

GAUTENG CITY-REGION OBSERVATORY

# ANNUAL REPORT 2013/4





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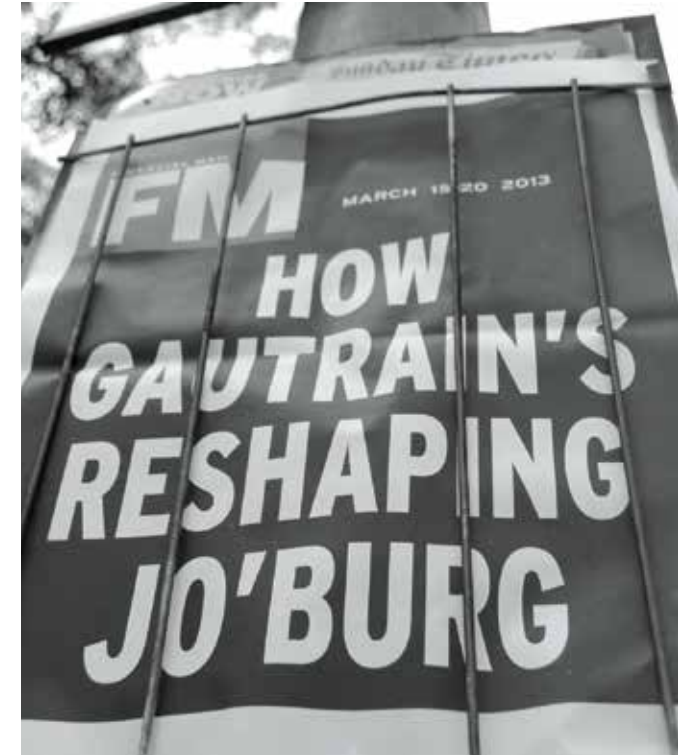


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## CONTENTS

<b>FOREWORD</b>	<b>2</b>
<b>INTRODUCTION &amp; OVERVIEW</b>	<b>4</b>
OVERVIEW	5
<b>GOVERNANCE</b>	<b>8</b>
LEGAL STATUS	10
STAFF AND STRUCTURE	10
GCRO ORGANOGRAM	11
STAFF DEVELOPMENT	11

<b>APPLIED RESEARCH</b>	<b>12</b>
GOVERNMENT, GOVERNANCE & INTERGOVERNMENTAL RELATIONS	12
FUTURE REGIONAL ECONOMIES	14
SUSTAINABILITY IN THE GCR	16
LIFE AND PEOPLE IN THE GCR	21
SPACE AND MOBILITY	22
DATA, DATA INFRASTRUCTURE, DATA VISUALISATION, INDICATORS AND BENCHMARKS	25

<b>SUPPORT TO GOVERNMENT</b>	<b>32</b>
<b>ACADEMIC CONTRIBUTIONS</b>	<b>34</b>
<b>PUBLIC PLATFORMS</b>	<b>40</b>
<b>FINANCIAL REPORT</b>	<b>42</b>

## FOREWORD

# ROB MOORE

As I stand down from my time on the Board of the Gauteng City-Region Observatory (GCRO) on which I have served since its inception, and which I have also chaired for the last two years, I do so with considerable pride in this bustling, busy and exciting organisation that we have built over these past six years. The GCRO has shown that universities can collaborate with provincial and local government, securing high quality data and incisive analytic outputs generated through the academic processes typical of the university, but making them policy-relevant for government.

In the last year, as GCRO ended its second three-year cycle, the Board also commissioned a Review of the organisation to ensure we are on track with meeting the goals set out originally in 2007/8 when the organisation was launched. I am extremely pleased that the Review Panel – comprising senior academics from various universities, as well as public intellectuals, professionals and others – gave the GCRO a resounding ‘thumbs up’ while also signalling the challenges that lie ahead, including the need to raise the global profile of the Observatory and of the Gauteng City-Region (GCR) itself.

During this year, we have seen the GCRO again generating a growing number of academic outputs, from books to journal articles, as well as producing a wide range of outputs relevant to citizens and government officials alike. We also saw a real deepening of its intellectual capacity, with a number of highly qualified, energetic staff joining the team at the Observatory.

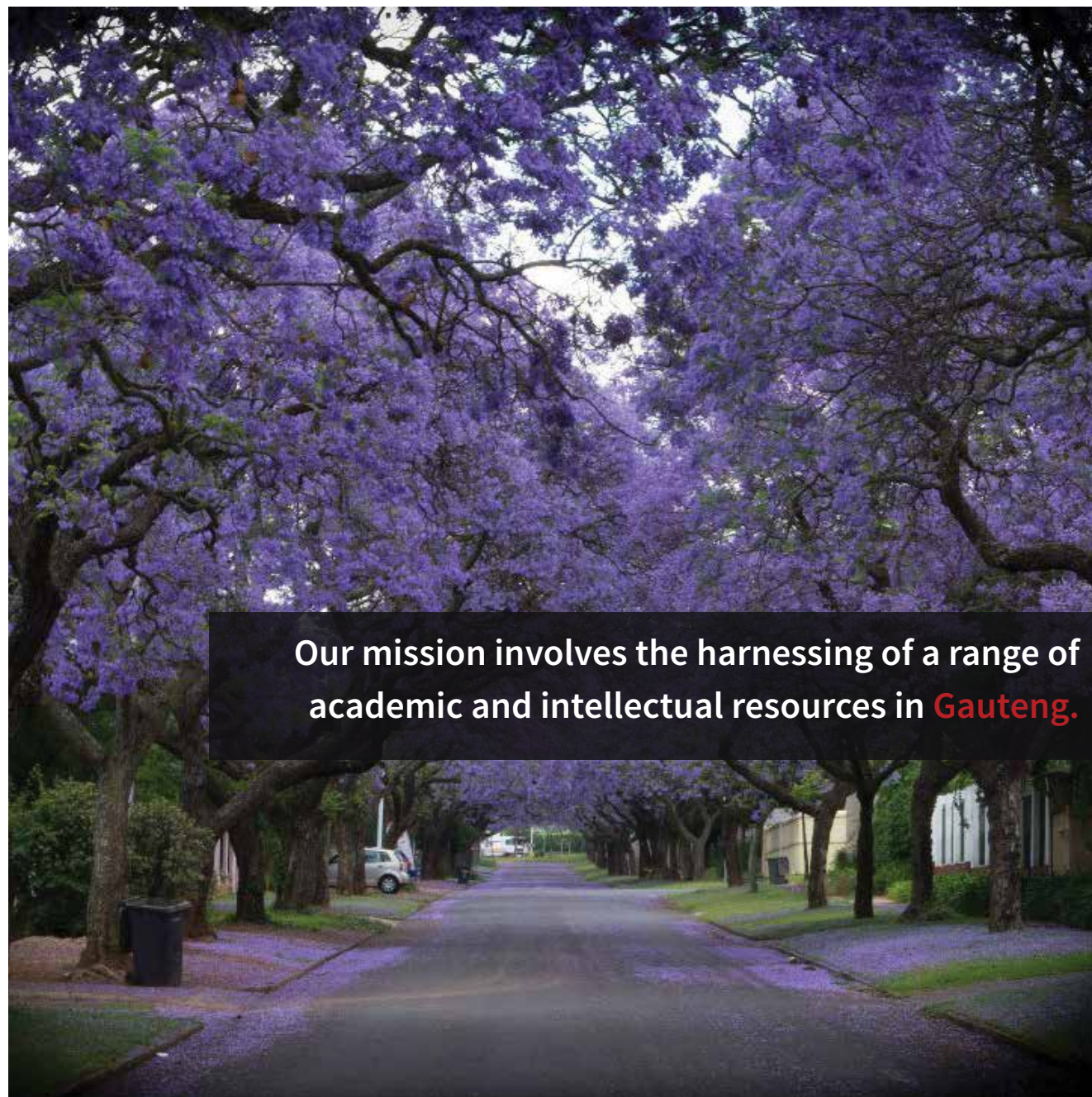
Key among the products this year was the launch of the second GCR Review, an interactive, web-based facility that showcases the GCRO’s ‘state of the art’ knowledge about the city-region, in forms, images and text that are accessible to all. The review was (and is) the culmination of two years of GCRO project work combined with on-going research into more interactive and accessible websites (and, in the future, other tools to access data). The launch was attended by hundreds of people, and opened by Premier Nomvula Mokonyane, who took the occasion to heap praise on the work of the GCRO.

During the year in review, GCRO awarded the tender for our largest ever ‘Quality of Life’ survey, which will yield data accurate to ward level. Crucially, this is a joint provincial/local government



initiative, as the three metropolitan municipalities – Ekurhuleni, Johannesburg and Tshwane – co-invested to ensure that such a large sample could be realised.

I will now leave the GCRO Board, confident that the organisation is in flourishing health, firmly and innovatively steered by its strong leadership, and sustained by the high quality and committed team of professionals who fulfil the intellectual and administrative purposes of the Observatory. This team carries the very strong affirmation and appreciation from myself and the rest of the Board. The organisation will go ahead now with the process of devising the next five-year strategic framework, will continue to recruit new talent, and will look forward to the additional support promised from our partners in government. A good year behind us, and a very promising future ahead!



Our mission involves the harnessing of a range of academic and intellectual resources in **Gauteng**.

## INTRODUCTION & OVERVIEW

# 01.

THIS REPORT COVERS THE APRIL 2013 TO MARCH 2014 FINANCIAL YEAR AND MARKS THE END OF THE FIRST FIVE-YEAR CYCLE IN THE LIFE OF THE GAUTENG CITY-REGION OBSERVATORY'S (GCRO) – GCRO WAS PUBLICLY LAUNCHED ON 11 SEPTEMBER 2008, BUT REALLY ONLY BECAME FUNCTIONAL IN 2009. IT IS A PARTNERSHIP BETWEEN THE GAUTENG PROVINCIAL GOVERNMENT (GPG), LOCAL GOVERNMENT IN GAUTENG, THE UNIVERSITY OF JOHANNESBURG (UJ) AND THE UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG (WITS), LATER JOINED BY THE GAUTENG BRANCH OF THE SOUTH AFRICAN LOCAL GOVERNMENT ASSOCIATION (SALGA).

GCRO is an innovative response to the socio-economic, cultural, governance, political, growth and other challenges related to the cluster of cities that makes up the Gauteng City-Region (GCR), the economic engine of South and southern Africa. At the end of these first five years, and based on the successes GCRO has enjoyed in the first few years of its existence, all partners have re-committed to a new Memorandum of Agreement (MoA) that stretches the partnership to 2019.

Behind the motivation for setting up GCRO is a vision for South Africa's economic heartland as a region that is competitive, spatially integrated, environmentally sustainable and socially inclusive. GCRO is charged with helping to build the knowledge base that government, business, labour, civil society and citizens all need to make this vision a reality. GCRO collects data and benchmarks the city-region, provides policy analysis and support, undertakes applied research and publishes critically reflective academic work. We make all our data and findings accessible to government officials, citizens and others who need to benefit

from the work of GCRO, while also being good academic citizens and feeding data and resources back into teaching, publishing and so on.

It is challenging to do justice to the academy's demand for intellectual independence and methodological rigour (and publication!) and government's demand for accessible, accurate, policy-relevant, high quality data and recommendations, while also seeking to help citizens better understand the space they occupy. But rising to that challenge is what makes a successful GCRO researcher, and we are proud of the staff who are with us now, and others who have passed through GCRO on their way to further academic studies, tenured Chairs, private sector employment and the like. We have all enjoyed the compelling mix of academic and policy work, which makes the Observatory an exciting and stimulating place, as we seek to straddle different arenas of work and satisfy the needs of very different partners and stakeholders.



## OVERVIEW

GCRO is at the end of a three-year funding cycle, the first the organisation has completed with a full staff complement and the end of the first five-year period of life for the GCRO. These are important milestones in the life of the Observatory. The building phase – building capacity, skills, reputation, datasets, profile and so on – is coming to an end. These activities continue, but they now focus on an existing, capacitated Observatory. At the end of the 2013/14 financial year, the first full five-year cycle came to an end (the GCRO was launched in September 2008, and the Director was appointed a month later, so 2008 is not really counted as a functional year for the GCRO) in March 2014 and an external review of the Observatory was conducted, in line with the MoA signed between the founding partners, namely the GPG, UJ, and Wits.

At five years of age, GCRO has become an established part of the life of our university and government partners, and we are increasingly turned to as a source of accurate data, high quality maps and policy expertise. This flows from an impressive set of



PHOTO: CRAIG HIGSON-SMITH

completed projects, massive data gathering, refinement and cleaning, geographical information system (GIS) mapping, policy work and so on, all done to the best academic standards and published (where possible) in peer reviewed journals. The *raison d'être* of the GCRO is to rely on review of our work by academic peers locally and globally, to ensure that the data and analysis we provide to government is of the highest quality. This is why in addition to the ambitious project load, staff (including interns) are required to publish in peer reviewed journals. This is a key output, both in locating GCRO on the global academic map, and in ensuring that standards are maintained.

During the period under consideration in this report, GCRO was subject to an external review by senior academics and sector experts. Without quoting the (draft) report at great length, it is worth noting the opening comments of the review:

- » There was unanimous appreciation of the quantity and quality of the output from the GCRO from both government partners and other stakeholders during its first five-year period of operation. At the outset it must be acknowledged that the GCRO has achieved a significant and impressive record in setting up the organisation, establishing relationships of practice and undertaking major pieces of research that are well regarded.
- » There was unanimous understanding that the GCRO needed to continue as a non- governmental entity, based in academia, as this permitted a level of confidence in its work due to its independent research capability – and also separated the GCRO team to some extent from the immediate pressures on government.
- » All partners want the GCRO to continue, and indeed increase its reach of operation through wider government partnerships (e.g. Metro local government partners becoming more involved in funding and agenda setting).
- » The major 'Quality of Life' survey and the OECD report are seen as the most important outputs.

