Management Framework
- Gauteng Mega Housing Projects (Gauteng Department of Human settlements)
- Future PRASA infrastructure investment plans

• ITMP25 data sets with future transport networks (Gauteng Department of Transport)

• Corridors of freedom (City of Johannesburg only). The GCRO is also currently updating its existing source data database and has identified some of the data that is outdated with the aim of acquiring more up to date data from relevant providers.

2015 QoL survey

Since 2009, the GCRO has run a biennial sample survey of the quality of life of the Gauteng City-Region. This includes respondents' socio-economic circumstances, psycho-social attitudes, service satisfaction, value-base and more. In 2015/16 the GCRO ran the fourth iteration of this survey which targeted 30 000 interviews in Gauteng. Memoranda of Understanding were finalised with each of the province's metropolitan municipalities, as well as the provincial Department of Health, with the outputs for next year including a short benchmarking report for each of the metros and a number of commissioned pieces on specific themes in the survey. Numerous challenges such as accessibility to gated communities and the management of data quality have delayed the final survey results, but the final cleaned and weighted dataset is expected in early 2016/17. In addition to commencing the 2015 QoL survey, the City Benchmarking Report based on the results of the 2013 QoL Survey was finalised, published and disseminated.

Advancing data visualisation

The advancing data visualisation project is designed to build and disseminate information on the GCR through innovative data products and information systems, indicators and benchmarks. The data products range from a monthly map of the month, which showcases unique spatial visualisations, to data briefs, interactive graphs and vignettes which present various aspects of the GCR. These data products, as summarised in the following table, are distributed to all GCRO contacts and are accessible via the GCRO website.

Summary of GCRO data products					
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
MAP OF THE MONTH	April 2015: Satisfaction with local government performance May 2015: The lo- cation of planned mega housing projects in context June 2015: Application of the GPEMF for in- forming the loca- tion of proposed mega-housing projects in Gauteng	July 2015: Quality of Life survey and service delivery protests August 2015: What is the biggest problem facing your com- munity? September 2015: Where informal sector cross border traders sell their goods	October 2015: Transforming transport in the Gauteng City- Region November/ December 2015: Gauteng's changing urban footprint 1990- 2013	January 2016: Clusters of dis- satisfaction with local government performance February 2016: The quality of education in Gauteng March 2016: Perceptions of mines and mining waste across Gauteng	
VIGNETTES	Vignette #25: Xenophobic attacks - are migrants the only victims?		Vignette #26: Informal sector cross border trade spending in Gauteng Vignette #27: Transforming Transport in the Gauteng City- Region	Vignette #28: The quality of education in Gauteng	

The GCRO worked with the Wits School of the Arts Digital Arts Department for the second year in a row to develop web-based interactive data visualisations with students. This year, Dr Sally Peberdy's data on Cross Border Trade was used as a basis for the work. The student projects were examined and four of the data visualisations created by students were launched as part of the digital Smart | City | Region exhibition on 26 August 2015. In addition, the GCR Village of 100 People project was re-initiated. The visualisation will be based on the forthcoming QoL 2015 survey results and will be launched in 2016/17. It is envisaged to offer a highly interactive and fun online visualisation of the QoL 2015 results.

Next generation interactive GIS website development

The GIS interactive website has become a key feature of GCRO's data systems. This has ensured that spatial information on the Gauteng City-Region is publically accessible online. ESRI and the Johannesburg Centre for Software Engineering (JCSE) assisted in resolving minor technical and functional issues to allow for the activation of the newly designed GIS website in August 2015, together with the launch of the new GCRO website. The project is now complete and serves as a platform to which further layers will be added in future as they become available. The GIS website has consistently received the most hits on the GCRO website and is utilised by government, NGOs, students and members of the general public.

GCRO website redevelopment

The GCRO website redevelopment involved, among others, the development of a single online GCRO contacts database, the redesigning GCRO output templates, and redesigning GCRO's branding. All of these improvements have been very well received and the website now functions as the primary online platform for all of the GCRO's activities, news, events and outputs. Continued maintenance is planned to ensure the continued smooth functioning of the live site.

ESRI urban gallery/observatory

Relevant selected data (such as zoning, population density, road and building infrastructures, etc.) for the cities of Ekurhuleni and Tshwane, were collated and formatted by GCRO and ESRI, and were officially published on the www.urbanobservatory.org website in August 2015. This provided an opportunity for the two cities (Ekurhuleni and Tshwane) to have a presence on the ESRI Urban Observatory (an international website platform) alongside Johannesburg and other cities across the world.



Photograph by Clive Hassall

"The Geo-visual analytics project aims to explore different state of the art techniques for preparing and interactively visualising data in general, and geospatial data in particular. One of the objectives of this project was to explore ways to enhance the current GCRO QoL and GIS online viewers with geovisual analytics capabilities."

Ward profile viewer

The ward profile viewer is an innovative application developed to view a wide range of socio-economic indicator based ward level data, notably from the Quality of Life Survey and the South African Multidimensional Poverty Index based on StatsSA's Census 2011. It is an upgrade of the 50 Priority Wards viewer that used a range of indicators to identify 50 of the 'poorest' wards in Gauteng. The ward profile viewer offers a comparative spatial view across the GCR at a provincial, municipal or ward-level scale, assisting with the identification of areas for targeted government interventions.

A demo ward profile viewer was on display at GCRO's Smart | City | Region Exhibition and Symposium on 26 August 2015. Finalisation of the viewer was slightly delayed due to computer programming challenges. By the end of the financial year these had been resolved by the joint efforts of ESRI and programmers from the Johannesburg Centre for Software Engineering (JCSE) who led the design of the viewer. Continued efforts to resolve technical issues allowed the ward profile viewer to be ported from the development environment into the production environment for testing, and a Beta version was available publically early in 2016. The ward profile viewer will be officially re-launched with updated QoL 2015 data in 2016/17.

Data-smart GCR

The GCRO, in collaboration with the Wits School of the Arts Digital Arts Department hosted the highly successful Smart | City | Region Exhibition and Symposium on 26 August 2015 at the Digital Innovation Zone in Braamfontein, as part of the Fak'ugesi Festival. The symposium questioned notions of the 'smart city' and also showcased municipal and provincial 'smart city' solutions. Participants were able to interact with various GCRO online products and data visualisation through large format touch screens. The success of the event and the growing need for spatially related data for the province paved the way for a new project that will draw on academic expertise within universities to support the Gauteng Planning Division's efforts to establish a corporate GIS and central spatial database (traditionally referred to as the GeoGCR database).

Geo-visual analytics

The Geo-visual analytics project aims to explore different state of the art techniques for preparing and interactively visualising data in general, and geospatial data in particular. One of the objectives of this project was to explore ways to enhance the current GCRO QoL and GIS online viewers with geovisual analytics capabilities. A report prepared by JCSE on technology options for re-engineering the current GCRO QoL Viewer was presented to GCRO staff. The IBM SPSS server software was recommended as the main software to consider for the development of the new QoL viewer. Subsequently, a quote for the development of the QoL viewer was prepared by JCSE/Olrac Spss for consideration by the GCRO.

In October 2015, GCRO released its first interactive online 'story map', 'Transforming transport in the Gauteng', as an interactive map of the month. The research will continue in 2016/17 through investigations into commercial and open source technologies able to perform geovisual analytics, interactive mapping and storytelling with statistical data.

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

In this thematic area GCRO leads 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.

Social cohesion and inclusivity in the city-region

Creating and sustaining a socially inclusive and cohesive society is at the heart of what makes up a city-region. With its focus on the residents and communities of the GCR, this project is concerned with social inclusion, as well as the attitudes and perceptions that divide communities and create mistrust and social disengagement. The research is theoretically informed by approaches to questions of inclusive cities, belonging and participation, as well as by current provincial policy priorities which emphasize nation-building, inclusive citizenship and social cohesion. In 2016 Caryn Abrahams published a paper 'Twenty Years of Social Cohesion and Nation-Building in South Africa' in a special issue of the Journal of Southern African Studies (JSAS). As part of this project, Caryn also authored a chapter 'Making the

nation twenty years after democracy' to be published later in 2016 in K. Lefko-Everett. and R. Govender (eds.) Twenty Years of reconciliation, A Review of the South African Reconciliation Barometer, Institute for Justice and Reconciliation, and a paper 'South Africa 20 years after democracy: solidarity missing' to be published in 2016 in a European Institute of the Mediterranean special issue Arab Transitions in Comparative Perspective.