The review team – which interviewed the (then) Premier of Gauteng, some members of the Gauteng executive (MECs), public officials from different spheres, academics, Research Advisory Committee (RAC) members and others – concluded that GCRO had been very successful in building an institution from scratch. The GCRO is not a simple institution to create or manage: it accounts to multiple partners with different if complementary needs and demands, governed by different statutes and regulations; nonetheless, our major projects appear to have been well-received. The GCRO design concept – a university/ government partnership, with a university base providing a degree of autonomy and authority as well as (not often mentioned) the removal of any profit motive – was validated, as was the initial execution of the concept.

Now the challenge facing GCRO is sustaining what GCRO has done well; jettisoning that which has not worked well; and innovating new approaches, methods and objects of research. All this is aimed at ultimately proposing a robust set of arguments about making the GCR a better managed space and a better space in which to live, do business, innovate into the future, and so on. In simple terms, this means raising the game above the provision of basic services to a more sophisticated understanding of what the GCR needs to collaborate better internally, if it is to then compete more effectively globally. This is an intellectual battle, as well as a policy and practical one. We therefore have to take the fight to the academic literature as much as to politicians and public officials, and to the private sector, labour and others.

Before we describe the year in detail, it is worth remembering the lag time between a research project (design, field, analysis, writing, editing, proof reading and so on) ... and publication time. Below you will find a list of 2013/14 projects that are complete but whose outputs will only appear in the next financial year; as well as the planned outputs (not all publications, just the 'output' load) for 2014/15. These exclude all the academic journal articles we produce, and focuses on our own outputs as GCRO.

## IN PRODUCTION OR IN PRINT

SCAVENGERS PHOTO-ESSAY

GCRO BAROMETER

MOBILITY IN THE GCR

ACID MINE DRAINAGE OCCASIONAL PAPER

HIGHER EDUCATION PROVOCATION

ANATOMY OF THE CRISIS OCCASIONAL PAPER

INFRASTRUCTURE PROVOCATION (BY PROF WILLIAM GUMEDE)



## PLANNED OUTPUTS FOR 2014/15

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- » QUALITY OF LIFE PRESENTATIONS AND MUNICIPAL REPORTS
- » PERIPHERIES REPORT
- » POVERTY AND INEQUALITY OCCASIONAL PAPER
- » GREEN ECONOMY OCCASIONAL PAPER
- » GREEN INFRASTRUCTURE OCCASIONAL PAPER
- » POLITICAL ECONOMY OF INFRASTRUCTURE OCCASIONAL PAPER
- » SPACE ECONOMY JOURNAL SPECIAL EDITION
- » METABOLIC FLOWS REPORT
- » METRO SPHERE OF GOVERNMENT OCCASIONAL PAPER
- » SOCIAL COHESION OCCASIONAL PAPER
- » SPATIAL IMAGINARIES REPORT
- » XENOPHOBIA BOOK (UKZN PRESS)
- » TRADE OCCASIONAL PAPER
- » TRADE RESEARCH REPORT
- » MINING LANDSCAPES REPORT
- » FOOD SECURITY OCCASIONAL PAPER
- » ANTI-RACISM OCCASIONAL PAPER
- » UNTANGLING TRANSPORT *PROVOCATION*
- » WATER SECURITY *PROVOCATION*
- » THREE WORKING PAPERS ON GREEN INFRASTRUCTURE CASE STUDIES
- » STATE FUNCTION IN INFRASTRUCTURE PLANNING *PROVOCATION*
- » REAL ESTATE OCCASIONAL PAPER
- » SPATIAL STATISTICAL ANALYSIS OF QUALITY OF LIFE DATA BRIEF
- » URBAN GALLERY AND ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI) URBAN OBSERVATORY ONLINE VIEWER
- » NEW GCRO WEBSITE
- » GIS WEBSITE UPGRADE
- » QUALITY OF LIFE SURVEY VIEWER UPGRADE
- » THREE ADVANCED DATA VISUALISATIONS
- » VIGNETTES AND INTERACTIVE GRAPHS
- » MUNICIPAL GCR WORKSHOPS
- » ON-GOING ACADEMIC ARTICLES AND BOOKS
- » ON-GOING 'FACES OF THE CITY' SEMINARS
- » ON-GOING MASTERS AND DOCTORAL SUPERVISION
- » ON-GOING SUPPORT TO LOCAL AND PROVINCIAL SPHERES OF GOVERNMENT

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THE GCRO BOARD REGULARLY (AND CORRECTLY) REMINDS GCRO NOT TO BE OVER-AMBITIOUS, AND THIS IS AN AMBITIOUS SCOPE OF WORK WHICH REFLECTS THE PACE AT WHICH GCRO OPERATES. NOT ALL OF THESE OUTPUTS WILL BE COMPLETED DURING 2014/15, BUT WE AIM TO COMPLETE AS MANY AS POSSIBLE AND WORK ON EACH WILL BE UNDERWAY.

# GOVERNANCE

# 02.

GCRO is overseen by a Board, made up of two representatives from UJ – Prof Tshilidzi Marwala, Deputy Vice-Chancellor: Research, Innovation and Post Graduate Studies, and Prof Fiona Tregenna from the economics department; two representatives of Wits, Prof Rob Moore, Deputy Vice-Chancellor: Advancement and Partnerships and Chair of the GCRO Board, and Prof Anne McLennan from the Wits School of Governance. The Head of the Gauteng Planning Commission (GPC), Mr Rashid Seedat, sits on the Board alongside Ms Annette Griessel, Deputy Director-General: Policy and Governance from the Office of the Premier, GPG. The local sphere is represented by SALGA Gauteng through Mr Dan Mashitisho, Municipal Manager: Mogale City, and Councillor Pinky Mkhonza.

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. A key mechanism in this regard is the Research Advisory Committee (RAC), made up of senior academics and public intellectuals from a range of academic and other institutions. The RAC is not a decision-making structure, but a sounding board and quality assurance mechanism for GCRO

and is now a fully functioning part of GCRO's work. Revised and re-engineered in 2012/13, the RAC is increasingly being drawn into GCRO work on an individual and small group basis, as well as functioning as an entity in its own right.

The GCRO Board is the most important governance structure. The Board meets at least thrice yearly. It receives, considers and debates an annual workplan and associated budget, which sets out the work of the Observatory for each twelve-month period, in turn drawn from a three-year Strategic Framework approved by the Board at the outset of each cycle. All these documents are available on the GCRO website. 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. The audited reports for 2013/14 are attached and mark our sixth successive clean, unqualified audit.

During 2013, the Board adopted a new Constitution, and the partner institutions signed a new MoA, committing all partners to another five-year vision for the GCRO. In response, the Board

## THE GCRO BOARD

PROFESSOR ROB MOORE

PROFESSOR DAVID EVERATT

MS ANNETTE GRIESSEL

PROFESSOR TSHILIDZI MARWALA

MR DANIEL MASHITISHO

PROFESSOR ANNE MC LENNAN

CLLR PINKY MKHONZA

PROFESSOR ROB MOORE

MR RASHID SEEDAT

PROFESSOR FIONA TREGENNA



## THE RESEARCH ADVISORY COMMITTEE

DR AURELIA SEGATTI	MR RUDI DICKS	PROFESSOR FETHI AHMED
DR CARYN ABRAHAMS	MS LISA VETTEN	PROFESSOR HARRISON
DR CHRISTO VENTER	PROFESSOR CHRIS ROGERSON	PROFESSOR MICHAEL MULLER
DR LULU GWAGWA	PROFESSOR EDGAR PIETERSE	PROFESSOR REX VAN OLST
DR NOOR NIEFTOGODIEN	PROFESSOR THEA DE WET	PROFESSOR SEERAJ MOHAMED
MR DUMISANI DAKILE	PROFESSOR WILLIAM GUMEDE	
MR MFANAFUTHI TSELA	PROFESSOR ALAN MABIN	
MR MICHAEL SACHS	PROFESSOR BHEKIE MAMBA	
MR NEESHAN BOLTON	PROFESSOR COLLEEN VOGEL	

requested GCRO to prepare a five-year strategic framework, one that would match the time period in the MoA and allow the Observatory to design more complex, multi-year projects.

The GCRO Board adopted a final Constitution for the organisation, which was subsequently signed off by the Office of the Premier and the two Vice-Chancellors. The time taken to finalise the document reflects the complexities of a multi-stakeholder partnership amongst very different partners; as well as the care taken by all parties to 'get it right' rather than rush the process. The Constitution was also important in that the local sphere, through SALGA, was formally made a Board member with two seats, and an equal partner with the universities and the provincial government.

GCRO has been visited twice by the Oversight Committee of the Premier's Office and Legislature (OCPOL) as part of the Committee's oversight role in relation to the work of the Office of the Premier. Furthermore, the Executive Director presents progress reports to the senior management structures of both partner universities and government. Remaining fully

accountable to four partner institutions continues to be a priority for GCRO.

GCRO is a publicly funded unit and we regard ourselves as answerable to the anchor universities, governments (local and provincial) and to the citizens 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 the 'Quality of Life' surveys of 2009 and 2011 have already been given to a range of individuals and research agencies; a data viewer allows anyone to log onto the website and run cross-tabulations and download the results; and the 2013 data will soon be made available in the same way. 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 the data 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.



PHOTO: SIGOURNEY FRIER



## LEGAL STATUS

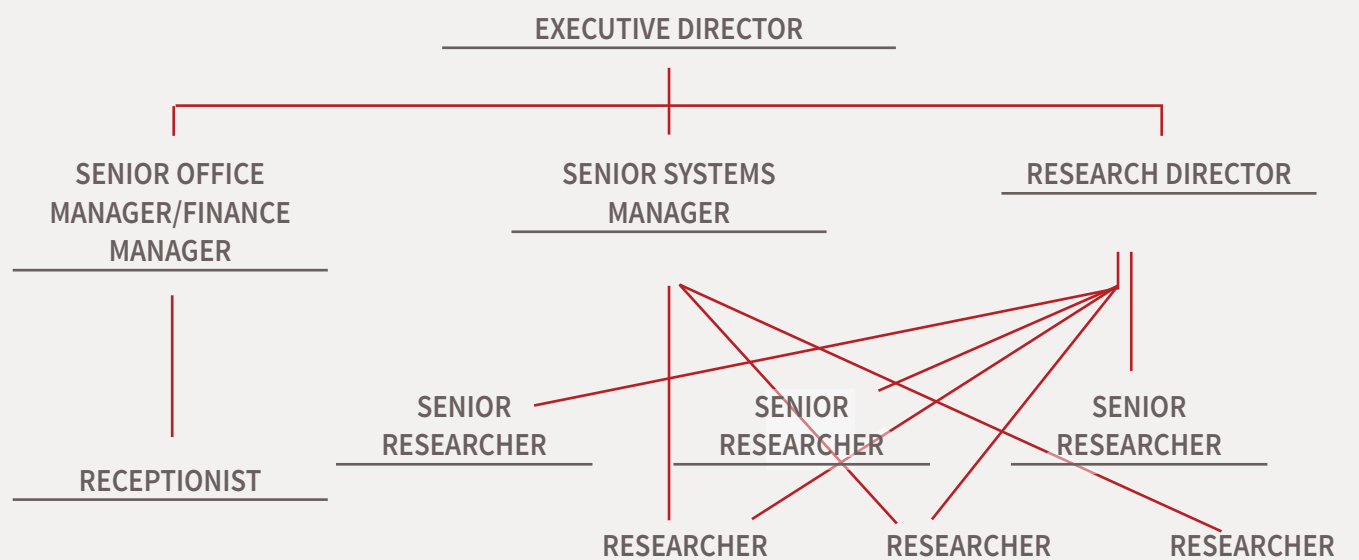
The legal status of GCRO is based on an agreement signed by the respective parties at the GCRO launch in 2008 in line with the GCRO Founding Document and legislation relating to the management of public finances. As noted above, these were revised and signed by all partners in 2013, setting up another five-year cycle for GCRO. In line with the agreement, Wits continues to host the offices and funds of GCRO and takes responsibility for its financial administration.

## STAFF AND STRUCTURE

GCRO is led by Executive Director Prof David Everatt, supported by Research Director Mr Graeme Gotz, Financial and Office Manager Mrs Adele Underhay, and Senior Systems Analyst Mr Chris Wray. During the coming year we will add a second Research Director to this senior team to help with the increasing project load and demands on our time.

During the last two years, we have grown close to the size and skills base GCRO needs to meet the different requests and requirements we face. Our staff includes Senior Researcher Prof Sally Peberdy, who is working on both trade and core/periphery issues in the GCR; Ms Annsilla Nyar, who works primarily on life and people in the GCR, as does new Senior Researcher Dr Caryn Abrahams; while Dr Koech Cheruiyot, an econometrician, works on regional geographies. Amongst our Researchers, Ms Alexis Schäffler worked primarily on sustainability issues (during the year she left to pursue her doctoral studies at Berkeley); and economist Darlington Mushongera (with Dr Cheruiyot) brought much-needed economic skills to the GCRO stable. Mr Guy Trangos, a qualified architect, brought a new understanding of space to the GCRO. Ms Kerry Bobbins, formerly an Intern at GCRO, successfully applied to become a Researcher, where she was joined by Ms Christina Culwick, both of whom work on many issues and areas falling loosely under the 'sustainability' portfolio. Also bringing new energy and vigour to the organisation were Interns Mr Potsiso Phasha, Ms Kavesha Damon and Mr Daniel Kibiridge, who were remarkable in the energy, commitment, sense of humour and sheer hard work they put in. Both Kavesha and Potsiso left to take up positions in the private sector and government, respectively. Ms Farah-Naaz Moosa joined as Receptionist and Junior Administrator in the office. In short: 2013/14 was a year with a high turn-over, but a much-needed injection of youthful talent and energy, which has pushed GCRO as a whole to work harder and better.





## GCRO ORGANOGRAM

As we grow, so the organisation becomes more complex, and the organogram is indicative rather than determinist. It too will become more complex when a second Research Director joins us in 2014/15. Any Researcher or Senior Researcher may report to the Research Director on the state of their project, the Senior Systems Manager on GIS or related matters, to the Financial Manager on their budgets, expenditure and so on, and all report to the Executive Director on their performance, the state of their projects and governance issues. All staff have their performance

assessed at least twice a year by the Executive Director, who in turn has his performance regularly assessed by his manager at Wits, Prof Rob Moore.