Poverty and inequality in the GCR

Poverty and inequality are legacies of apartheid that continue to plague South African society in spite of deliberate attempts by government to reverse this legacy. Why do poverty and inequality continue to be major developmental challenges in South Africa? To what extent have government efforts since 1994 contributed towards alleviating poverty and lowering inequality? And what can municipalities do to make significant progress towards reducing both poverty and inequality?

This research project sought to answer these questions from three different perspectives: (i) an income and expenditure analysis; (ii) a labour market inequality analysis; and (iii) a multidimensional poverty analysis. The scale of analysis is provincial, with a focus on Gauteng.

The resulting Research Report will provide an in-depth understanding of poverty and inequality in Gauteng in terms of patterns, drivers and changes



Photographs by Anthea Pokroy



Photograph by Amanda van der Walt

over time. It also provides policy insights. In Part 1, David Tseng analyses poverty and inequality from an income and expenditure perspective. The paper first provides an overview of changes in poverty and income inequality in Gauteng for 1995-2010 while examining the relationships between economic growth, poverty and inequality. Second it assesses the impact of government social grants on income inequality and poverty in the province. Part 2 was written by Dr Prudence Kwenda and Professor Miracle Benhura (Wits School of Economics and Business Sciences). The main objective of their paper is to generate and explain a profile series of inequalities in the labour market between 1995 and 2012. Variables included race, gender and education. Particular attention is given to how these characteristics result in segmentation and discrimination in the labour market, ultimately generating income inequalities. Part 3 was co-authored by Darlington Mushongera and two World Bank economists, Dr Precious Zikhali and Phindile Ngwenya. Together they developed a Multidimensional Poverty Index for Gauteng (GMPI) using GCRO Quality of Life survey data from 2011 and 2013. Quality of Life data allows the GMPI to be used for ward level analysis. It shows spatial variation in the GMPI across different wards, helping municipalities target areas most in need of interventions. Some of the results were published as a GCRO Map of the Month and the full report will be published in the 2016/17 financial year.



Photograph by Mbali Mdledle

Anti-racism in the GCR: reversing the resurgence of racism

Taking forward GCRO's work on non-racialism and xenophobia this project considers pathways toward antiracism in South Africa. This has involved develop- $\operatorname{ing}\operatorname{links}\operatorname{with}\operatorname{civil}\operatorname{society}\operatorname{and}\operatorname{government}\operatorname{initiatives}$ to tackle racism. Caryn Abrahams of the GCRO became a task team member of a new collaborative anti-racism network, initiated by civil society groupings and co-convened by the Kathrada and Mandela Foundations. The Anti-Racism Network South Africa (ARNSA) was launched in Johannesburg, and input was made at the launch event. Key contributions were made in the formulation of the terms of reference, and guiding document of the ARNSA. Contributions were also made to the Department of Justice and Constitutional Development on its National Action Plan against Racism in preparation for submission to the UN in September 2016. This included input regarding the role of civil society in the process. An Anti-Racism report Pathways to Antiracism which includes commissioned papers by Kira Erwin and contributions from Caryn Abrahams, the head of research at the Kathrada Foundation, a poet, and a GCRO intern will be published in 2016/17. A photo-essay on anti-racism will be also be published in the report and on the website. A video based on the photo-essay was prepared for Anti-Racism week in March 2016, a draft of which was presented at the South African Human Rights Commission 20 year anniversary.



Photograph by Amanda van der Walt

Hungry city-region

Hunger and food insecurity are present challenges for residents of many city-regions. This project undertakes a multi-dimensional analysis of aspects of food insecurity facing the GCR to identify possible food security enhancement strategies. Scholars associated with the University of the Witwatersrand Geography department were commissioned to undertake a scoping study on the state of food security and existing food policy in the GCR. The papers consider the governance requirements for a comprehensive urban food system for the GCR. The GCRO will be publishing these texts as an Occasional Paper in 2016/17.

Understanding the objective of post-apartheid urban mixing

The inequalities of apartheid are still manifest in the shape of the South African city, characterized by racial segregation, spatial dislocation between home and work for millions, and uneven investment. For many policy makers the endurance of the apartheid urban form in post-apartheid South Africa obstructs the achievement of greater social justice. Post-apartheid processes have also extended the kinds of spatial

patterns characteristic of the past. There have of course been important changes in the urban landscape of the GCR. Change has been 'organic', needing then to be managed by policy, as well as a result of policy. Policy interventions include the 'Corridors of Freedom' project by the City of Johannesburg. This kind of policy intervention aims to enable residents to live closer to work and schools and move around the city more easily. These initiatives and challenges provoke empirical questions to be investigated in this multi-year project. How do government and residents understand the 'undoing' of the apartheid city? What are their assumptions about class and space in the development of mixed-use, mixed-income mobility corridors? What are the policy debates that feed these choices? During 2015-2016 GCRO has been an active participant in the Johannesburg Spatial Development Framework workshops. Richard Ballard started a literature review on the way in which mixing becomes a planning norm, which has evolved into a review on international scholarship on urban mixing policies. The research will be published in 2016/17.

3. Rationalities of government and governance in the GCR

Research in this thematic area looks at governments in the GCR – in particular their policy objectives, institutional arrangements and 'ways of thinking' about delivery and development – as well as the changing relations between government and society.

Towards a metro form of government in Gauteng

Over the last decade a consensus has begun to build that Gauteng needs to move towards a 'province of metros', where all two-tier district/local municipalities are replaced by wall-to-wall single-tier structures. In this light, GCRO crafted a research project that seeks to interrogate this thinking. The project, "Towards a metro form of government in Gauteng", led by GCRO Research Director Graeme Gotz, investigates the reasoning behind the idea, how the idea is being activated in visions and plans, and the likely benefits and costs of a further round of municipal amalgamations. This project resumed in the second quarter through the collection of relevant documentation on the issue.

State function in infrastructure planning in the GCR

This project involves a deep level analysis of the state plans and budgets for service delivery, with a specific focus on water services in the City of Johannesburg. Through an analysis of archival material, coupled with interviews with key officials (current and ex) from the City of Johannesburg, this research seeks to uncover the complexities inherent in planning for water services at the local level in Gauteng. GCRO Researcher, Darlington Mushongera obtained access to archival material on the Phiri Water Case, from both the Center of Applied Legal Studies (CALS) at Wits University and at the Socio-Economic Rights Institute (SERI). The writing of the research report was started and the final report is expected to close in the next financial year. Preliminary findings were presented at various fora including a Wits School of Governance seminar held on 16 September 2015.

Ethnographies of the state and the politics of service delivery planning

GCRO researcher. Darlington Mushongera, led this project which seeks to understand the internal workings of the local state in South African using City of Johannesburg as a case study. The project involves an ethnographic study into internal decision making processes around water services in the City of Johannesburg. Collection of secondary data was undertaken with a view to map the institutional make up of water services administration in the City. Following negotiations between GCRO and the City of Johannesburg, Darlington was granted permission to physically spend time at the City's offices, working, discussing, observing, and talking to City officials regarding planning and implementation of water projects. This work also forms part of Darlington Mushongera's PhD work which he is currently undertaking through the School of Planning and Architecture at Wits University. Associate Professor Claire Benit-Gbaffou is leading a group of PhD/Masters students in an innovating project called Practices of the State in Urban Governance Programme (PSUG) at the Centre for Urbanism and Built Environment Studies (CUBES), School of Architecture & Planning at Wits University. This project has thus benefited from discussions held during PSUG seminars in the school. The research project will continue in the next financial year with more time spent in ethnographic work at the City of Johannesburg.

"Over the last decade a consensus has begun to build that Gauteng needs to move towards a 'province of metros', where all two-tier district/local municipalities are replaced by wall-to-wall single-tier structures."



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 is means to be a city-region.

Futures of the GCR

An external specialist has been commissioned to write a GCRO Occasional Paper that provides a 'futures perspective', situating the GCR within projected long term global urban trends and dynamics. Contracting on the work was delayed in this financial year, and the work will proceed in 2016/17.

5. Landscapes in transition

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

Little is known about uneven development in Gauteng and the GCR. This project attempts to explore uneven development, better understand concepts of peripherality, identify peripheral areas in Gauteng, and identify the social, demographic and economic dynamics of change in peripheral areas. It has also endeavoured to enhance understanding of change in towns in the province, peri-urban and commercial farming areas, zones of displaced urbanisation and de-industrialising and re-industrialising areas outside the core of the province. This project is run in conjunction with Philip Harrison, the NRF SARCHI Chair for Spatial Analysis and City Planning in the Wits School of Architecture and Planning.