The drive to recruit new staff, referred to in the previous Annual Report, was extremely successful. GCRO is now of a size and with a diverse skills base that allows us to approach highly complex policy and/or academic questions from multiple angles, given the skills we have in-house. Multi-disciplinary work will be a hallmark of GCRO as we move into our next five-year cycle.

## STAFF DEVELOPMENT

The GCRO Board and Executive Director are committed to and encourage staff development and skills enhancement, both through academic qualifications and learning as well as in the area of personal growth. The academic partners provide opportunities to all GCRO staff through fee subsidies.

During the 2013/14 provincial financial year the following staff development activities occurred:

Adele Underhay (Senior Finance and Office Manager) attended Research Information Management System training provided by the Research Offices at Wits in August 2013 and i-Procurement Training by Wits Finance on the 12th September 2013.

Caryn Abrahams (Senior Researcher) attended a two-day Basic Use of SPSS course offered by OLRAC SPS on 11 and 12 March 2014.

Chris Wray (Senior Systems Analyst) and Koech Cheruiyot (Senior Researcher) both attended a three-day course on SPSS Forecasting: Time Series Analysis and Forecasting on 22-24 August 2013 at OLRAC SPS.

Christina Culwick (Researcher) attended two courses:

- » Energy and Sustainable Development (10-14 June 2013) at the University of Cape Town (UCT)
- » Centre for Learning, Teaching & Development Project Planning (12 July 2013) at Wits.

Daniel Kibirige (GIS Intern), Guy Trangos (Researcher), Kerry Bobbins (Researcher), Potsiso Phasha (Intern) and Prof Sally Peberdy (Senior Researcher) all attended a two-day Basic Use of SPSS training course at OLRAC SPS on 2 and 3 September 2013.

Farah-Naaz Moosa (Receptionist and Administrator) enrolled at Wits Plus for a part-time BA Psychology degree. She is currently doing her 1<sup>st</sup> year subjects.

# APPLIED RESEARCH

# 03.



## GOVERNMENT, GOVERNANCE AND INTERGOVERNMENTAL RELATIONS

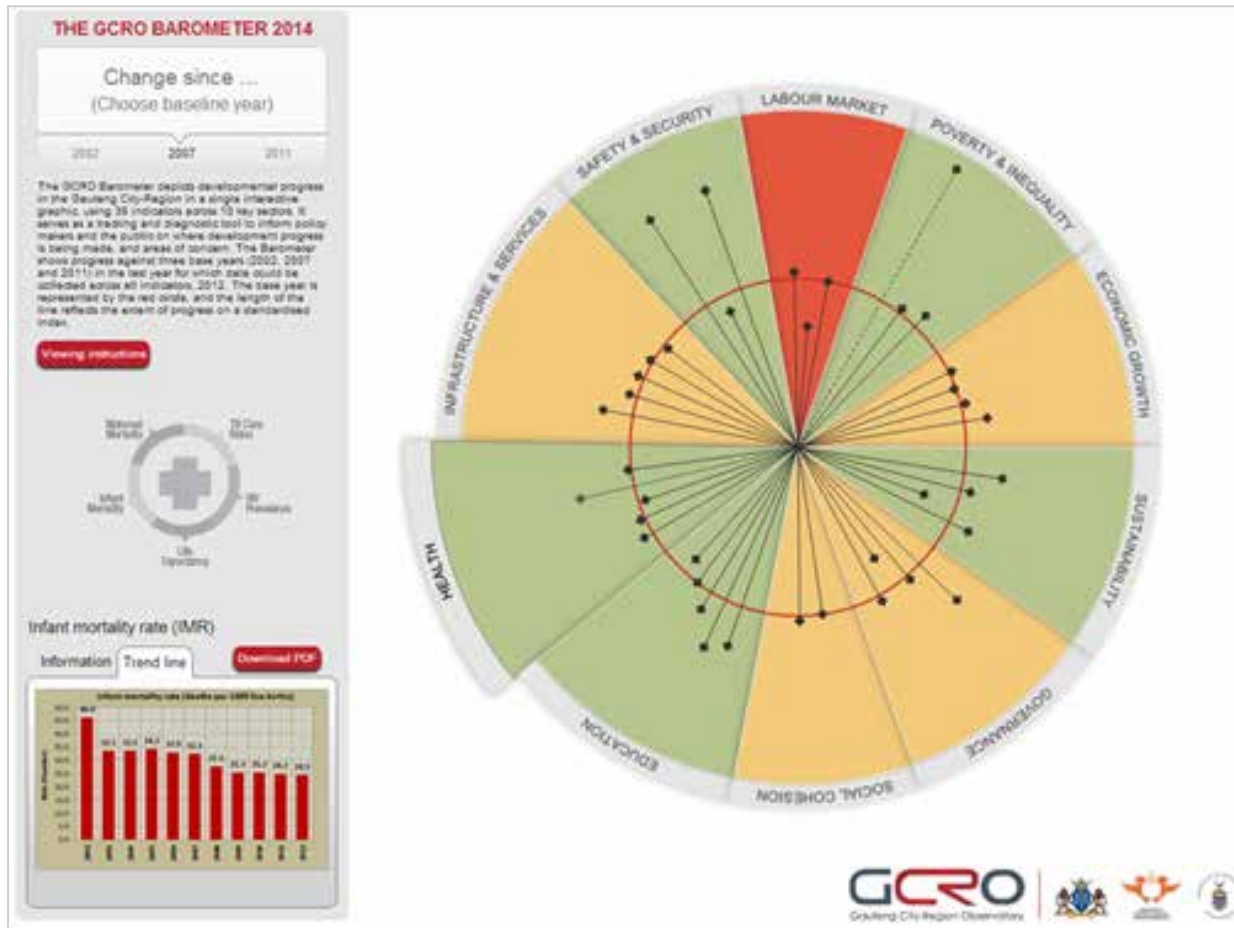
### *Conceptualising the GCR*

GCRO's mission is to help illuminate trends and dynamics shaping the towns and cities in and around Gauteng, and to enhance understanding of the idea of the GCR as a project – a different way of thinking about and governing this space. While much of the data collection and analysis work of the GCRO is focused on the present, we also consider the city-region's past and its possible futures. In this vein, the GCRO commissioned two Occasional Papers specifically to deepen our understanding of the past of the GCR. As both papers focus on aspects of the region's spatial past, they ought to be read together. Published in July of 2013, the paper by Prof Alan Mabin explores how the idea of a city-region found expression in various statutory planning frameworks over the course of the last century, and how embryonic city-region concepts influenced spatial decisions and developments. The companion paper by Brian Mubiwa and Harold Annegarn published in March 2013, considers the different but related issue of the actual historical spatial evolution of the GCR.

### *Transformation and change in the Gauteng higher education sector and its role in the city-region*

Transformation of the higher education sector is a key challenge for South Africa, both in terms of unwinding apartheid legacies of unequal access to skills and the labour market, and to help ensure a competitive economy for the future. The GCRO found it necessary to develop a descriptive and analytical perspective on the state of higher education in the GCR, examining key trends in higher education institutions, identifying key opportunities and challenges confronting the GCR, and exploring in comparative perspective whether higher education institutions are meeting the needs of the GCR's people and its economy. At its heart is a realisation that the growth of the city-region will depend heavily on the capacity and robustness of the higher education sector, but in particular on the way in which government works with the sector as a strategic partner. A report titled *Higher Education Collaboration for Development in the GCR* was submitted to the GCRO in February 2014 for editing and is expected to be released towards the end of 2014.





## SNIPPETS

THIS PROJECT INVOLVES PULLING TOGETHER A RANGE OF DATA SETS THAT REFLECT UPON THE DEVELOPMENT PROGRESS OF THE GCR. IT UTILISES EXISTING DATASETS FROM OFFICIAL AND PRIVATE SECTOR SOURCES AS WELL AS DATA GENERATED FROM GCRO'S OWN RESEARCH. THE INDICATORS USED WERE CAREFULLY CHOSEN TO ALLOW FOR INTERNATIONAL BENCHMARKING.

10

SECTORS IDENTIFIED TO MAKE UP THE BAROMETER

38

DEVELOPMENT INDICATORS ARE SHOWN ACROSS THE SECTORS

### Governance Barometer

Data and information on development challenges and progress, as well as government performance, are frequently inaccessible and difficult to decipher. The Barometer, in the form of a web-based visual, pulls together 38 key development indicators spanning across ten sectors. Time-series data covering the period 2002 to 2012 were collected and analysed. Several official and private data sources were used including GCRO Quality of Life surveys. The idea of the Barometer is not just to track development across time, but to also show in a single visual how each of the different

sectors is performing relative to others. Data was collected to 2012 – the last year for which data for all indicators was available – and indexed against three base years 2002, 2007, 2011 to show the direction and magnitude over time. The Barometer is interactive and viewers will be able to navigate the tool in a number of ways, view trends charts and download a 46-page document with concise analyses of the different indicators. The Barometer will be launched during the 2014/15 financial year.

### *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. This project investigates the reasoning behind the idea, how the idea is being conceptualised in visions and plans, and the likely benefits and costs of a further round of municipal amalgamations. A meeting was held with the Chair of the Demarcation Board to source information, and following this, GCRO Research Director Graeme Gotz agreed to request from the Chair to be part of an external panel of experts advising the Demarcation Board on key demarcation decisions. This allowed access to some of the metro demarcation proposals. As part of GCRO's ongoing participation in this initiative, Graeme Gotz presented to the Transformation Committee of West Rand municipalities on 18 June 2013 on key spatial and demographic data related to their motivation to be integrated into a single metro by 2016.

### *Political economy of infrastructure choices*

The efficient and sustainable management of water resources is a key priority for the GCR, especially because of its location in a water stressed region. However, water services authorities are hard-pressed to strike the appropriate balance between efficiency, equity and sustainability in the overall supply and management of water resources. Understanding the influence of current water pricing and social assistance mechanisms on water consumption patterns is a key step towards the development and implementation of appropriate methods of water management in the future. Using econometric methods and micro-level data, this project aims to critically analyse, on a comparative basis, different water pricing mechanisms for domestic supply across selected local municipalities in the GCR, and how they impact on water consumption. The success of this project depends on the availability of stand-level data on consumption in certain suburbs in Johannesburg. With assistance from the Wits Research Office, the GCRO initiated a process towards a Memorandum of Understanding (MoU) with Joburg Water to gain access to this data.

## FUTURE REGIONAL ECONOMIES

### *Understanding Gauteng's urban space economy*

'Urban space economy' is a term used to describe the distribution of economic activity in space. It includes consideration of how the spatial form of cities is structured by dynamic changes in economic activity; how economic opportunities and constraints are structured by spatial form, fabric and function; and of how economic spaces themselves are changing. This project aims to deepen understanding of how the urban space economy of Gauteng works, and interrogate how government has understood and taken up the challenge of intervening in the space economy of Gauteng over the last two decades.

In 2013/14 considerable progress has been made on this project. In the first quarter of the year Professor Chris Rogerson of UJ was contracted to lead research into inclusive economic growth in the Cradle of Humankind. This has led to research towards eight journal articles which will be submitted to appear in a special edition of the international journal *Urban Forum* in 2014.

In the second quarter of the year GCRO worked with Mahomed Moolla from the Wits Community University Partnerships Office to organise a one-day symposium on Inclusive Economic Growth in the Cradle of Humankind. GCRO presented on socio-economic trends in the Cradle, and arranged for Prof Chris Rogerson from UJ to present on his research into tourism-led inclusive economic

growth in the Cradle of Humankind, one of the eight journal articles being written. The symposium was well attended by officials from provincial government, relevant municipalities as well as academics, the private sector and non-governmental organisations (NGOs).

### *Transitions to a future economy – trade in the GCR*

This project examines trade in the GCR and aims to establish the potential contribution and costs of informal and formal sector trade to the GCR economy. Originally developed to focus on formal large scale and small scale/informal sector cross-border trade flows, the project has been reoriented in the past year to enable comparative and collaborative research. By the first quarter of the 2013/14 year, GCRO had been approached by the Southern African Research Centre (Queen's University, Canada) and the African Centre for Cities (ACC) at UCT to collaborate in a comparative research project exploring migration and informality in cities. By the second quarter an MOU was signed. During 2013/14, one part of the trade project enables the GCRO to build on its already planned research on informal sector trade flows in the GCR working with researchers at the University of Eduardo Mondlane in Maputo and the University of Zimbabwe in Harare. The other part has allowed the GCRO to pursue topical research on entrepreneurs in the informal sector of the GCR.

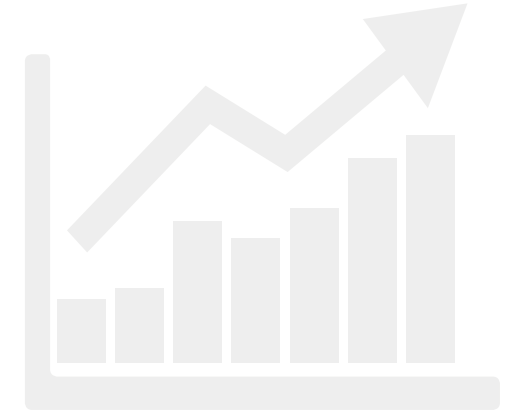




PHOTO: PHELADI KGALADI

Following a closed tender process (as per Wits guidelines) Quest Research Services were appointed to undertake surveys of migrant entrepreneurs in the informal sector and of cross-border traders in the GCR. The questionnaire and sampling methodology for migrant entrepreneurs has been finalised and training of research assistants and piloting of the migrant entrepreneurs survey completed.

Related to the project and as part of the partnership, the GCRO co-hosted a workshop 'Urban Informality and Migrant Entrepreneurship in Southern African Cities' with the ACC, the

Southern African Migration Program (Queen's University, Canada) and the International Migration Research Centre (Balsillie School of International Affairs, Wilfred Laurier University). Funded by the International Development Research Centre (Canada) the workshop brought together researchers from across Southern Africa. Sally Peberdy presented and chaired at the conference. A workshop was also held in Cape Town with Southern African Research Centre, the ACC and the University of Eduardo Mondlane to plan the implementation of the cross-border traders survey in Johannesburg (GCRO), Harare and Maputo.

## SNIPPETS

THE AREA OF 'FUTURE REGIONAL ECONOMIES' IN GCRO'S RESEARCH ENCOMPASSES VARIOUS PROJECTS TO FACILITATE UNDERSTANDING OF THE ECONOMIC AND SPATIAL CHANGE IN THE GCR AND THEIR IMPLICATIONS.

### THE MOST DIVERSE ECONOMY IN SA

THE GCR IS SOUTH AFRICA'S ECONOMIC POWERHOUSE, CONTRIBUTING SIGNIFICANTLY TO SOUTH AFRICA'S GDP. DESPITE THIS, POVERTY AND INEQUALITY REMAIN A CHALLENGE.

**42,9%**

IN THE EMERGING ECONOMY RANKING  
SOUTH AFRICA RANKS 15 OUT OF THE  
TOP 20 COUNTRIES IN THE WORLD

**34,5%**

GAUTENG'S GDP CONTRIBUTION  
TO THE SOUTH AFRICAN  
ECONOMY IN 2011

[SOURCE: STATE OF THE GCR REVIEW, 2013]

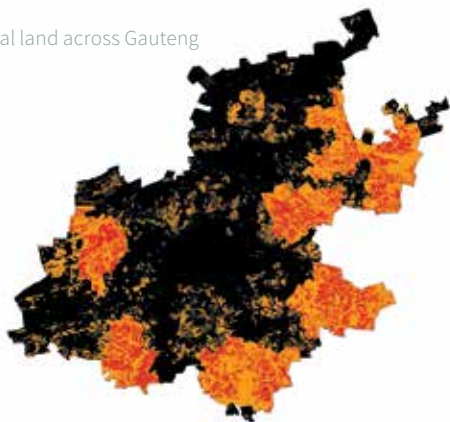
As a result of research activity in this area, the GCRO was asked to participate in various forums organised by Wits in relation to the actions and policies of the City of Johannesburg around street trading in the inner city.



Natural and planted vegetation in Gauteng



Agricultural land across Gauteng



Hydrological networks in Gauteng



[SOURCE: STATE OF GREEN INFRASTRUCTURE IN THE GCR, 2013]

## SUSTAINABILITY IN THE GCR

### *Metabolic flows and infrastructure transitions*

Based on the argument that it is no longer possible to grow economies while assuming that resources are unlimited, researchers have concluded that it is vital to determine a city's ability to reduce its socio-economic material and energy inputs as well as waste outputs. The starting point for this determination is the study of 'urban metabolism'. This involves analysing the throughput of 'material flows': that is, tracking the use of materials in economic activities and daily life, as well as the hardware or infrastructure that conducts flows of these materials into, around and out of the city.

Work towards this project in the year under review included post-collection analysis of the data sourced on water, food, waste and energy flows in the GCR. Initial findings on the material flows of the GCR, and implications of these flows for government, were presented to an International Sustainable Development Research Society (ISDRS) Conference held in Stellenbosch from 1-3 July 2013. Four GCRO members attended the conference, with three contributing to the presentation. A journal article will be published out of the presentation titled *Governing resource flows in the Gauteng City-Region*. In preparing this paper for publishing, further investigations with service providers and key stakeholders around data anomalies, particularly in the food and water data, were initiated. Before this paper is published it is expected that

more work will need to be undertaken on interrogating existing data, and on sourcing additional data through a series of semi-structured interviews. This will enable an integration of the metabolic flows data analysis and a reading of how government in the city-region understands resource flows and infrastructure transitions.

Unfortunately there has been limited momentum around the book project (initiated in the previous financial year), with flagging interest from the editors. A way forward may be found in 2014, but facing the risk that GCRO chapters prepared for the book may not be published, Alexis Schäffler, with the agreement of GCRO, adapted her chapter on storm water and submitted it for a special edition of the journal *Landscape & Urban Planning*.

### *Green assets and infrastructures*

The GCRO has been running a multi-year research project on Green Assets and Infrastructure (GAI) that examines the current state of green infrastructure in the GCR and facilitates the development of a region-wide Green Infrastructure Plan. The overall objective of the project is to influence the approach to green asset management within the GCR by assessing the extent to which green infrastructure has been valued by various stakeholders in the city-region, and by demonstrating ways to



# State of Green Infrastructure in the Gauteng City-Region



Alexis Schäffler with Natasha Christopher, Kerry Bobbins, Emmarie Otto, Mduduzi W. Nhlozi, Martin de Wit, Hugo van Zyl, Douglas Crookes, Graeme Gotz, Guy Trangoš, Chris Wray, Potsiso Phasha

## THE LAUNCH OF THE STATE OF GREEN INFRASTRUCTURE REPORT

THE LAUNCH WAS ACCOMPANIED BY AN EXHIBITION OF PHOTOGRAPHIC WORK FROM NATASHA CHRISTOPHER. THE LAUNCH ATTRACTED MEDIA INTEREST FROM A RANGE OF QUARTERS AND ARTICLES ABOUT THE PUBLICATION APPEARED IN, *INTER ALIA*, URBAN GREEN FILE AND POSITION IT.

### SNIPPETS

THROUGH DETAILED ANALYSES, THE REPORT IDENTIFIED KEY FACTS THAT RELATE TO THE EXTENT, DISTRIBUTION AND ACCESSIBILITY OF GREEN ASSETS IN THE GAUTENG CITY-REGION

85%

GAUTENG IS MADE UP OF GREEN SPACE (TRANSFORMED & UNTRANSFORMED)

93%

OF JOHANNESBURG'S POPULATION FALL WITHIN A 750M BUFFER OF PARKS

JUST OVER 6%

OF GAUTENG IS COVERED BY TREES (INDIGENOUS & PLANTED)

[SOURCE: STATE OF THE GCR REVIEW, 2013]

incorporate green infrastructure within government budgeting and planning processes.

*The State of Green Infrastructure Report* (SOGIR) was finalised and launched at a very successful event at UJ's Faculty of Art, Design and Architecture (FADA) gallery on 29 July 2013. This report reviews the physical state of green infrastructure in the GCR and whether municipalities have adequately appreciated and valued green infrastructure in their planning and budgeting processes.

More specifically, this report:

- » Provides a detailed analysis of the extent, distribution and accessibility of green assets;
- » Indicates how ecosystem services provided by green infrastructure might be valued;
- » Interrogates how green landscapes are socially constructed, including an analysis of private and public decision-making processes.

Building on the foundation laid by the SOGIR, the next phase of research focused on understanding the provision of ecosystem services in the GCR and the monetary and / or non-monetary values that can be attributed to these services. More informed investigations on the role of green infrastructure in urban areas were also co-ordinated. This included progress on the theoretical and data perspectives component of the report, which involved the requisition of policy documents related to the creation and management of GIS data, and engagements with municipal



stakeholders on data creation and use. Scoping work for the next phase of research also included a two-day study tour to Cape Town where Kerry Bobbins and Christina Culwick met with a range of specialists in the field.

Based on this prior work, GCRO planned and launched a Green Infrastructure Citylab in the final quarter of 2013/14. The Citylab, involving municipal and provincial government officials from across the GCR, provides a platform to facilitate the co-production of policy relevant knowledge around green infrastructure by both practitioners and researchers.

Three Citylab meetings were held between January and March 2014. Discussions have proved valuable in defining key areas that will need to be unpacked in greater detail in future Citylab sessions, and in highlighting some of the challenges faced by cities in protecting green assets and promoting the idea of green

infrastructure. The sessions also assisted with defining key areas that need to be explored in framing the development of a Guideline Green Infrastructure Plan for the GCR. Outputs of these sessions will feed into the Gauteng Integrated Infrastructure Master Plan (GIIMP) being developed by the GPC. In addition, expert inputs were solicited to inform what work needs to be done in the next two years to assess the value of ecosystem services in the GCR, and to build a case for incorporating this valuation in municipal plans, budgets and projects. These expert inputs, together with theoretical framings and the inputs of municipal participants will be published as a GCRO Occasional Paper to be released in 2014.

#### *Green economy*

This project builds on GCRO's policy support work in 2010 and 2011 around a green economy. While a lot has been written on the importance of moving towards a green economy, there has

been little empirical research on the nature of the green economy that is actually emerging. The research therefore reflects on the existing green economy in the GCR.

The key components of this project have included working towards a journal article and an Occasional Paper on the green economy. Work towards the journal article included participation by Graeme Gotz and Alexis Schäffler in workshop in London on 16-17 April, titled *Bearing the brunt of environmental change: understanding climate adaptation and transformation challenges in African cities*. Participation in the workshop was a condition for possible inclusion of the article in a special issue of *Current Opinion in Environmental Sustainability*.

Progress was made towards the terms of reference for two inputs to be written by external specialists to be released together as an Occasional Paper. One of the pieces will analyse how municipal





fiscal architectures and financial management arrangements positively and negatively impact on possible transitions to a green economy in the region, with proposals for key adjustments that could conceivably be made to local government financial systems. The other piece will analyse the impact of key micro-economic and key policy, regulatory and administrative constraints on the development of green economic industries and practices.

### *Intersection between disaster vulnerability and sustainability*

We currently have limited understanding of the 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, including the way we are designing human settlements,

and the growing variability of our climate. This project analyses disaster-related vulnerabilities in the GCR and how resilient the region is in the face of these.

This project saw progress towards the finalisation of the GCRO Occasional Paper on acid mine drainage (AMD). The paper provides the necessary context to consider the planning implications of the intersection between sustainability and vulnerability in the GCR's mining landscape and to identify the risks presented by, and the future prospects for overcoming the GCR's mining legacy.

Building on the foundation laid by the AMD research, the mining landscapes project was established with the aim of compiling a joint mining landscapes report with contributions by four researchers that draw together the GCRO's diverse interests in the mining belt. This report is focused on the multi-dimensional

## SNIPPETS

THE AVERAGE AMOUNT OF WASTE GENERATED IN JOHANNESBURG IS APPROXIMATELY 1.2 KG PER PERSON PER DAY. GAUTENG IS THE BIGGEST PRODUCER OF WASTE IN SOUTH AFRICA.

### INFORMAL VS AFFLUENT AREAS

PEOPLE IN INFORMAL SETTLEMENTS GENERATE ON AVERAGE 0,16KG PER DAY, WHEREAS OVER 2KG PER DAY IS GENERATED IN AFFLUENT AREAS.

3,6million

CUBIC METERS OF  
HAZARDOUS WASTE ARE  
PRODUCED EVERY YEAR  
IN THE GCR

5,7million

TONS OF WASTE  
ARE PRODUCED BY  
GAUTENG EVERY YEAR

35%

OF ALL ENERGY  
CONSUMPTION IS BY  
TRANSPORT

[SOURCE: GCRO VIGNETTE/GREEN STATS]

issues related to mining landscape legacy with an emphasis on urban spatial planning, environmental and socio-economic considerations and the how landscape legacy will affect the overall sustainability of city-region over the longer-term.

The scope and content of the report were shaped by ideas and insights obtained from a variety of stakeholder engagements with municipal officials, academics and the public. Alongside these engagements, the GCRO mining landscape team participated in a number of field trips in the West Rand and Johannesburg south. Progress has been made on the writing up of the introductory chapters and preliminary mapping work that details the extent of the waste landscape in the city-region and key focus areas. Through these investigations, the final joint output has been refined to include a series of concise research chapters supported by a large visual component to explain complex theories and definitions. Visuals will include info-graphics and photographs.





PHOTO: KERRY BOBBINS



PHOTO: CHRISTINA CULWICK

Researcher involvement and links with the mining research networks of Wits and UJ have been developed over the course of the year, in particular with the Post Mining-Landscapes of the Witwatersrand Mining Studio run by the Wits School of Architecture and Planning. Researcher involvement included data sharing and attendance at a variety of seminars and meetings.

As part of a sub-project Christina Culwick made progress towards a journal article on using an interdisciplinary methodology for disaster management, based on flooding in Ekurhuleni. The paper was presented at the Southern African Adaptation Colloquium in Cape Town, 25-26 November 2013.



## LIFE AND PEOPLE IN THE GCR

### *Social cohesion and non-racialism in the GCR*

In 2012/13 the focus of the Life and People pillar broadened to look at social cohesion and inclusivity. It added further depth to the ongoing research that attempts to strengthen the social fabric of the GCR. Much of this work focused on contributing to Gauteng's G2055 programme, and working towards a set of social cohesion indicators based on the three Quality of Life surveys. Former staff member Annsilla Nyar began establishing a set of indicators for social cohesion, which has also informed aspects of the GCRO Barometer. The project has been reconfigured and is being taken forward by Caryn Abrahams after she joined GCRO in January 2014. The basis of this work was part of the submitted interventions for the Presidency's Twenty Year Review (2014), and will look at social cohesion, democratic citizenship and participation.

An on-going partnership with the Ahmed Kathrada Foundation, which began in 2011 with a project and subsequent publications on non-racialism, was strengthened through co-hosting its Democracy +20 launch event at the Wits Club in September 2013. Then Minister of Arts and Culture, Paul Mashatile, and Editor of the City Press, Ferial Haffajee, reflected on the past 20 years of South Africa's democracy. The following year will build on the work done on non-racialism with the Kathrada Foundation toward a pragmatic anti-racism strategy in post-apartheid South Africa.

### *Poverty and inequality in the GCR*

Within the Life and People pillar, a project on Poverty and Equality is in its final phase. The project is led by Darlington Mushongera

and addresses the increasingly serious concern of inequality in the GCR. This study seeks to understand the nature and extent of inequality in the GCR, as well its underlying causes, drivers and dynamics. Two expert pieces have been commissioned and received from external researchers, and a third is being finalised by Darlington Mushongera.

### *Visualising the GCR*

This project involved a digital photography competition in 2012/13. The project was led by former staff member Potsiso Phasha. The successful photo exhibition ran at the FADA Gallery until 10 May 2013. It attracted over 250 people and enjoyed wide media coverage from campus and national radio stations, TV and newspapers.