The GCRO section of the report analyses uneven development and core and peripheral areas in Gauteng through the lenses of demography, migration, education, employment and income, housing, access to services, transport, connectivity and relationship to government. The NRF Chair's section of the report contains six in depth case studies of particular places in the periphery. Work on both sections of the report were substantially concluded in the financial year, although there is a hope that some updating of the research will be done with new Quality of Life 2015 data. Under the partnership an event was co-ordinated on 26 May 2015 entitled 'Gauteng on the Edge' where various aspects of the research were presented.



Photograph by Clive Hassall

Mining landscapes of the GCR

The mining landscapes of the GCR are characterised by a series mine residue areas (MRAs) that are scattered across the landscape. MRAs – areas of general mine waste that are located within the boundaries of former mine properties – create sterile pockets of land that have historically dissected the city-region often along socio-economic lines. These areas impact society and the environment notably through their effect on air and water quality.

During the course of 2015, GCRO's lead researchers on the Mining Landscapes project, Kerry Bobbins and Guy Trangoš, finalised a Research Report which will be published in 2016/17. The major sections of the report are: 'The mining city', an account of the formation of the urban landscape through mining; 'The hidden legacies of gold', an analysis of the long term impacts of gold mining on the environment; 'Human health implications of abandoned mine waste', which considers the various impacts of mining and mine waste on people; and 'New prospects for the Witwatersrand's abandoned mine waste' which examines current attempts to derive value from mines including re-mining and scavenging. These sections are accompanied by photo essays and other content in order to illustrate particular aspects of mining landscapes.

Untangling transport

Facilitating an integrated transport network has emerged as a key priority in the GCR. Paired with

this vision is the aim of improving overall mobility across the region. In recent years the GCR has seen significant investment into public transport including the Gautrain, Rea Vaya BRT and A Re Yeng BRT. These investments aim to both improve transport for current public transport users and encourage a modal shift from private car usage to public transport. These new systems exist alongside established public transport options. Despite visions of building an integrated transport network across the GCR, there is limited alignment between different public transport systems and with other transport modes. As a result. navigating the GCR remains difficult and confusing. This project, led by Christina Culwick and Guy Trangoš, explores the nature and interaction of these various networks.

During the course of 2015-16, this project produced two major outputs. The first was a 'regional graphic' in the journal Regional Studies, Regional Science by Christina Culwick, Graeme Gotz, Samy Katumba, Guy Trangoš and Chris Wray. The second was a 'story map' of Transport in Gauteng. This story map is a new kind of output for the GCRO which allows for a more interactive and multi layered map than is possible with a static map. In addition to these two outputs. Content for the story-map included results from a small survey, conducted via Survey Monkey, into the impact of the City of Johannesburg's EcoMobility Festival in Sandton in October 2016.

Under this project GCRO also provided support to the Gauteng Department of Roads and Transport



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in their preparation for the 'International conference on transport authorities'. GCRO team members presented thinking on 'transport governance' at the conference. Research in this project is fed into the Gauteng Transport Commission (GTC) through ongoing Christina Culwick's participation on GTC's panel of experts.

QoL spatial statistical modelling

While researchers at the GCRO and elsewhere have generated a great deal of analysis of the Quality of Life surveys, much of this is aggregated spatially. Even relatively fine grained representations are aggregated at the ward level. The purpose of this project is to make use of the fact that all individual interviews are geo coded, allowing for much more complex spatial analysis of the results at a higher 'resolution' than ward level summary information.

The major output under this project for this year was an article by Chris Wray and Koech Cheruiyot in the South African Journal of Geomatics entitled 'Key challenges and potential urban modelling opportunities in South Africa, with specific reference to the Gauteng City-Region'. This paper was also presented at Geomatics Indaba 2015 Annual conference where it won the award for best peer reviewed paper. Further articles have been submitted for publication.

Publics of the GCR

This project considers the way in which those who live in the GCR engage in public space and are constituted as 'publics'. Like many parts of the world, public life takes place in the GCR in various fora such as shopping malls, casinos, festivals, active streets and street parties. Crucially, South Africa's history has produced a particular geography to the ways in which people can participate in public life. This project underscores the importance of public life and examines its nature using the particular cases of public infrastructure and symbolic acts of spatial appropriation in the inner city. The researcher on this project, Guy Trangoš, presented a paper entitled 'Claiming Johannesburg: Urban heritage and acts of symbolic appropriation' at the European Association of Geographers 2015 conference in Budapest and at the South African City Studies Conference in March 2016, and has prepared this paper for publication.

Spatial Imaginaries

Realising integrated spatial planning across the Gauteng City-Region requires collaboration between municipal and provincial departments together with private developers, residents and affected parties. Yet these many different actors all develop their own spatial imaginations both in relation to the existing city and the imagined future city. It is important to understanding the intricacies of spatial visions, the alignments and misalignments of municipal plans, the strategies of investors and the needs of residents in order to develop a sense of the complexity of development in an integrated city-region.

The 2015-16 financial year saw a phase of field work research on a series of different case studies, including the proposed private development at Modderfontein, municipal and provincial spatial frameworks, and the mega human settlements policy direction. These, together with an introductory essay and other components, will be compiled into a research report during 2016. Graeme Gotz, Richard Ballard and Christina Culwick presented papers stemming from this project at the South African cities conference in March 2016 in Durban.

6. New regional economies

Research in this theme examines the changing economy of the Gauteng City-Region. While there are many relevant concerns and questions here, our research focuses mainly on the region's economic geography, and how local economies connect to emerging opportunities in other parts of the world.

Understanding Gauteng's urban space economy

Work on the Gauteng urban space economy project continues. The various pieces of the project are aimed at deepening the understanding of how the urban space economy of Gauteng works, as well as interrogate how government has understood and taken up the challenge of intervening in the space economy of Gauteng over the last two decades.

Trade in the GCR

This is a joint partnership project among the African Centre for Cities (ACC), Eduardo Mondlane University (Mozambique), and the Southern African Migration Program (SAMP). The project first examines informal sector entrepreneurship in Gauteng, allowing for comparison between South African and cross-border migrant entrepreneurs.

It further looks at informal cross-border trade between Gauteng and Southern Africa. It aims to establish the potential contributions and costs of informal-sector entrepreneurship and cross-border trade to the GCR economy. Fieldwork for the project was completed in 2014/15.

Completed outputs from the project this year include four joint GCRO and SAMP policy papers on Johannesburg, on cross-border migrant and South African informal sector entrepreneurship and informal cross-border trade. Two outputs - 'International Migrants in Johannesburg's Informal Economy' and 'Calibrating Informal Cross-Border Trade in Southern Africa' – were published in 2015/16. The others will be published in 2016/17. Two GCRO vignettes, one on the impact of xenophobic violence on the informal sector and local economies, and the other on informal cross border trade in Gauteng. appeared in 2015, as did a GCRO Map of the Month showing how cross-border trade extends the reach of the retail and wholesale sector of the GCR into Southern Africa.

Allied to this project is a co-authored chapter 'Transnational entrepreneurship and informal cross-border trade with South Africa' that was published in the book Mean Streets: Migration, Xenophobia and Informality in South Africa.



Photograph by Amanda van der Walt



Photograph by Jhono Bennet

Another chapter 'A City on the Move' was published in the book Movement Johannesburg. A GCRO Research Report on informal sector entrepreneurship and cross-border trade in Gauteng will be published in 2016/17.

GCRO co-hosted two project related seminars in Cape Town with SAMP, the ACC, and the University of Eduardo Mondlane. Data from the surveys was used in presentations to the Gauteng Provincial Government (GPG) APRM, the GPG EXCO Lekgotla, the Swedish and Somali Embassies, the Grocery Retail Inquiry of the Competition Commission, and Wits Digital Arts Students. The latter used the data for their assignments. Four of the best assignments were shown at the GCRO's Smart | City | Region exhibition. Following further xenophobic attacks in Gauteng in April 2015, Sally Peberdy was invited to engage with various South African and international radio and television stations as well as the print media.

Economic geography of the GCR

Gauteng has a very large and diversified economy and it is necessary to understand the interconnection and spatial distribution of economic activities in order to design effective policies. This project draws in expertise from various academics on a number of issues related the Gauteng/GCR space economy. The various pieces of research focusing on various aspects of the economic geography of Gauteng/GCR will be published as a 10-chapter book volume.