Following the launch, a reflective (photo) essay was designed with the intention of re-examining the submitted photographs and discussing the value of the photographic medium in representing the GCR. The photo-essay, together with a selection of key photographs, went live on a new online space connected to the GCRO website in December 2013.

Work on a second photo-essay – 'Scavenger economies of mine dumps' – was completed, and the essay will be launched online in 2014. The essay studies the dynamics of a shadow economy (and its actors) evolving around the reprocessing of waste metals from the mine dumps in the GCR.

## SNIPPETS

THE GCR ATTRACTS PEOPLE FROM EVERY PROVINCE AND ALL OVER THE WORLD MAKING IT THE MOST DIVERSE REGION IN THE COUNTRY.

### NON-RACIALISM IN THE GCR

THE STATE OF RACE RELATIONS IN GAUTENG CAN BE SEEN AS A SERIOUS THREAT TO THE SOCIAL FABRIC OF THE CITY-REGION WHICH IS ALREADY FRAUGHT WITH HIGH LEVELS OF XENOPHOBIA AND CRIME, INCLUDING GENDER-BASED VIOLENCE.

10%

OF GAUTENG  
RESIDENTS LIVE  
BELOW THE FOOD  
POVERTY LINE

45%

OF CROSS BORDER  
MIGRANTS HOUSEHOLDS  
SOURCE INCOME FROM  
THE FORMAL SECTOR

94%

OF RESIDENTS VOTED  
IN THE LAST LOCAL  
GOVERNMENT ELECTION

[SOURCE: STATE OF THE GCR REVIEW, 2013]

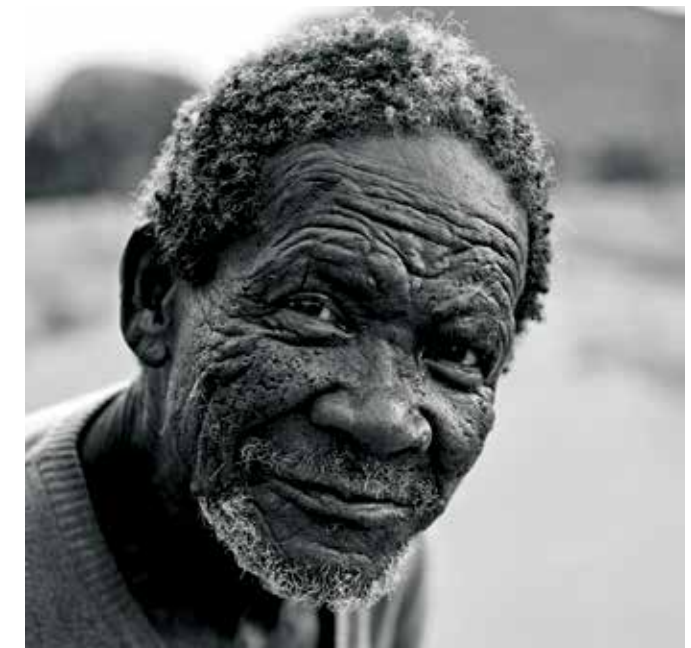


PHOTO: SETH VAN STADEN





PHOTO: TEBHO NTSAMAI

## SPACE AND MOBILITY

### *Spatial change in the GCR*

Gauteng confronts mounting concern that spatial trends may be compounding the effects of apartheid, the possibility that its population may double by 2055, and the very real prospect of future economic and environmental risks and shocks. There is an urgent need to understand whether its spatial form, fabric and function are resilient enough to cope with change. A starting point is to understand the rapid spatial changes that are already occurring, for example in terms of population growth and changing land use. In order to document this change, GCRO together with Professor Philip Harrison's National Research Foundation (NRF) Chair, have been working on a series of books that explore spatial change starting with Johannesburg and Pretoria.

The manuscript of the first book, *Changing Form, Changing City: Johannesburg after Apartheid*, was reviewed by anonymous peer reviewers in 2013, revised and then submitted in final form to Wits Press in December 2013. This richly illustrated study, edited by Graeme Gotz and Chris Wray from the GCRO, and Philip Harrison and Alison Todes from the Wits School of Architecture and Planning, offers not only detailed empirical analyses of changes in the city's physical space, but includes a host of chapters that examine the character of specific neighbourhoods, as well as the social identities being forged within them. Consideration is also given to the economic, social and political processes shaping the wider GCR.



By the end of March 2014, the editors of the publication were in discussion with the publisher over its length and the number of maps and graphics to be included, with a final publication date expected to be around November 2014.

### *Mobility in the GCR*

A key factor in defining a functional city-region is the flow of people between its constituent parts, as evident in one of the qualifying criteria for defining an OECD metro-region. Traffic flow is also an important development concern, as congestion affects business efficiency and in turn regional competitiveness, as well as the quality of life of residents. For both reasons it is important to understand the existing flows of traffic across the GCR, and to gauge the impact of key transport interventions such as the Freeway Improvement Programme (and associated tolling), Gautrain, and bus rapid transit (BRT) system.

GCRO's *Mobility in the GCR* Report is the culmination of a number of separate commissioned mobility research reports. The report has grown over the last year with the addition of three new chapters written by GCRO's researchers. These include Christina Culwick's research on non-motorised transport (NMT) in Gauteng, a photo essay on NMT compiled by Christina, and Guy Trangoš's research on the public space interfaces of various Gautrain stations. Three



PHOTO: MICHAEL CROUCH

of the chapters – Prof Venter’s Quality of Transport index, Guy’s analysis, and Christina’s review – were presented at the launch of the State of the GCR Review launch on 25 October. The report will be published in the second quarter of 2014/15 in a similar format to the *State of Green Infrastructure* report.

#### *Peripheries and rural / urban transitions – understanding the region’s small towns and peri-urban areas*

This project explores small towns on the edge of the city region, large peri-urban and commercial farming areas, and huge swathes of zones of displaced urbanisation in ex-Bantustans,

which are all poorly understood. Yet there is evidence that they are undergoing rapid change. Some small towns and extended informal settlements on the edge seem to be attracting more migrants, leading some academics to call them ‘estuary zones’ where people who are between urban and rural lives try to access the benefits of the region’s core, while negotiating its costs. But there is also some data that indicate the depopulation of these peripheries, as people leave farms and declining small towns to get closer to opportunities in the larger economic centres of the GCR. This project is run in conjunction with the NRF Chair for Planning and Modelling in the Wits School of Architecture and Planning, and others with interests in this research area.

## SNIPPETS

DESPITE THE CONSIDERABLE PROGRESS THAT HAS BEEN MADE OVER THE LAST 20 YEARS IN BRINGING DECENT SHELTER AND BASIC SERVICES TO COMMUNITIES, IT IS FAIR TO SAY THAT THE APARTHEID-BEQUEATHED SPATIAL INEQUALITIES AND SETTLEMENT DISTORTIONS REMAIN AS SCARS ON THE URBAN LANDSCAPE.

### TRANSPORT TRENDS

TRANSPORT HAS PLAYED A MAJOR ROLE IN SHAPING THE SPATIAL CONFIGURATION OF THE CITY-REGION.

**48%**

OF RESIDENTS’ TRIPS ARE TO WORK

**21%**

OF RESIDENTS’ TRIPS ARE FOR SHOPPING

**12%**

OF GAUTENG RESIDENTS’ TRIPS ARE TO LOOK FOR WORK

[SOURCE: QUALITY OF LIFE SURVEY, 2011]

The year started with a comprehensive mapping process that, using ward-level data of core and periphery, produced a binary analysis of Census 2011. The maps used indices produced from Census 2011 to show peripherality through connectivity, housing, access to services, household demographics, access to household goods, income and employment, and migration. The research was further supported by GCRO’s Quality of Life survey data. The report is currently at an advanced phase, with final drafts being written by both SARCHi and GCRO researchers. It will be published in late 2014.





PHOTO: MONYAKA NALELI

### *Modelling urban spatial change in the GCR*

One of the key tasks of urban observatories is to provide futures modelling. This project investigated what modelling is currently being undertaken to analyse urban change and predict future urban development. After a draft report was presented to the space and mobility theme session at the RAC on 30 May, final comments were received and incorporated. The report, authored by Chris Wray, Josephine Musange, Kavesah Damon and Koech Cheruiyot, was published in August as the 6<sup>th</sup> GCRO Occasional Paper, titled *Modelling urban spatial change: a review of international and South African modelling initiatives*. Chris Wray and Koech Cheruiyot, are currently in the process of submitting a journal article, based on the research, to the South African Journal of Geomatics.

### *Government spatial imaginaries and capabilities for sustainable human settlements*

Originally conceived as a study into how provincial and local governments are defining spatial visions for their areas (with an emphasis on how to develop and redevelop human settlements), and what resources and tools are available to translate vision into reality, this project was enlarged and redefined in the fourth quarter. With Guy Trangoš taking a leadership role together with Graeme Gotz, focus will now also fall on how provincial and local government spatial visions are contradicted in practice by private developments. The project will form part of the 2014/15 work plan.



## UNDERSTANDING THE MARGINALISATION INDEX

- There are 29 variables in the Index, organised into 10 'dimensions'.
- Data is from the GCRO's 'Quality of Life' surveys for 2009 and 2011.
- Analysis of data yields four typologies, 'Fine', 'OK', 'At risk', and 'Marginalised'.
- Scores range from 0-10. The higher the score, the greater the degree of marginalisation.

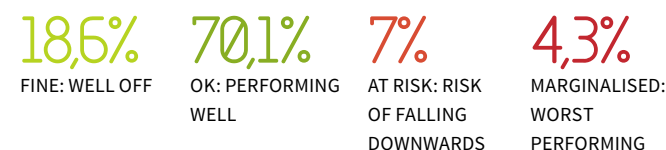
Typology	Description	Score range	Proportion of respondents	
			2009	2011
'Fine'	Well off	0 - 0.9999	22,3%	18,6%
'OK'	Performing well	1 - 3.9999	64,5%	70,1%
'At risk'	Risk of falling downwards	4 - 4.9999	8,4%	7,0%
'Marginalised'	Worst performing	5 - 10	4,8%	4,3%

# MARGINALISATION

UNDERSTANDING AND VISUALISING TRENDS IN THE GCR IS A KEY FUNCTION OF THE GCRO, UNDERPINNED BY QUALITY OF LIFE SURVEYS, DEVELOPMENT OF NEW DATA SOURCES, GIS MAPPING AND ANALYSIS WORK, AND ASSEMBLY OF INFORMATION INTO INNOVATIVE DATA PRODUCTS.

## FINDINGS

ANALYSIS OF DATA YIELDS FOR FOUR TYPOLOGIES, 'FINE', 'OK', 'AT RISK' AND 'MARGINALISED'.



[SOURCE: QUALITY OF LIFE SURVEY, 2011]

## DATA, DATA INFRASTRUCTURE, DATA VISUALISATION, INDICATORS AND BENCHMARKS

### Data acquisition

During 2013/14 GCRO continued to negotiate access to, and to acquire and hold GIS data from a variety of public and private sector sources, including:

- » Updated satellite imagery from South African National Space Agency (SANSA) (Fundisa disc), including 2011 SPOT5 imagery for Gauteng and 2009 global land cover map
- » Aerial photography (2012) from the National Geo-information Directorate
- » Cplan v3.3 environmental data from the Gauteng Department of Agriculture and Rural Development (GDARD)
- » Gauteng Spatial Development Framework (GSDF) 2010 layers from the GPC
- » Updated parks, open space and tree layers from Johannesburg City Parks
- » Latest 2001 and 2010 land use per building data from GeoTerraImage for all municipalities in Gauteng

### 2013 Quality of Life Survey

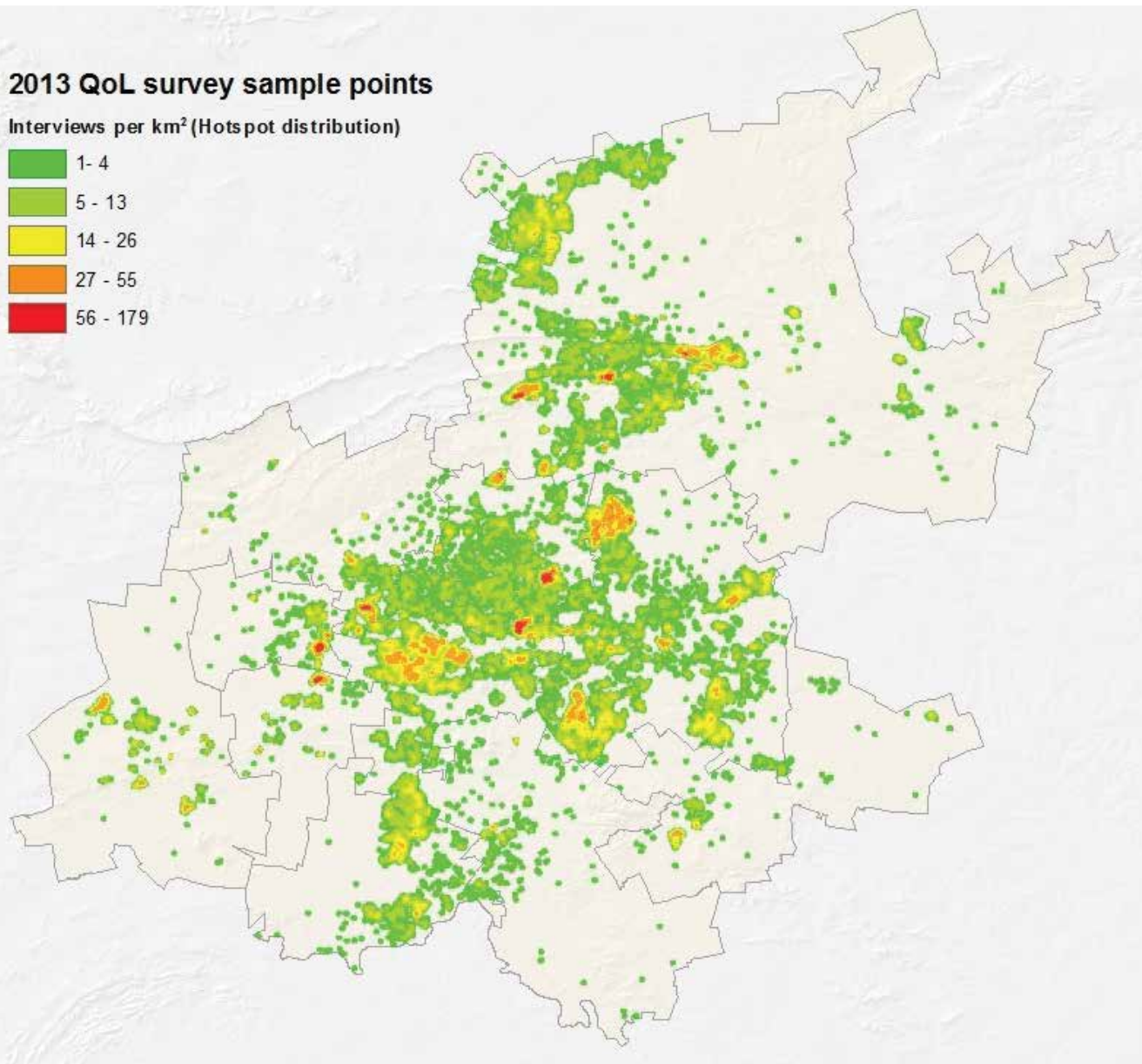
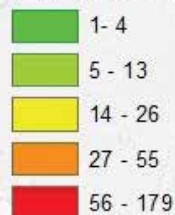
In 2009, as part of its mandate to generate primary research data for Gauteng for the benefit of both the local and provincial spheres of government, GCRO commissioned a 6 600 Quality of Life sample survey to measure the quality of life, socio-economic circumstances, attitudes to service delivery, psycho-social attitudes, value-base and other characteristics of the GCR. In 2011 a second Quality of Life survey was undertaken, this time with some 17 000 sample points across Gauteng. The third Quality of Life survey was commissioned in 2013, this time with co-investment by the three metropolitan municipalities and critical in that three points in time will permit the GCRO to undertake trend analysis with a degree of confidence. The tender process to procure the services of a fieldwork agency was well underway by the end of June, with a detailed set of tender documents having been drawn up, and adverts circulated. The finalisation of procurement for a service provider and substantial work on the sample and survey instrument was carried out in July. Agreement was reached with Tshwane, Ekurhuleni and Johannesburg to