In the 2015/16 financial year three chapters were finalised, while work continued on the introductory and conclusion chapters. Necessary mapping on the completed chapters has been finalised. Work continues on three contracted chapters, with anticipated submission of developed drafts in 2016/17. Two authors have promised to start work on their chapters. Springer International has been approached with a view to publishing the completed manuscript.

One of the completed chapters titled, 'Testing economic growth convergence (or divergence) and its policy implications in Gauteng City-Region, South Africa' was presented at the Regional Development Association's annual conference in Graz, Austria. Insightful suggestions from the conference have been incorporated in the completed chapter.

Determinants of real estate demand

This project seeks to undertake an analysis of macro-economic and spatial determinants of supply and demand for various property asset classes. An extensive literature was carried out and the required data was identified. Work continues on this project, which will be completed in the 2016/17 financial year.



"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"

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 such as green infrastructure and the green economy that may drive a transition to greater sustainability.

Metabolic flows and infrastructure transitions

This project builds on the argument that it is no longer possible for cities to grow while assuming unlimited resources, and instead this project 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 such studies have been undertaken. Towards these objectives, GCRO participated in a major workshop convened by John Fernandez from MIT and Josephine Musango from Stellenbosch, on Resources and Urban Africa (17-18 June 2015). GCRO was also asked to be represented on the Steering Committee for the workshop and to be part of the African Urban Metabolism (AUM) Network. This has provided a basis for the resumption of GCRO's own research in this area, and the remainder of the year saw progress towards an Occasional Paper, drawing together the work GCRO has done in this domain over the last few years.

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. Work undertaken under this project in 2015/16 built on the foundations laid by the 2013 State of green infrastructure report as well as the CityLab process which began in 2014/15. The second report of the GAI project, entitled 'A framework for a green infrastructure approach in the Gauteng City-Region' was finalised and will be published in 2016/17. This year also saw the completion of three investigative studies that will form the basis of the GAI project's third report, to be finalised and published towards the end of the 2016/17 financial year. The investigative studies build the evidence base for applying a GI approach in the GCR, and were specifically aimed at addressing critical gaps identified in the earlier phases of the projects. The studies include:

- Developing a municipal green asset registry for recording, planning and managing green assets in the GCR;
- 2. Monitoring and evaluating the cost benefits of the Atlas Spruit green infrastructure flood relief scheme in Ekurhuleni; and
- Green infrastructure stormwater solutions for Diepsloot, Johannesburg.

During 2015/16 the project's lead researchers presented at local and international forums, and to a range of audiences including academic, government and the private sector stakeholders. Publications finalised this year include an article published in the Journal of Public Administration, and an opinion piece for UrbanAfrica.net, an online platform which communicates the challenges and opportunities in African cities. In addition to these an article was accepted to Urban Ecosystems (subject to addressing reviewer comments) and should be published in 2016/17. Through the course of the year, researchers participated on the second phase of the Gauteng Environmental Management Framework (GEMF), engaged with various stakeholders and attended site visits including to Diepsloot with the research team and WASSUP, a local NGO working in the area.

The project established a strategic collaboration with Carla Washbourne (Department of Science, Technology, Engineering and Public Policy (UCL STEaPP) and planned her research stay at GCRO for early 2016/17. During this stay, Carla will focus on how scientific research is transferred into the policy realm in the GCR, and based on these reflections she will assist with thinking through the next phase of the GAI project.

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 the empirical research on the nature of the emerging green economy in the GCR. This project moves beyond advocating the importance of moving towards a green economy through reflecting on a series of case studies on the current state of the green economy in the GCR. Furthermore, these case studies will examine the successes and failures, as well as the possibilities for and limitations on a future green economy.





"Current water security challenges in the GCR range from inadequate water supply and sanitation infrastructure, pollution, flooding, and unmet infrastructural upgrade requirements. In this project, we hypothesise that water security challenges are likely to worsen in the near future due to population growth within the context of limited and sometimes poorly managed water resources and sanitation systems."

The article by Graeme Gotz and Alexis Schaffler 'Conundrums in implementing a green economy in the Gauteng City-Region' was published as part of a special issue in Current Opinion in Environmental Sustainability (COSUST) in April.

Intersection between disaster vulnerability and sustainability

This project was initiated in response to the limited understanding of prevailing disaster risks facing the GCR, the levels of potential resilience of communities and households to a major disaster, or how the vulnerability of the region is being exacerbated by a range of factors. During 2015/16, the primary focus of this project was on publishing GCRO's 10th Occasional Paper entitled 'Acid Mine Drainage and its Governance in the GCR'. This paper carefully updates the historical record on AMD since the publishing of a GCRO Provocation on the issue in 2010. In doing so, it argues that the way in which AMD has been governed raises a flag around how the political economy of an issue such as AMD should be understood, publicly debated and managed. This research was presented at a South African Local Government Association (SALGA) Gauteng Provincial Executive Committee quarterly meeting in September 2015.

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. In this project, we hypothesise that water security challenges are likely to worsen in the near future due to population growth within the context of limited and sometimes poorly managed water resources and sanitation systems. Although investments in the Lesotho Highlands Water transfer scheme reflect a sense of urgency in trying to address the city-region's water supply challenges, the ongoing service delivery protests and impacts of the recent drought highlight the need for a deeper understanding of the challenges and potential solutions. The main goal of the project is to unravel the water security challenges in the GCR's major urban centres. This includes seeking to understand both the critical bio-physical and governance factors at play in the GCR urban water management landscape, with particular attention being placed on understanding and exploring solutions to upstream-downstream water pollution challenges in various urban areas in the GCR. In 2015/16 this project saw the commissioning of a scoping study, which is anticipated to be published as a report in 2016/17.

City transitions to a green economy

The concept of a green economy has gained local and international policy traction in recent years. In a green economy, economic growth is primarily driven by investments that enable more sustainable development processes. The objective of this project is to generate and synthesize data that will enhance our understanding of the level of green economy readiness prevailing among the main urban centres in the GCR. Furthermore it provides a preliminary assessment of the strengths and shortcomings of the approaches deployed by various municipalities to address the green economy agenda in the GCR. The 2015/16 year saw the commissioning of a report entitled 'Transitioning to a green economy in the Gauteng City-Region: Assessing local municipalities' readiness', which will be published in 2016/17.

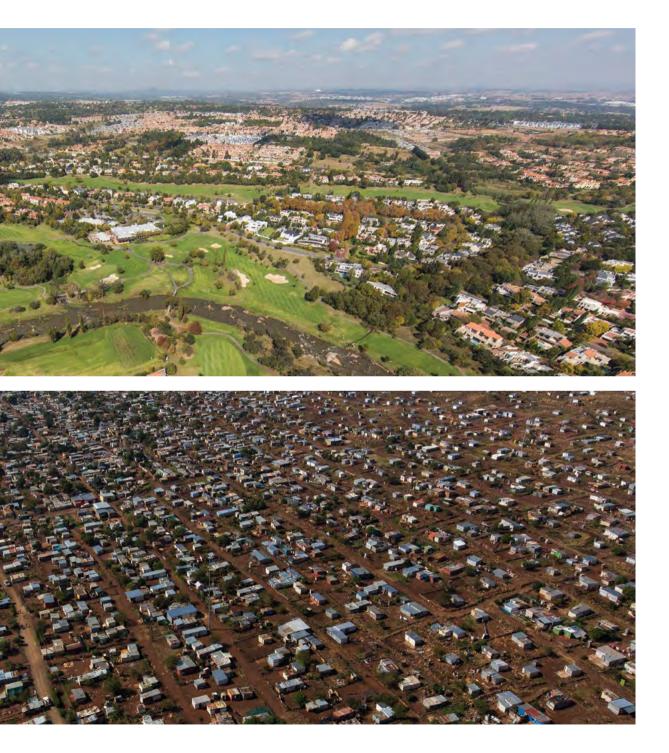
Justice and sustainability transitions

Spatial transformation and developing an integrated, sustainable and equitable city-region requires that both sustainability and social justice be fundamental considerations. Despite the opportunities and services that attract people to the GCR from across South Africa and the world, the potential for a high quality of life is undermined by the inequality and unsustainability entrenched in the spatial form and function of the city-region. Although improved service delivery and access to services help to meet human rights objectives, the current development trajectory in the GCR is very consumptive and is not consistent with sustainable development objectives, which are likely to result in worsened inequality in the long term. This project furthers research toward understanding the 'Green Agenda' in the GCR through exploring the justice and political economy implications of sustainability transitions in the GCR. Towards the development of a Research Report, the 2015/16 year saw progress towards establishing a theoretical framework for the project, which will guide a series of case studies to be commissioned in 2016/17. Based on this initial work, a paper was written and presented at the 2015 RC21 conference (Urbino, Italy), and a presentation was made at the 2016 SACSC conference in Durban.





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Photograph (back) by Clive Hassall | Photograph (front) by Holger Deppe

GCRO outputs, academic publishing, presentations and academic citizenship



GCRO outputs, academic publishing, presentations and academic citizenship

GCRO outputs and events

GCRO outputs

- Bobbins, K (2015) 'Acid Mine Drainage and its Governance in the GCR', GCRO Occasional Paper 10, May 2015
- GCRO, 'Quality of Life Survey 2013: City Benchmarking Report', GCRO Research Report, November 2015
- A series of joint GCRO-SAMP policy papers on informal migrant entrepreneurship and cross-border trading moved into the final stages of publication, with the first, 'International migrants in Johannesburg's informal economy', due for publication early in 2016/17
- GCRO assisted closely with the Metropolitan
 Policy Program at the Brookings Institution on a
 profile of the GCR, 'South Africa's Global Gateway:
 Profiling the Gauteng City-Region's International
 Competitiveness and Connections', which was
 published in November 2015.

Conferences, seminars and symposia organised by GCRO

 GCRO continued to co-organise a seminar series with the NRF Chair of Spatial Planning and Modelling, Phil Harrison, and the Centre for Urban and Built Environment Studies (CUBES), at Wits. The seminar series is called Faces of the City: Urban Form, Fabric and Function. GCRO organised the July-September section of the Faces of the City Schedule which included the following individual speakers: Louis Grundlingh, Yousuf Al-Bulushi, Kristen Kornienko, Javier Auyero, Ivan Turok and a panel discussion organised by Marie Huchzermeyer and consisting of Edgar Pieterse, Philip Harrison, Alan Mabin, Noeleen Murray, Sophie Oldfield, Monique Marks, and Kira Erwin

- GCRO hosted the Smart | City | Region Exhibition and Symposium on 26 August 2015 at the Digital Innovation Zone, as part of the Fak'ugesi Festival
- GCRO worked with the SARChI Chair Phil Harrison, and officials in the Gauteng Department of Human Settlements, to co-organise a symposium on Mega Human Settlements on 3 September 2015.

Published works

Published books, journal articles, book chapters and conference proceedings

- Culwick, C. and Patel, Z. (forthcoming) United and divided responses to complex urban issues: insights on the value of a transdisciplinary approach to flooding risk. Area (in press)
- Richard Ballard (forthcoming) Review of Falkof, Nicky (2015) Satanism and Family Murder in Late Apartheid South Africa: Imagining the End of Whiteness. Houndmills: Palgrave Macmillan (Review in Journal of Southern African Studies)
- Ballard, R. (forthcoming). 'Development and governance'. Douglas Richardson, Noel Castree, Michael F. Goodchild, Audrey L. Kobayashi, Weidong Liu Richard Marston (eds.) The



Photograph by Gareth Pon

International Encyclopedia of Geography: People, the Earth, Environment, and Technology. London: Wiley-Blackwell (in press)

- Richard Ballard (forthcoming 2016). Review of Daniel Conway and Pauline Leonard (2014) Migration, space and transnational identities: the British in South Africa, Ethnic and Racial Studies, DOI: 10.1080/01419870.2016.1145718
- Mahomed, F. and Trangoš, G. (forthcoming 2016).
 'An exploration of public attitudes towards LGBTI rights in the Gauteng City-Region of South Africa'. Journal of Homosexuality (in press)
- Abrahams, C. (forthcoming 2016). 'South Africa 20 years after democracy: solidarity missing'. European Institute of the Mediterranean, Barcelona, special issue publication Arab Transitions in Comparative Perspective (in press)
- Abrahams, C. (forthcoming 2016). 'Making the nation twenty years after democracy', in K. Lefko-Everatt, K. and Govender, R. (eds) Twenty Years of reconciliation, A Review of the South African Reconciliation Barometer, Institute for Justice and Reconciliation (in press)
- Chikozho, C. & Mapedza, E. (forthcoming 2016).
 'Free-market economics and developmental statism as political paradigms: implications for water governance theory and practice in developing countries'. In Water Governance for the 21st Century. Springer Publishers (in press)
- Chikozho, C. (forthcoming 2016). 'The missing link: articulating the disjuncture between economic growth, poverty reduction and social inclusion in South Africa'. In Inclusive Growth and Development - Challenges and Opportunities in Eastern and Southern Africa. OSSREA/ McMillan Publishers (in press)

- Ballard, R. (2016). 'Community and the balkanization of social membership'. Dialogues in Human Geography. 6(1): 78-81
- Mosselson, A. (2016). "Joburg has its own momentum": towards a vernacular theorisation of urban change'. Urban Studies. Online first DOI: 10.1177/0042098016634609
- Abrahams, C. (2016). 'Twenty years of social cohesion and nation-building in South Africa'. In part special issue 'South Africa in Transition', Journal of Southern African Studies, online first DOI:10.10 80/03057070.2016.1126455, February 2016
- Mosselson, A. (2016). 'Book review: Changing Space, Changing City: Johannesburg after Apartheid'. Regional Studies. Online first DOI:10.1 080/00343404.2016.1138740, January 2016
- Ballard, R. (2015) Review of James Ferguson (2015) Give a man a fish: Reflections on the New Politics of Distribution. Duke University Press, Durham. Review published in Transformation 89
- Ballard, R. (2015). 'Assimilation'. John Stone, Rutledge Dennis, Polly Rizova, Anthony Smith, and Xiaoshuo Hou (eds.), Encyclopedia of Race Ethnicity and Nationalism. Wiley-Blackwell. Online first DOI: 10.1002/9781118663202. wberen380, December 2015
- Ballard, R. (2016). 'Black Middle Class in South Africa ("Black Diamonds")'. John Stone, Rutledge Dennis, Polly Rizova, Anthony Smith, and Xiaoshuo Hou (eds.), Encyclopedia of Race Ethnicity and Nationalism. Wiley-Blackwell. Online first DOI: 10.1002/9781118663202. wberen379, December 2015
- 17. Chikozho, C. & Houdet, J. (2015). 'The valuation of ecosystem services in environmental impact assessments: a review of selected mining case

studies and implications for public policy in South Africa.' Journal of Corporate Citizenship. Issue 60, December 2015

- Chikozho, C. & Saruchera, D. (2015). 'Universities and think-tanks as partners in the African knowledge economy: insights from South Africa'. African Journal of Science, Technology, Innovation and Development. 7(4), pp286–300
- Asmal, Z. and Trangoš, G. (2015). Movement Johannesburg. The City: Cape Town
- 20. Trangoš, G. (2015). 'Crash City'. In Asmal, Z. and Trangoš, G. (eds.) Movement Johannesburg. The City: Cape Town
- Peberdy, S. (2015). 'A city on the move'. In Z, Asmal and G. Trangoš (eds.) Movement Johannesburg, The City: Cape Town
- Mushongera, D. Zikhali, P & Ngwenya, P. (2015).
 'A Multidimensional Poverty Index for Gauteng Province, South Africa: Evidence from Quality of Life Survey Data'. Social Indicators Research. Online first DOI 10.1007/s11205-015-1176-2, November 2015
- Everatt, D. (2015). 'Quality of Life in the Gauteng City-Region, South Africa'. Social Indicators Research. Online first DOI 10.1007/s11205-015-1127-y, October 2015
- 24. Cheruiyot, K., Wray, C., and Katumba, S. (2015). 'Spatial statistical analysis of dissatisfaction with the performance of local government in the Gauteng city-region, South Africa'. South African Journal of Geomatics, vol. 4, no. 3, 224-239
- 25. Mahomed, F. (2015). Examining attitudes towards

reproductive rights in the Gauteng City-Region of South Africa. Social Indicators Research, 122 (3). pp. 1-23

- 26. Bobbins, K. (2015). 'Promoting urban sustainability through managing ecological systems'. In Condie, J. & Cooper, A.M. (eds)Dialogues of Sustainable Urbanisation: Social Science Research and Transitions to Urban Contexts, Penrith: University of Western Sydney
- Peberdy, S., Crush, J., Tevera, D., Campbell, E., Zindela, N., Raimundo, I., Green, T., Chikanda, A. and G. Tawodzera (2015). 'Transnational entrepreneurship and informal cross-border trade with South Africa'. In J. Crush, A. Chikanda and C. Skinner (eds.) Mean Streets: Migration, Xenophobia and Informality in South Africa, Blue Weaver: Cape Town, pp. 207–228
- 28. Bobbins, K. and Culwick, C. (2015). 'Green growth transitions through a green infrastructure approach at the local government level: case study of the Gauteng City-Region'. Journal of Public Administration. 50(1), pp32–49
- 29. Trangoš, G. and Bobbins, K. (2015). 'City of extraction: gold mining exploits and the legacies of Johannesburg's mining landscapes'. Scenario 5: Extraction
- Culwick, C., Gotz, G. Katumba, S., Trangoš, G. and Wray, C. (2015). 'Mobility patterns in the Gauteng City-Region, South Africa'. Regional graphic in Regional Studies, Regional Science. Vol. 2: 308–310, 2015
- 31. Gotz, G. and Schäffler, A. (2015). 'Conundrums



Photographs by Amanda van der Walt

in implementing a green economy in the Gauteng City-Region'. In journal special issue edited by Simon, D. and Leck, H. Bearing the brunt of environmental change: understanding adaptation and transformation challenges in urban Africa. Current Opinion in Environmental Sustainability. 13: 79–87.