PHOTO: NZOLO BIDLA

## 2013 QoL survey sample points

Interviews per km<sup>2</sup> (Hotspot distribution)



2013 QOL SURVEY SAMPLE POINTS

each contribute an additional R800 000 to the costs of the survey, a major achievement which ensured a minimum sample of 30 respondents per ward in the non-metro municipalities, and a minimum of 60 in each of the metro's wards. Fieldwork began in August, with the mining houses once again proving a major obstruction to accessing the people living in mining quarters, as were the housing estates armed by possibly over-zealous private security firms. The external back-check reports confirmed a high-level of fieldwork quality that realised a final sample of 27 490 respondents. The first few months of 2014 were spent cleaning the data and converting to a SPSS format. A final weighted dataset was delivered at the end of March 2014. Quality control has been provided by Professor Emeritus Paul Fatti on sampling, with weighting required by both ward and race/sex (at ward level). GCRO has established teams of researchers to work with each of the metro municipalities, with the 'city' teams meeting to discuss what the different metros want to see analysed. The City of Johannesburg indicated that they want assistance with very specific analysis on the spatial distribution of 'classes' around the city, and attitudes to government, as an input into immediate tariff setting exercises. GCRO will begin work on the survey analysis in the first quarter of 2014/15.

### *Indicators and benchmarks*

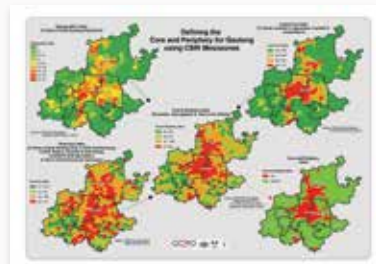
There is a concerted effort to assemble information on the GCR into innovative data products and information systems, indicators and benchmarks. The data products (summarised in the table below) range from a monthly map of the month, which showcase unique spatial visualisations of GCRO's datasets, drawing from various data sources and research projects mapping some of the key issues affecting the GCR; to data briefs, interactive graphs and vignettes which measure and present the performance, development progress and 'competitiveness' of the GCR, and benchmark it against city-regions elsewhere in the world. These data products are distributed to all GCRO contacts and accessible via the GCRO website.

## 1<sup>ST</sup> QUARTER

**April 2013:** Historical spatial change in the GCR (1991-2009)



**May 2013:** Defining the core and periphery in Gauteng

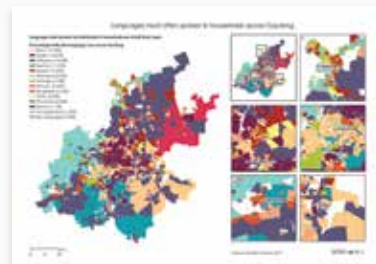


**June 2013:** Building our green networks

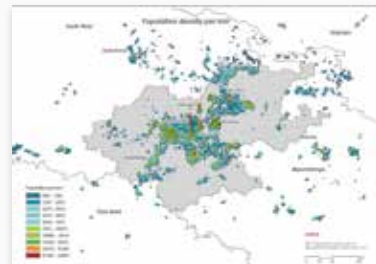


## 2<sup>ND</sup> QUARTER

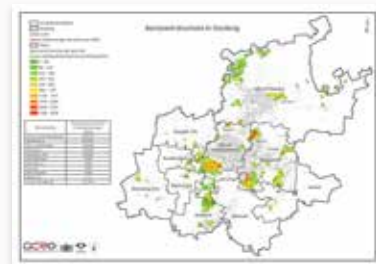
**July 2013:** The spoken diversity of Gauteng



**August 2013:** a) Population dot density (Census 2011) and b) 3D population density (Census 2011)

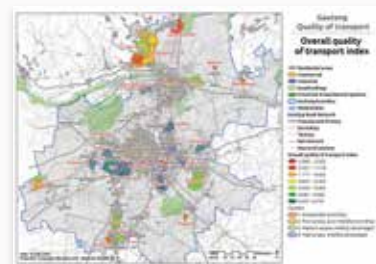


**September 2013:** Backyard structures in Gauteng

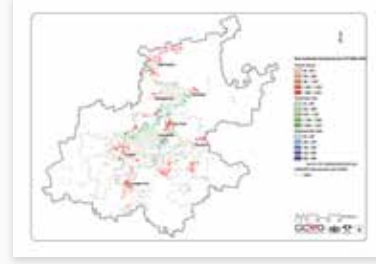


## 3<sup>RD</sup> QUARTER

**October 2013:** Quality of Transport index

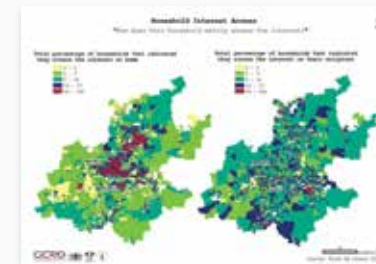


**November/December 2013:** GTI housing and commercial/industrial growth

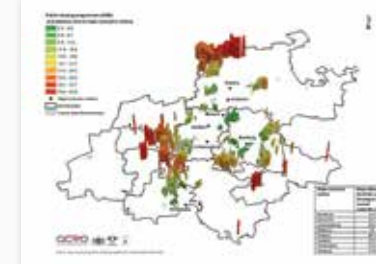


## 4<sup>TH</sup> QUARTER

**January 2014:** Household internet access in the GCR



**February 2014:** Proximity of RDP housing in relation to major economic centres



**March 2014:** Gauteng-sized populations in South Africa



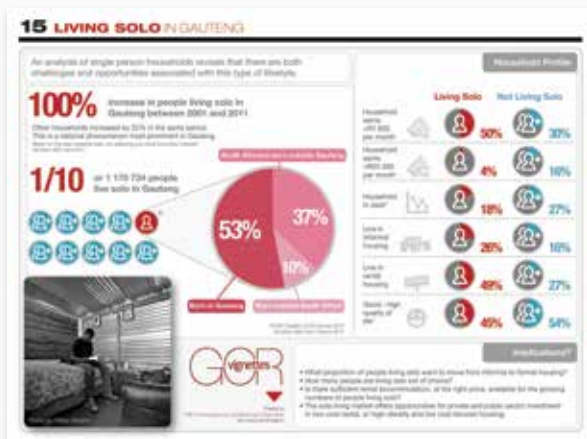


1<sup>ST</sup> QUARTER

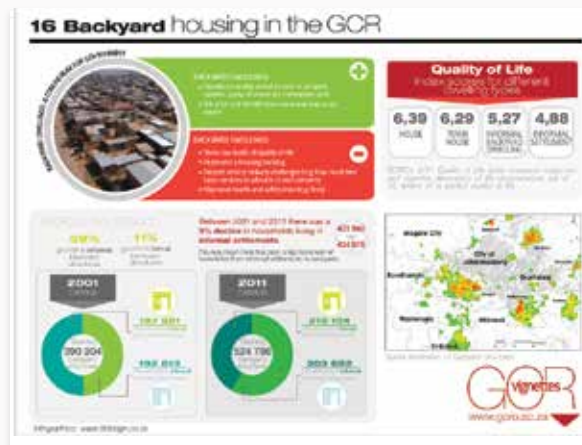
**Vignette #14:** International wage differentials for primary school teachers



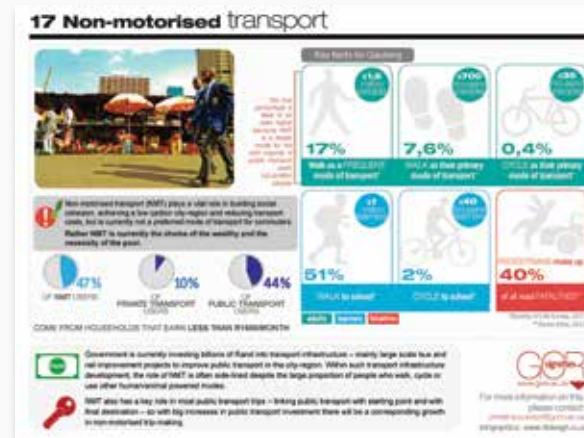
### Vignette #15: Living solo in Gauteng

3<sup>RD</sup> QUARTER

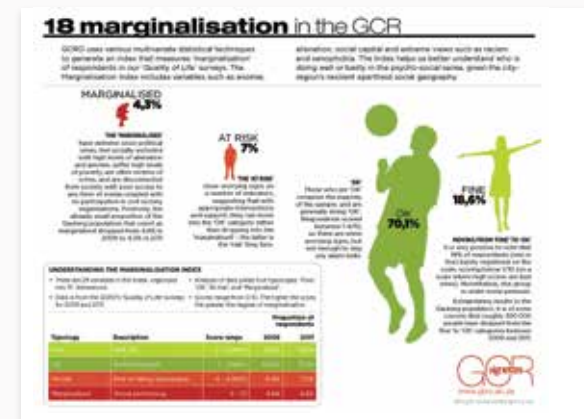
### Vignette #16: Backyard shacks

4<sup>TH</sup> QUARTER

### Vignette #17: Non-motorised transport

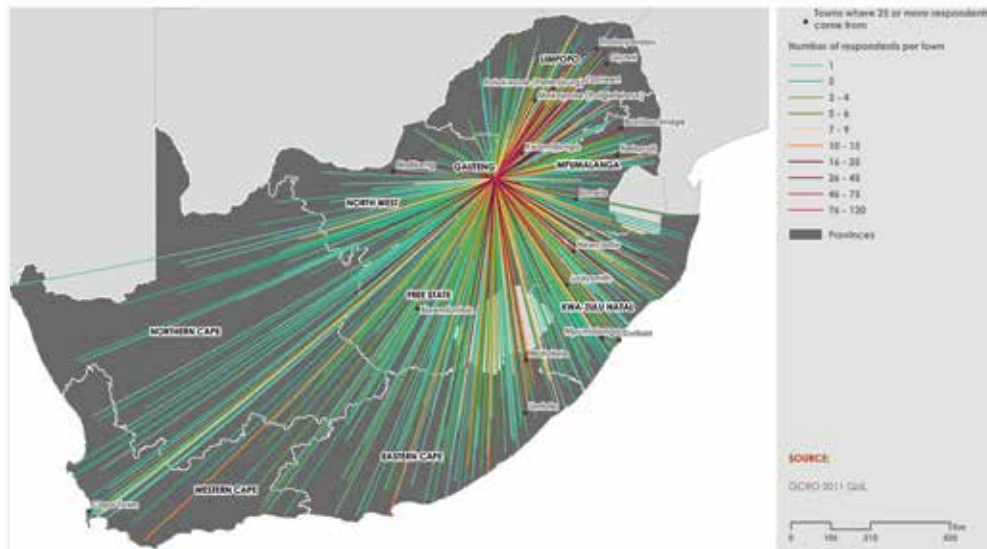


### Vignette #18: Marginalisation



## 1<sup>ST</sup> QUARTER

### Data Brief #5: Gauteng: a province of migrants



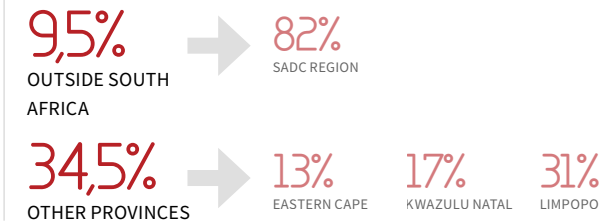
ORIGINS OF INTERNAL MIGRANTS

## SNIPPETS

MIGRANTS COME FROM ALL CORNERS OF THE COUNTRY AND FROM ALL OVER THE WORLD.

### PLACE OF BIRTH

MOST (56%) GAUTENG RESIDENTS WERE BORN IN GAUTENG, MOST OTHERS CAME FROM OTHER PROVINCES IN SOUTH AFRICA. ONE TENTH COME FROM OUTSIDE THE COUNTRY.