Works submitted and under review

- Abrahams, C. 'The future of non-racialism in South Africa'. Submitted to Robinson, J. Naidoo, P. Hefferman, A. and Bundy, C. What now? The next 20 years of South Africa's democracy. James Currey Publishers (entire publication under peer review; individual papers finalised)
- 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)
- 3. Cheruiyot, K. Wray, C. & Katumba, S. 'Patterns and determinants of dissatisfaction with government performance in the Gauteng City-Region, South Africa: A comparison across three government spheres', submitted to Urban Affairs Review journal (under review)
- 4. Chikozho, C. and Saruchera, D. 'Articulating the history and major departure points evident in post-apartheid South African national water law and policy'. Submitted to Water South Africa (under review)

- 5. Chikozho, C & Mapedza, E. 'In search of socio-ecological resilience and adaptive capacity: articulating the governance imperatives for improved canal management on the Barotse floodplain, Zambia.' Submitted for publication to the International Journal of the Commons (under review)
- Culwick C. and Patel Z. 'United or divided responses to complex urban issues: insights on the value of a transdisciplinary approach to flood risk'. Submitted to Area (accepted subject to revisions)
- Bobbins, K. 'Accounting for natural capital and ecosystem services in the Gauteng City-Region: lessons learned and opportunities for the future', submitted to the South African Geographical Journal (under review)
- Mushongera, D. 'Beyond GDP in measuring development progress: the GCRO Barometer'. Submitted to Development Southern Africa (under review)
- Trangoš, G. 'Claiming Johannesburg: Urban heritage and acts of symbolic appropriation'. Submitted to City and Society (under review)
- Trangoš, G. 'Deepening Division in Johannesburg'. Submitted to Perspecta 50 (under review)
- Vogel, C., Scott, D., Culwick, C. and Sutherland, C: Environmental problem solving in South Africa: Harnessing creative imaginaries to address 'wicked' challenges and opportunities. Submitted for publication to the South African Geographical Journal (under review).





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Presentations

- Christina Culwick (March 2016). 'Juggling sustainability and justice trade-offs in Gauteng's mega human settlement plans'. South African City Studies Conference, Durban, 18 March 2016
- Sally Peberdy (March 2016). Invited panellist Gauteng Policy, Research and Strategy Forum, Johannesburg, 2 March 2016
- Graeme Gotz (March 2016). 'Transport governance in the Gauteng City Region'. GPG conference Transport Authorities, 9 March 2016
- Sally Peberdy (February 2016), Presentation to the Grocery Retail Commission Inquiry of the Competition Commission, Pretoria, 22 February 2016
- Graeme Gotz (February 2016). 'Key human settlements questions and relevant (spatial) datasets for the GCR', Department of Planning, Monitoring and Evaluation in the Presidency Human Settlements Monitoring and Evaluation Workshop, 25 February 2016
- Graeme Gotz (January 2016). (On behalf of the Brookings Institution) 'South Africa's global gateway: Profiling the Gauteng City-Region's international competitiveness and connections', Gauteng Economic Development Workshop, 28 January 2016
- Sally Peberdy (December 2015). 'Migrant entrepreneurs in the informal sector of Johannesburg', roundtable hosted by the Ambassadors of Sweden and the Federal Republic of Somalia, 8 December 2015
- Samy Katumba (November 2015). 'Telling the story of the Gauteng City-Region through a map of the month'. Geoinformation Society of South Africa (GISSA-Gauteng), Pretoria, 26th November 2015
- Graeme Gotz (November 2015). Panel member on a commission entitled 'New spatial paradigm for the GCR – Spatial restructuring and transformation', Gauteng Spatial Planning Summit, 24 November 2015
- Samy Katumba (November 2015). 'A new age for web GIS applications in the GCR, Cape Town, 11-13 November 2015

- Samy Katumba (November 2015). 'Telling the story of the Gauteng City-Region through a map of the month' ESRI Africa User Conference, Cape Town, 11-13 November 2015
- Guy Trangoš (October 2015). 'EcoMobility online survey interim results', EcoMobility Press Conference, City of Johannesburg, 30 October 2015
- 13. Graeme Gotz (October 2015). 'Overview of government and governance: with a focus on the Gauteng City-Region'. Visiting delegation of Indian civil servants on a study tour organized by the Indian Institute of Human Settlements (IIHS), Johannesburg, 19 October 2015
- Richard Ballard (October 2015). 'An ontology of aspiration' Aspiration, Belonging and Exclusion, WISER workshop, 7-8 October
- Chris Wray (October 2015) 'Showcasing urban innovation through GCRO's urban data gallery', Partnership for Urban innovation Colloquium, Ekurhuleni, 1 October 2015
- Chikozho, C. & Mushongera D. (September 2015). The Missing Link: Articulating the Disjuncture between Economic Growth, Poverty Reduction and Social Inclusion in the Gauteng City-Region. Paper & Poster Presented at the World Social Sciences Forum, Durban International Conference Centre, 13-16 September 2015
- Kerry Bobbins (September 2015). 'Acid mine drainage and its governance in the Gauteng City-Region', South African Local Government Association (SALGA) Gauteng Province Executive Committee Quarterly Meeting, Johannesburg, 11 September 2015
- Darlington Mushongera (September 2015).
 'The GCRO Barometer', Human Development Capability Association (HDCA) Conference 2015, Georgetown University, Washington D.C. 11 September 2015
- Christina Culwick (September 2015). 'Green infrastructure in the Gauteng City-Region: Sustainable development and green job opportunities', Promoting Green Jobs in the Natural Resources Sector Course, DBSA, 10 September 2015

- 20. Richard Ballard (September 2015). 'A close reading of the policy: reasons, ambiguities and assumptions'. GCRO, Wits and Gauteng Department of Human Settlements half day symposium on Mega Human Settlements, Wits Club, 3 September
- Guy Trangoš (September 2015). 'Claiming Johannesburg: urban heritage and acts of symbolic appropriation', EUGEO 2015 conference, Budapest, 2 September 2015
- 22. Caryn Abrahams (August 2015). 'The future depends on now: Forecasting social attitudes', CANRAD Conference, "Non-racialism: Debates and controversies", Nelson Mandela Metropolitan University, 29 August 2015
- Christina Culwick (August 2015). 'Social justice and sustainability transitions in the Gauteng City-Region', RC21 Conference, Urbino, Italy, 28 August 2015
- 24. Chris Wray (August 2015) 'Analysing key challenges in the Gauteng City-Region (GCR) through a range of GIS outputs, applications and open data', GPG GIS forum, 27 August 2015
- Graeme Gotz (August 2015). 'Urbanisation and its implications: appropriate policy responses'. Isandla National Roundtable: Transforming the urban landscape, Cape Town, 27 August 2015
- Guy Trangoš (August 2015). 'What Smart City?' Panel chair, Smart | City | Region Symposium, 26 August 2015
- 27. Richard Ballard (August 2015). 'The policy idea of mega human settlements in Gauteng' Conference Organised by the Research Project on Employment, Income Distribution and Inclusive Growth, University of Cape Town, 17-18 August
- 28. Christina Culwick (August 2015). 'Green growth transitions through a green infrastructure approach at the local government level: case study of the Gauteng City-Region', West Rand District municipality Green IQ/Climate change dialogue, Randfontein, 14 August 2015
- 29. Christina Culwick (August 2015). 'Facilitating the uptake of a green infrastructure approach in municipal planning: the case of the Gauteng City-Region', Impumelelo Master Class in Public Service Excellence, Johannesburg, 13 August 2015
- 30. Kerry Bobbins (August 2015). 'Incorporating green infrastructure into Gauteng

City-Region planning', Solid Green, Johannesburg, 7 August 2015

- 31. Caryn Abrahams (August 2015). 'Global anti-racism networks: structure, ethos and institutional makeup', Anti-Racism Network South Africa Workshop, Johannesburg, 1 August 2015
- 32. Caryn Abrahams (July 2015). 'The myth of multiculturalism in the church: structural anti-racism', Jesuit Institute seminar on "Racism: The Conversations We Are Not Having", Parktown, 28 July 2015
- 33. Kerry Bobbins (July 2015). 'Incorporating green infrastructure into Gauteng City-Region planning', Wits Global Change MSc Programme, Centre for Sustainability in Mining and Industry (CSMI), 22 July 2015
- 34. Claudious Chikozho (July 2015). 'Revisiting Africa's Political Economy Landscape: Comparatively Articulating the National Macro-Economic Policy and Institutional Trajectories of Botswana, South Africa and Zimbabwe'. Paper Presented at the UNECA Regional Conference on Building Democratic Developmental States for Economic Transformation in Southern Africa, Pretoria, South Africa, 20-22 July 2015
- 35. Graeme Gotz (July 2015). 'Spatial inequality and financial sustainability in the Gauteng City Region'. National Treasury City Budget Forum, Pretoria, 8 July 2015
- Graeme Gotz (July 2015). 'Overview of the GCRO and its work', Johannesburg City Improvement District (CID) Forum, Johannesburg, 7 July 2015
- Graeme Gotz (July 2015). 'Urban development issues in the Gauteng City-Region'. National Treasury Pre-Budget Stakeholder Engagement Forum, Pretoria, 2 July 2015
- Graeme Gotz (July 2015). 'The Integrated Urban Development Framework (IUDF)'. UCT Mphil in Development Policy & Practice, Cape Town, 1 July 2015
- 39. Kerry Bobbins (June 2015). 'Promoting the provision of sustainable infrastructure through a green infrastructure planning approach', CSIR Sustainable Infrastructure Seminar, Pretoria, 25 June 2015
- 40. Chris Wray (June 2015) 'The potential of an African Urban Observatory and mapping the way

forward', African Capital Cities Sustainability Forum, CSIR Pretoria, 23 June 2015

- Richard Ballard (June 2015) Panelist for the Antipode-sponsored 'Institute for Geographies of Justice', Johannesburg
- 42. Kerry Bobbins (May 2015). 'Green growth transitions through a green infrastructure approach at the local government level', ESCP Europe, Berlin, 28 May 2015
- 43. Christina Culwick (May 2015). 'Green growth transitions through a green infrastructure approach at the local government level: Case study for the Gauteng City-Region', International Conference on Innovation and Sustainability, Ekurhuleni, 28 May 2015
- 44. David Everatt (May 2015). 'Public perceptions regarding progress after one year in office', Gauteng Provincial Government EXCO Lekgotla, Velmore Estate, 27 May 2015
- 45. Sally Peberdy (May 2015). 'Xenophobia and the GCR', Gauteng Provincial Government EXCO Lekgotla, Velmore Estate, 27 May 2015
- 46. Koech Cheruiyot (May 2015). 'Spatial statistical analysis of dissatisfaction with the performance of local government in the Gauteng City-Region, South Africa', 2nd International Conference on Applied Methods in Social Sciences: People, Goods and Regions in a Globalized World, Poznan, Poland, 22-23 May 2015

- 47. Chris Wray (May 2015). 'GCRO Ward profile viewer', Gauteng Ntirhisano Service Delivery War Room, Midvaal, 21 May 2015
- Guy Trangoš (May 2015). 'Planetary Urbanism and the GCR', Department of Architecture, University of Johannesburg, FADA, 20 May 2015
- Darlington Mushongera (May 2015). 'Caring Cities Barometer', special session at the Metropolis Conference, Buenos Aires, Argentina, 17 May 2015
- 50. Sally Peberdy (April 2015). 'Migrant entrepreneurs in the City of Johannesburg', GCRO Brown Bag Lunch Seminar, 29 April 2015
- 51. Richard Ballard (April 2015) Panelist 'Middle Class, Consuming Class?' organised by the Wits 'Critical Research in Consumer Culture' network.

Media publications and appearances

- Guy Trangoš was interviewed by SABC and Joburg TV on the interim results of the GCRO's online EcoMobility survey (30 October 2015)
- Christina Culwick was interviewed by JoburgToday.tv on Transport in Johannesburg (5 October 2015)
- Caryn Abrahams was part of a radio panel discussion alongside Mzwanele (Jimmy) Manyi entitled



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'Racial Trends in Workplace' on The Leadership Platform hosted by Arian Groenewald, Cliff Central Radio (27 July 2015)

- Kerry Bobbins was interviewed by SAfm on the Green Talents programme (13 June 2015)
- Sally Peberdy was interviewed by 'Impact', VIBE.105.5 Toronto, Canada (radio) (11 June 2015)
- Christina Culwick and Kerry Bobbins wrote 'Green infrastructure: a way to support development in Africa' for UrbanAfrica.net (2015)
- Chris Wray wrote 'An open data revolution for the Gauteng City-Region?' for UrbanAfrica.net (2015)
- Sally Peberdy took part in a debate on the economic impact of xenophobia hosted by eTV Sunrise (1 May 2015)
- Chris Wray was interviewed by Classic FM focusing on the maps in the book 'Changing Space Changing City: Johannesburg after Apartheid' (29 April 2015)
- Sally Peberdy and the GCRO's research on informal sector entrepreneurship was cited by AfricaCheck and the Sunday Times (20 April 2015)
- Sally Peberdy was interviewed on 'Inside Story' on Al Jazeera TV (18 April 2015)
- Kerry Bobbins was interviewed by Science Year 2015 on the Green Talents programme (14 April 2015)
- Christina Culwick wrote 'Access Denied' for UrbanAfrica.net (6 April 2015).

Wider academic citizenship

As a research organisation embedded in two universities, it is important that the GCRO's researchers are good academic citizens. Academic citizenship entails a mix of external examining, supervision, teaching and support. The following provides an indication of the breadth of contributions:

 Caryn Abrahams co-facilitated and participated in the Wits Centre for Diversity Studies' two-day 'National Race Dialogues', which brought SRC leadership from across the country together, 29-30 September 2015

- Caryn Abrahams guest-lectured on the Wits Geography Sustainability Course
- Caryn Abrahams reviewed a journal article for the Journal of Asian and African Studies
- Caryn Abrahams continued to be an external examiner at the Nelson Mandela Metropolitan University
- Caryn Abrahams co-supervised an MA student at the Wits School of Governance
- Caryn Abrahams supervised a PhD student at the University of Johannesburg
- Caryn Abrahams sat on an MA panel defence at the Wits School of Governance on the 11th of December 2015
- Chris Wray and Samy Katumba presented a lecture and prepared a student practical on Web GIS for the Remote Sensing/GIS MSc Programme at Wits on 19 May 2015
- Chris Wray presented lectures on 'Analysing key challenges in the Gauteng City-Region (GCR) through GIS and a map of the month' and 'Web GIS' to the Wits' second year geography GIS class on 1 October 2015
- Chris Wray reviewed a journal article for the South African Geographical Journal
- Christina Culwick participated in a panel discussion at a University of Cambridge Institute for Sustainability Leadership event on "What does a 'smart African city' look like? Designing a better future", 11 November 2015
- Christina Culwick reviewed articles for the following journals: Local Environment, South African Geographical Journal, Landscape and Urban Planning
- Claudious Chikozho examined 1 Ph.D. Thesis and 1 Masters' Degree Thesis from the UNISA Graduate School of Leadership
- Darlington Mushongera chaired a panel session at the Economies of Regions Learning Network (ERLN) Conference in Pretoria, 15 October 2015
- Darlington Mushongera was invited to review a journal article for the South African Journal of Geomatics
- Darlington Mushongera was invited to review two research reports for the Research



Project on Employment, Income Distribution and Inclusive Growth (REDI 3x3) based at University of Cape Town