ORIGINS OF INTERNATIONAL MIGRANTS



#### Highlights from the State of the Gauteng City-Region Review 2013 include:

- |  |  |
|--|--|
|  <b>Quality of Life and Marginalisation</b> <ul style="list-style-type: none"> <li>Presenting and interrogating quality of life and marginalisation scores for Gauteng's residents</li> <li>Interpreting results according to municipality, sex, race, age and education</li> </ul> |  <b>Regional Economy</b> <ul style="list-style-type: none"> <li>Interpreting Gauteng's role in global trade</li> <li>Presenting findings related to unemployment, competitiveness and the labour market</li> </ul>                    |
|  <b>Space and Mobility</b> <ul style="list-style-type: none"> <li>Analyzing urban growth and spatial change</li> <li>Presenting human settlements and transport research</li> </ul>   |  <b>Government and Governance</b> <ul style="list-style-type: none"> <li>Explaining the complexities of governance</li> <li>Interrogating satisfaction with the public service and exploring ways to improve participation</li> </ul> |
|  <b>Life and People</b> <ul style="list-style-type: none"> <li>Poverty and inequality analysis</li> <li>Investigating migration</li> <li>Exploring gender-based violence attitudes</li> </ul>   |  <b>Sustainability</b> <ul style="list-style-type: none"> <li>Investigating environmental challenges</li> <li>Exploring both green and grey infrastructure and human settlement vulnerability</li> </ul>                              |



#### State of the GCR 2013

The State of the GCR Review 2013 is an interactive report that combines GCRO's various data products and information collected from the Quality of Life survey, benchmark indicators development and GIS data acquisition. A first version was produced in 2011, with a second iteration initiated the following year. At the beginning of 2013/14 Annsilla Nyar, assisted by Guy Trangos, started establishing the content and process flow of the second Review, including setting up a Trello board as a management system. They worked with leads of the various sections of the report to develop first draft content and fed this through to the design service provider – Into the Limelight (ITL). At the end of August 2013, Annsilla Nyar resigned from the GCRO and responsibility for the Review shifted to Guy Trangos. The months following this change saw the Review going through a substantial design, data and text editing process with continued input from

research staff and the website's designers and developers. The 2013 State of GCR Review was concluded in October 2013, and formally launched at 'GCRO day' on 25 October to an audience of some 130 participants. David Everatt presented the report and Premier Nomvula Mokonyane responded to the presentation. A small pamphlet was designed and printed since the Review proper is an online product only. The launch and the Review received substantial media interest with press articles and radio appearances in/on: SABC news, Business Day, The Times, Polity/Engineering News, Rapport, SAFM, 702, Rainbow FM, etc. The event also generated substantial interest on Twitter. Following the launch small edits continued to be made in order to perfect the product as best as possible – for example almost all of the static graphs were subsequently converted to interactive ones.

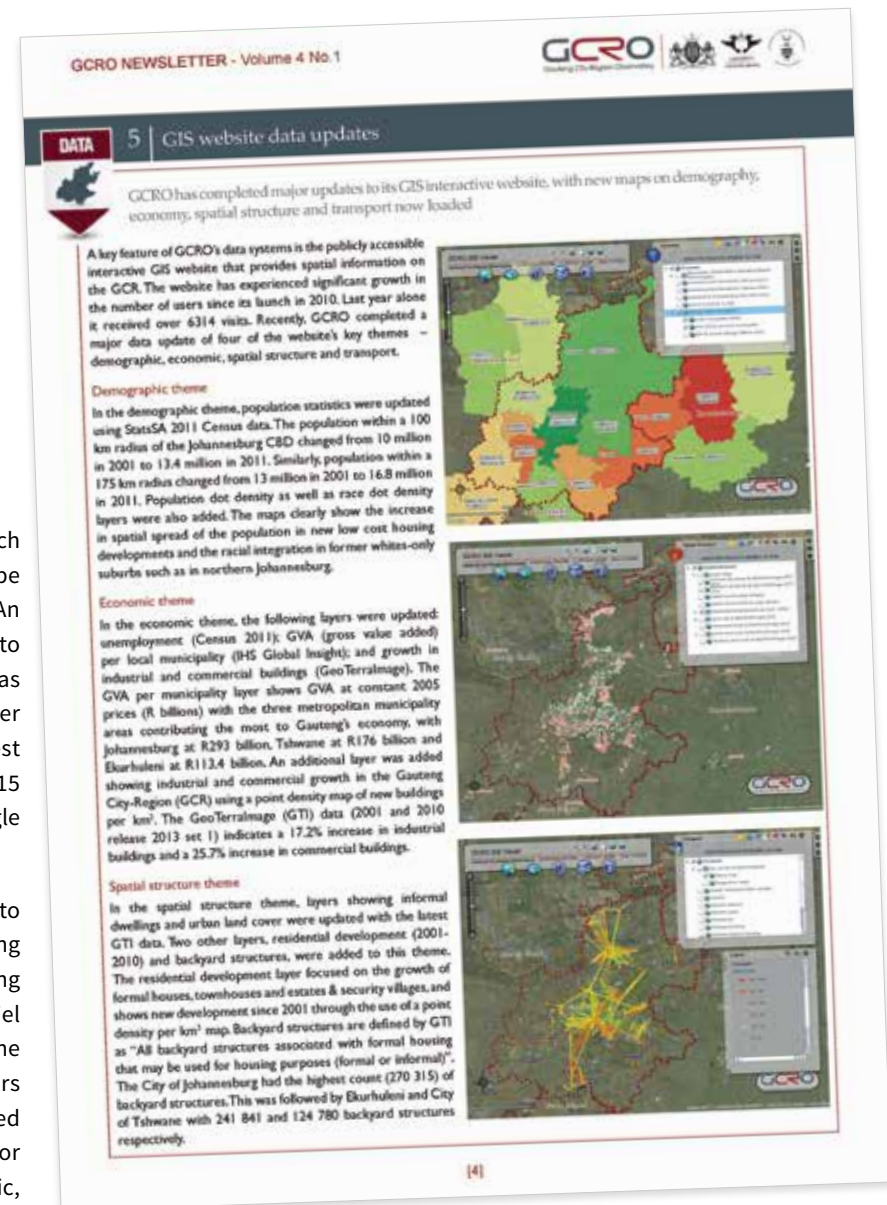


### Interactive GIS website re-design

Spatial information on the GCR is publically accessible online via the interactive GIS website. The GIS website has consistently received the most hits on the GCRO website and is utilised by government, NGOs, students and the general public. For a number of reasons, such as the deprecation of the Google Maps API and lack of access to the GIS website via some tablet devices (e.g. iPads), there is an urgent need to redevelop the website and consider alternative hardware solutions. In order to address these concerns, the new interactive GIS website project investigated the latest available technologies for both storing and serving GCRO's data. Various discussions were held in the first quarter of 2013/14 with Prof Rex van Olst, Associate Professor in the School of Electrical and Information Engineering, and Prof Dwolatzky from the Joburg Centre for Software Engineering (JCSE) at Wits, to discuss the project and a possible partnership. A workshop was then held with GCRO, JCSE and Esri South Africa on 31 July to review the development options. There was consensus at the workshop that HTML5 and Javascript (JS) was the preferred development route. JCSE was prepared to take on initial development of a prototype at no cost (considering the long-term possibilities of GIS development within the GCRO and Wits) and Esri provided free training to the JCSE developers. Work was completed on the prototype by January and a quote for the main viewer development submitted by JCSE to assist GCRO's budgeting for the 2014/15 financial year. Shortly after reviewing the quote, however, it was established that a new

Esri Javascript WebApp builder viewer, which would cut development costs by half, was to be released by Esri during the second half of 2014. An internal GCRO workshop was held in February to review development options and a decision was made to postpone the development (in order to save development costs and utilise the latest web development technology), until the 2014/15 financial year. A solution to resolve the Google Maps issue will be sought in the interim.

During 2013/14 the GIS website was updated to the latest ArcGIS Server software and following his attendance of an ArcGIS Server training course, the newly appointed GIS Intern, Daniel Kibirige, was enlisted to assist with updating the website data. A major update of online GIS layers began in October, with 2011 census layers added and the demographic theme updated. A major update of another three themes – economic, spatial structure and transport – was completed at the beginning of 2014. New data now available in these themes include: industrial and residential development, back yard structures and three layers from the transport analysis of the 2011 Quality of Life survey.



## SUPPORT TO GOVERNMENT

# 04.

MUCH OF GCRO'S WORK – WHETHER IT BE IN THE FORM OF RESEARCH PAPERS AND REPORTS; THE COLLECTION OF PRIMARY DATA THROUGH THE QUALITY OF LIFE SURVEYS; THE DEVELOPMENT OF ONLINE PLATFORMS TO HOLD AND VIEW DATA; OR THE PRODUCTION OF MAPS OF THE MONTH, VIGNETTES AND DATA BRIEFS – IS DONE WITH A VIEW TO PROVIDING PUBLIC SECTOR OFFICIALS AND DECISION-MAKERS WITH STRATEGIC INFORMATION AND ANALYSIS. HOWEVER, IN ADDITION, GCRO OFTEN WORKS DIRECTLY WITH AND FOR GOVERNMENT IN SUPPORT OF VARIOUS POLICY AND PLANNING PROCESSES, EITHER ON AN AD HOC BASIS, OR ON DEDICATED PROJECTS.

### STRATEGIC SUPPORT TO THE GAUTENG PLANNING COMMISSION (GPC)

In mid-2013 the GPC asked GCRO to contribute a section to its review of progress in the 20 years since democracy. In September and October 2013 GCRO staff worked together on a synthesis of socio-economic trends over the last two decades. The 20 000 word section covered 14 topics, including demographic changes and spatial development, poverty and inequality, health, economy and employment, human settlements, governance, and social cohesion. The chapter was submitted in October 2013. In early 2014 GPC requested some additional detail on specific aspects, most notably an historical perspective on Gauteng's Human Development Index (HDI).

GPC also requested GCRO to provide a PowerPoint presentation on Quality of Life and other GCR data as a resource document

for the GPC. This was finalised in October 2013 and posted on the GCRO website.

During 2013/14 GCRO continued to play a strategic support role on the G2055 process, but to a lesser extent than in previous years as GPC outsourced most of the drafting work to an external consultant. GCRO presented at various G2055 consultative workshops: 'Resource crises and infrastructure transitions' to the Gauteng Planning Forum on 10 September and on 'Smart cities' to a session with business leaders on 17 September. In the third quarter GCRO also participated in a number of strategy formulation sessions with the GPC team and its consultant. In the fourth quarter GCRO made comments and suggestions on a part of the final G2055 document.

## AD HOC SUPPORT TO VARIOUS GOVERNMENT DEPARTMENTS AND MUNICIPALITIES

GCRO regularly provides information and analysis or technical support to various national and provincial government departments, and to municipalities in the GCR. By way of illustration 2013/14 saw the following:

- » In mid-2013 GCRO provided socio-economic and Quality of Life survey data to the Gauteng Premier's Office on various neighbourhoods in Gauteng where service delivery protests were occurring or where other community-level concerns were being addressed (e.g. drug abuse challenges in Eldorado Park);
- » On 26 June 2013 GCRO participated in a workshop, arranged by the GPC on a Growth Management Strategy for Gauteng, and we subsequently provided comments on the document;
- » On request, GCRO provided selected maps for the Tshwane 2055 process, and information on commuter patterns for the Ekurhuleni Executive Mayor's Office;
- » On 12 November 2012, Chris Wray met with representatives from the Ekurhuleni, Tshwane and Johannesburg to discuss approaches to demographic futures modeling;
- » Christina Culwick and Kerry Bobbins agreed to be Members of the Steering Committee for a new Gauteng Environmental

Management Framework (GEMF), and participated in various meetings of this Committee;

- » Christina Culwick agreed to be a member of the Gauteng Transport Commission Panel of Experts and participated in various meetings of the Panel;
- » Chris Wray and David Everatt participated in a national workshop called by the National Planning Commission to formulate strategy on the planned National Spatial Observatory;
- » GCRO participated in a workshop to brainstorm the possible focus of the proposed Centre for Urban Innovation being set up in partnership between the Gauteng Provincial Government and the National Planning Commission;
- » Graeme Gotz continued to be a member of a Panel of Experts for the Integrated Urban Development Framework (IUDF), a national cross-departmental initiative led by the Department of Co-operative Government and Traditional Affairs (CoGTA). He participated in various meetings of the Panel, wrote a terms of reference for research into settlement typologies and demographic changes, and researched and wrote up a brief analysis of this set of issues.

## RESPONDING TO THE NEEDS OF GCR MUNICIPALITIES IN A MORE STRUCTURED WAY

On 1 October 2013, GCRO met with the central strategy units of Tshwane, Ekurhuleni and Johannesburg, on request from the cities, to explore possible joint city-focused projects that will build a collective understanding of and commitment to the GCR. Various projects, including a regular GCR seminar to explore structural challenges facing municipalities, were discussed. A subsequent e-mail was sent to the participants outlining the

proposals and asking for additional suggestions that could be built into strategic plans. Preliminary ideas were received from the cities and in line with this GCRO proposed a project involving a City GCR Seminar to the Board for 2014/15. Further engagements around other possible projects will occur as part of the further process towards GCRO's final five-year Strategic Framework.



PHOTO: JHONO BENNET



## ACADEMIC CONTRIBUTIONS

# 05.

GCRO PRIDES ITSELF ON ITS RESEARCH OUTPUTS IN PEER REVIEWED ACADEMIC AND OTHER PUBLICATIONS. PUBLICATION IN PEER REVIEWED OUTLETS REFLECTS THE HIGH QUALITY OF OUR RESEARCH AND PUSHES US TO REACH AND EVEN EXCEED INTERNATIONAL STANDARDS. IT ALSO MAKES GCRO'S WORK AVAILABLE TO A WIDER AUDIENCE. IN 2013/14 FINANCIAL YEAR GCRO BOASTED OF 33 PUBLISHED AND FORTHCOMING ARTICLES, INCLUDING THOSE IN PROGRESS (COMPLETED AND SUBMITTED).

*Breakdown of publication by category*

	PUBLISHED	FORTHCOMING	IN PROGRESS/SUBMITTED
PEER REVIEWED JOURNALS	4	1	15
BOOKS	1		2
BOOK CHAPTERS AND REVIEWS	2	1	6
CONFERENCE PROCEEDINGS	1	0	0
OTHER	3	0	0
TOTAL	11	2	23

#### *Published and forthcoming in peer reviewed journals*

Adelson, I., Alshalfan, S., Palominos, N., Trangoš, G. & Valdez Young, A. (forthcoming June 2014), 'Reordered publics: reimagining the City of London', *City* (volume, issue and pages unknown)

Wray, C. (2014), 'Racial integration in the Gauteng City-Region (GCR), South Africa', regional graphic, *Regional Studies Regional Science*.

Cheruiyot, K. & Harrison, P. (2014), 'Modeling the relationship between economic growth and time-distance accessibility in South Africa', *Review of Urban and Regional Development Studies*, Published online 27 March 2014.

Peberdy, S. (2013), 'From the past to the present: regulating migration and immigration in post-apartheid South Africa', *Austrian Journal of Development Studies* (JEP - Journal für Entwicklungspolitik), Vol. 3: 67-93.

Nyar, A. & Musango, J.K. (2013), 'Some insights about gender-based violence from the Gauteng City-Region', *International Journal of Sociology Study* Vol 1(2).

A FULL LIST OF GCRO'S PUBLISHED WORK IS AVAILABLE AT  
[HTTP://WWW.GCRO.AC.ZA/PROJECT/PUBLISHED-WORKS](http://www.gcro.ac.za/project/published-works)

#### *Books, book reviews and book chapters*

Everatt, D. (forthcoming), 'The politics of non-belonging in the developing world', Wyn, J. Cahill, H. (Eds.), *Springer Handbook on Children and Youth Studies*, (in press).

Everatt D. (ed.) (2013), *Non-racialism in South Africa* (Routledge, London).

Everatt, D. (2013), 'What lies at the end of the 'Rainbow Nation'?' in Everatt, D. (ed.) *Non-racialism in South Africa* (Routledge, London).

Everatt D. (2013), 'Ring of fire or puff of smoke? Youth in Gauteng', in Helve et al (eds) *Youth and youth transitions* (Tufnell Press, London).

#### *Conference proceedings*

Bobbins, K. (2013), 'The legacy and prospects of the Gauteng City-Region's mining landscapes', published in conference proceedings, 8th International Conference on Urban Regeneration and Sustainability (Sustainable Cities, 2013), Putrajaya, Malaysia, 3-5 December 2013.

#### *Other*

Trangoš, G., Masters Projects: Architecture & Urbanism, Volume 1 Review, April, 2014 (Published works)

Trangoš, G. (2014), 'The fickle "embrace" of informality doesn't help', *Informal Cities Reader.za* (South African Cities Network, Johannesburg).

Everatt, D. (2013), 'Quality of Life in the Gauteng City-Region: a steady ship on a global sea of change?' *In Focus* (Helen Suzman Foundation journal), Issue 69, June 2013 (Special issue on 'Future of our cities').

#### *In preparation/awaiting publication*

A book manuscript for the book *Changing Space: Johannesburg within its City-Region* was finalised and submitted to Wits University Press. Positive comments were received from the two reviewers and Wits Press, and the book was fully revised and re-submitted in late November and is now in press. Four chapters were prepared by GCRO staff, in addition to the jointly authored editors' introduction: 'Poverty and inequality in the Gauteng City Region' (David Everatt), 'Changes in the natural landscape'

(Maryna Storie), 'Johannesburg's changing urban space economy' (Graeme Gotz with Alison Todes) and 'The "thin oil of urbanisation"? Spatial change in Johannesburg and the Gauteng City-Region' (Graeme Gotz and Chris Wray with Brian Mubiwa).

Sally Peberdy and David Everatt are working on converting pieces previously published on the xenophobia project into a book. A complete book manuscript of *South African Civil Society and Xenophobia* has been sent to UKZN Press for peer review.

Potsiso Phasha submitted a journal article, '53mm off the ground: understanding street skating and urbanity in Johannesburg' to the journal *Area*. The article was not accepted and is being revised for consideration by another journal.

David Everatt has submitted a paper to a special edition of *Social Indicators Research* based on his paper on long-term quality of life modelling to the RC55 mid-term conference held in the Hague in September 2013.

David Everatt has been invited to present three papers at St Antony's College, Oxford in April 2014, as part of the Centre for African Studies conference marking 20 years of democracy in South Africa.

An abstract written by Guy Trangoš and Michael Clark from the Socio-Economics Rights Institute entitled 'Blurred boundaries: informality and the post-apartheid city' has been accepted for presentation at the Law, Urban Space and Social Justice conference in June 2014. It will be published in a book following the conference.

Drawing from GCRO Occasional Paper 6, Chris Wray and Koech Cheruiyot have submitted a journal article for review to the journal *South African Journal of Geomatics*, titled 'Key Challenges and Potential Urban Modelling Opportunities in South Africa, with specific reference to the Gauteng City-Region'. The journal article is currently under review. The first reviewer had positive comments.

Alexis Schäffler, submitted an article – 'Green Infrastructure reflections: sustainably managing stormwater in Johannesburg? – researched and written while she was at GCRO, for publication in a special edition of the journal *Landscape & Urban Planning*. The article was not accepted and the piece is currently being revised and submitted to an alternative journal. Alexis Schäffler was also selected to present a poster, based on this research, at the 2013 Philomathia Symposium at the University of California, Berkeley, on 1 November 2013. The symposium was themed Water, Climate and Society: Challenges and Strategies in a Rapidly Changing World.

Christina Culwick is preparing a journal article titled 'Transitions to Non-motorised Transport in the Gauteng City-Region'.

Koech Cheruiyot is working with Philip Harrison on a journal article titled 'Sub-national economic resilience: Differential patterns from South Africa's local municipalities with regard to the 2008 global financial crisis'.

Graeme Gotz and Alexis Schäffler are working on a journal article provisionally titled 'Conundrums for an emerging green regional economy – reflections from the Gauteng City-Region', for submission to a special edition of the journal *Current Opinion in Environmental Sustainability*.

Annsilla Nyar submitted a draft journal article, 'Nation-building, Africanism and the 2010 FIFA World Cup: what did they do for social cohesion in post-apartheid South Africa?', for a special issue of the journal *Transformation*.

Darlington Mushongera is working on a paper on 'Income inequality trends in Gauteng over the last 10 years', using Stats SA General Household Survey data from 2002-2011.

Christina Culwick and Guy Trangoš are working on a paper, provisionally titled 'Living Solo in the Gauteng City-Region'.

David Everatt (2012) 'The black middle class and the future of politics in South Africa' (paper prepared for a South Africa/Brazil conference on 'the new middle classes' organised by the CDE) is being revised for submission.

Christina Culwick is working on a paper with Dr Zarina Patel with the provisional title 'Working with an interdisciplinary approach: The case of flood disaster management in Ekurhuleni'.

Kerry Bobbins's paper abstract to the South African Association of Geographers (SAAG) conference and it has been accepted to be presented and written into a full paper. Conference to take place in June 2014.

Kerry Bobbins's paper abstract sent to the International Association of Geographers (IAG) has been accepted to be presented and written into a full paper. Conference to take place in August 2014.

Koech Cheruiyot's paper abstract sent to The 7th Knowledge Cities World Summit (KCWS-2014) 23-27 September 2014, Tallinn, Estonia, titled 'Future of the Gauteng City-Region (GCR) as a Knowledge-Based Economy: Potentials and Challenges' has been accepted to be presented and written into a full paper. Conference to take place in September 2014.

### *GCRO publications*

Greyling, T. (2013), 'A composite index of quality of life for the Gauteng city-region: a principal component analysis approach', *GCRO Occasional Paper 7* (November 2013).

GCRO (2013), *State of the Gauteng City-Region*, 2013, interactive online report at <http://www.gcro.ac.za/gcr/review/2013/gcro/> (October 2013).

Wray, C., Musango, J., Damon, K. & Cheruiyot, K. (2013), 'Modelling urban spatial change: a review of international and South African modelling initiatives', *GCRO Occasional Paper 6* (August 2013).



Schäffler, A. et al (2013), *State of Green Infrastructure in the Gauteng City Region*, GCRO Research Report, (July 2013).

Mabin, A. (2013), 'The map of Gauteng: evolution of a city region in concept and plan', *GCRO Occasional Paper 5* (July 2013).

Mubiwa, B. & Annegarn, H. (2013), 'Historical change in the Gauteng City-Region', *GCRO Occasional Paper 4* (March 2013).

Potsiso Phasha, Representations of a fluid spatial identity: the GCR in a photograph, December, 2013 (Photo essays).

### *Presentations*

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

GCRO was well represented at the recent Southern Africa City Studies Conference, cohosted by the Centre for Urbanism and Built Environment Studies (CUBES) and the African Centre for Cities in Johannesburg from 27-29 March 2014:

- » Kerry Bobbins presented a paper, 'Mapping green infrastructure networks of the Gauteng City-Region, South Africa', and participated in a panel on 'The Post-Mining Studio: Studio as collaboration; Studio as exploration';
- » Christina Culwick chaired a session and presented a paper, 'Transitions to Non-Motorised Transport in the Gauteng City Region';
- » Graeme Gotz and Chris Wray each presented on a panel on 'Spatial Transformations in Johannesburg: Materialities and Subjectivities in Urban Spatial Change';
- » Graeme Gotz was discussant on a panel on 'Coproducting knowledge for tricky transitions: Urban experimentation and innovation in Cape Town';
- » Potsiso Phasha presented his photo-essay 'Scavenger Economies of the Mine Dumps'.

Guy Trangoš and Graeme Gotz (March 2014) presented on a panel, 'Mapping, Justice and Sustainability', at the Columbia University Studio-X Johannesburg Launch, 15 March 2014.

David Everatt (March 2014), 'Sustainability through a mega-city lens', UJ Symposium on Sustainability, 10-11 March 2014.

Kerry Bobbins (February 2014), 'State of Green Infrastructure in the Gauteng City-Region'. JCP Valuing Natural Capital Dialogue, 26 February 2014.

Kerry Bobbins (February 2014), 'Valuing green infrastructure and existing spatial data challenges'. GCRO Citylab, 20 February 2014.

Kerry Bobbins (February 2014), 'Investigating acid mine drainage and its governance as part of the broader mining landscape legacy in the GCR'. Post-mining landscapes of the Witwatersrand seminar, 19 February 2014.

Sally Peberdy (February 2014), 'Monitoring Small Scale Cross Border Trade in Southern Africa: Contributions, Costs and Opportunities' at the SAMP/GCRO/ACC/IMRC/IDRC workshop 'Urban informality and migrant entrepreneurship in Southern African cities,' Cape town 10-11 February 2014.

Chris Wray (February 2014), 'GIS for spatial analysis and data visualisation in the Gauteng City-Region', IEB teachers conference, 1 February 2014.

Christina Culwick (January 2014) 'GCR overview' for UP Leadership in Urban Transformation course, 29 January 2014.

Kerry Bobbins (December 2013), 'The legacy and prospects of the Gauteng City-Region's mining landscapes'. Sustainable Cities Conference, 4 December 2013.

Christina Culwick (November 2013), 'A multidisciplinary approach to understanding disaster risk: the case study of flood disasters in Ekurhuleni' at the Southern African Adaptation Colloquium in Cape Town, 25 November 2013.

Chris Wray (November 2013), 'GIS for spatial analysis and data visualization in the Gauteng City-Region', Statistics South Africa GIS day, Pretoria, 20 November 2013.

Guy Trangoš (November 2013), 'Johannesburg: Dislocation | Fragmentation and An Introduction to the GCR / GCRO', Opening of the Johannesburg component of the [In]formal City Berlin-Johannesburg Exchange, 18 November 2013.

David Everatt (November 2013), 'State of the Gauteng City Region 2013', Gauteng Advisory Council, 15 November 2013

David Everatt (November 2013), 'GCR past, present and future', Gauteng SMS Conference, 14 November 2013.

Kerry Bobbins (November 2013), 'State of the Green Infrastructure Report and GIS data constraints', CoJ user group and spatial information steering committee, 13 November 2013.

Kerry Bobbins (October 2013), 'Investigating acid mine drainage and its governance in the Gauteng City-Region', GCRO Day / Launch of the 2013 State of City-Region Review, 25 October 2013.

Darlington Mushongera (October 2013), 'The GCR barometer', GCRO Day / Launch of the 2013 State of City-Region Review, 25 October 2013.

Guy Trangoš (October 2013), 'New spaces of transport in the GCR: a Gautrain analysis', GCRO Day / Launch of the 2013 State of City-Region Review, 25 October 2013.

Christina Culwick (October 2013), 'Non-motorised transport in the GCR', GCRO Day / Launch of the 2013 State of City-Region Review, 25 October 2013.

Chris Wray and Christina Culwick (October 2013) 'Spatial transformation across the Gauteng City-Region', Ahmed Kathrada Foundation's Lost in Transformation? Conference, 9 October 2013.

Koech Cheruiyot (September 2013), 'Collaboration opportunities for spatial analysis and data visualization', StatsSA's Gauteng Isibalo Conference, Midrand, 16-17 September 2013.

Chris Wray (September 2013), 'Smart cities + smart province = smart city-region?' G2055 business lab, 17 September 2013.

Sally Peberdy (September 2013) 'Social protection for informal cross-border traders', inaugural international conference of the Southern African Social Protection Experts Network (also hosted by Friedrich Ebert Stiftung) Social protection for those working informally: Social & income (in) security in the informal economy, 16 September 2013.

Graeme Gotz (September 2013), 'Socio-economic trends in the Cradle of Humankind' Wits colloquium on Inclusive Economic Growth in the Cradle of Humankind, 13 September 2013.

David Everatt (September 2013) 'What we know: the GCR today' Premier's Co-ordinating Forum, Springs, September 2013 David Everatt (September 2013). 'Long-term quality of life analysis in Gauteng' to RC55 (Social Indicators Research Committee of the ISA) mid-term conference on Social