- Graeme Gotz participated in a facilitated discussion hosted by CUBES and the African Urban Research Initiative (AURI) on 'Inclusive growth in the context of inequality', 14 May 2015
- Graeme Gotz participated in a panel discussion at an African Association of Business Schools Conference, on urbanisation and design of cities for the future, 18 May 2015
- Kerry Bobbins was selected as one of 20 International Social Science Council (ISSC) World Social Science (WSS) fellows and attended a fellowship seminar on Big Data in the Environmental context in Xiamen, China from 30 November to 5 December 2015
- Kerry Bobbins presented a guest lecture on Green Assets and Infrastructure for the Global Change MSc programme at Wits on 22 July 2015
- Kerry Bobbins served as a discussant on a paper at a workshop on International Climate Policy in Berlin, Germany
- Kerry Bobbins took up a research stay at the German Institute of Urban Affairs (DifU) in May 2015 as part of the Green Talents Programme
- Kerry Bobbins was nominated as one of Mail and Guardian's Top 200 Young South Africans and attended an awards ceremony in August 2015
- Kerry Bobbins was selected as one Africa's 100 Brightest Young Minds (BYM) and attended the BYM Summit, 16-20 July 2015
- Koech Cheruiyot is supervising an MComm (Development Finance) student at the University of Cape Town
- Richard Ballard and Samy Katumba ran a session in the Wits Planning and Housing masters orientation programme on the GCRO map of the month series in February 2016
- Richard Ballard examined 6 masters dissertations for Wits, UJ, UP, NWU and UKZN
- Richard Ballard peer reviewed 13 journal articles and book chapters
- Richard Ballard supervised the following UKZN PHD students (Ndwa Tshishonga, Dorothee

Holscher, Efe Isike, Clive Greenstone - the latter two having submitted for examination), and UKZN master students (Alice Morrison, Zethembe Mseleku both of whom have completed). He has also started to supervise two honours students (Vicky Phiri and Siphiwe Silinda) and will be supervising Abraham Oreoluwa Ajibade (Development Planning Masters) and Geniver Tebeila (Masters Environmental Sciences)

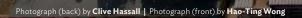
- Richard Ballard was external examiner on the UCT human geography undergraduate and honours programme
- Sally Peberdy met with Paola Piscitelli of the University Luave of Venice to discuss her research on Mozambican women cross border traders
- Sally Peberdy met with Zini Godden who was representing UNCHR and the ILO to discuss the place of migrants and refugees in the Gauteng economy
- Sally Peberdy presented the results of her work on cross border trade to a 4th year class of Wits University Digital Arts students who are using the data in a project to develop a set of interactive visualisation
- Sally Peberdy reviewed seven academic journal articles between April 2015 and December 2015 for the journals African Affairs, Archiv Orientalni, Journal of Historical Sociology, Journal of Immigrant and Refugee Studies, South African Historical Journal, Tijdschrift voor Economische en Sociale Geografie and Urban Forum
- Sally Peberdy was the external examiner for a PhD thesis from UNISA and an MA theses from UCT and Fort Hare University
- Samy Katumba was elected as a member of the Gauteng Committee of the Geoinformation Science Society of South Africa (GISSA).

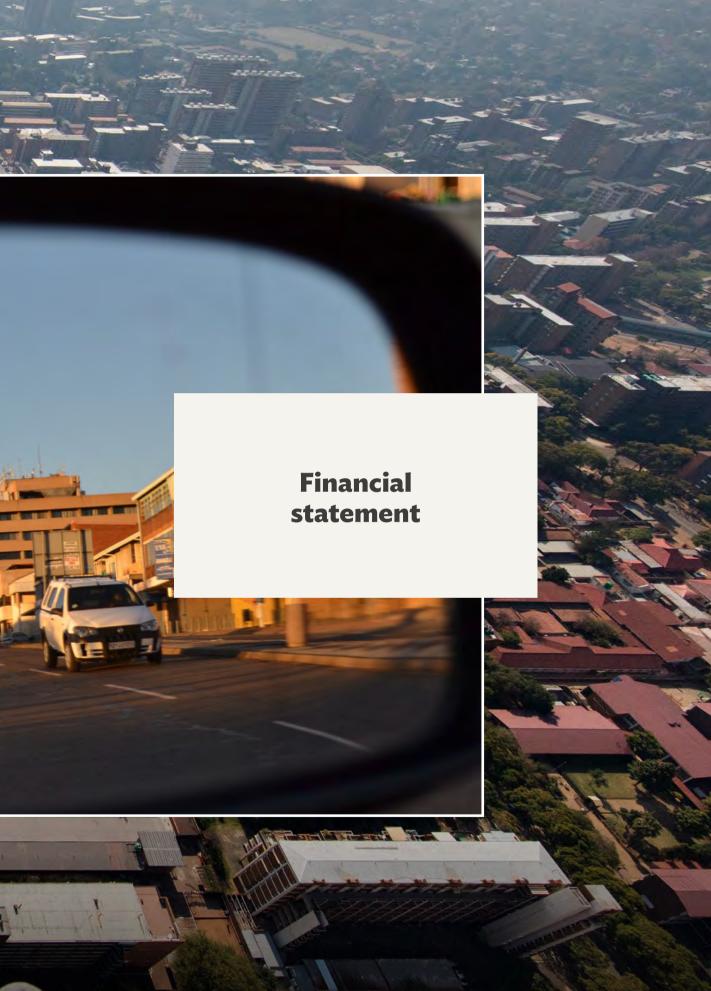




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Report of factual findings in respect of the financial information of the Gauteng City-Region Observatory

We have performed the procedures agreed with you and enumerated below with respect to the Financial Information of the Gauteng City-Region Observatory for the period 1 April 2015 to 31 March 2016. Our engagement was undertaken in accordance with the International Standard on Related Services applicable to agreed-upon procedures engagements. The responsibility for determining the adequacy or otherwise of the procedures agreed to be performed is that of the Gauteng City-Region Observatory. The procedures were performed solely to assist you in the reporting of the Financial Information of the Gauteng City-Region Observatory and are summarised as follows:

- Obtain a project schedule of income and expenditure of the Institution for the period 1 April 2015 to 31 March 2016.
- 2. Test the mathematical accuracy of the project schedule.
- 3. Trace the total income recorded to appropriate source documentation.
- 4. Select a sample of 10% of the expenses recorded for the year and agree to supporting documentation.
- 5. Obtain a general ledger analysis of the Institution from the University of the Witwatersrand for the period 1 April 2014 to 31 March 2015 to compare the accounting records of the GCRO to that of the University of the Witwatersrand and prepare Statements of Income and Expenditure, and Assets and Liabilities for the period ended 31 March 2016 for the GCRO.

We report our findings below:

 Obtained a project schedule of income and expenditure of the Institution for the period 1 April 2015 to 31 March 2016.

- 2. Tested the mathematical accuracy of the project schedule.
- 3. Traced the total income recorded to appropriate source documentation.
- 4. Selected a sample of 10% of the expenses recorded for the year and agreed to supporting documentation.
- 5. Obtained a general ledger analysis of the Institution from the University of the Witwatersrand for the period 1 April 2014 to 31 March 2015 and compared the accounting records of the GCRO to that of the University of the Witwatersrand and prepared Statements of Income and Expenditure, and Assets and Liabilities for the period ended 31 March 2015 for the GCRO.

No exceptions were noted as a result of the procedures performed above.

Because the above procedures do not constitute either an audit, review or other assurance engagement made in accordance with International Standards on Auditing, International Standards on Review Engagements or International Standards on Assurance Engagements, we do not express any assurance on the financial information for Gauteng City-Region Observatory for the period 1 April 2015 to 31 March 2016.

Had we performed additional procedures or had we performed an audit or review of, or other assurance engagement on the financial information in accordance with International Standards on Auditing, International Standards on Review Engagements or International Standards on Assurance Engagements, other matters might have come to our attention that would have been reported to you.

The report is supplied on the basis that it is for the sole use of the parties to whom it is addressed and exclusively for the purposes set out herein. No party other than those to whom it is addressed may rely upon this report for any purpose whatsoever.

Copies of our report may be made available to your professional advisers provided that it is clearly understood by the recipients that they enjoy such receipt for information only and that we accept no duty of care to them in respect of our reports and letters. Furthermore, the reports and letters are to be used by them only for purposes stated herein. The report must not be made available or copied in whole or in part to any other party without our prior written consent, which consent may be given or withheld at our absolute discretion. This limitation will obviously not apply to the provision of this report in compliance with any order or court, subpoena or other judicially enforceable directive.

This report relates only to the accounts and items specified above and does not extend to any financial statements of Gauteng City-Region Observatory, taken as a whole.

D Desai Director Johannesburg 13 June 2016



Photograph by Gareth Pon



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Photograph (back) by Clive Hassall | Photograph (front) by Holger Deppe

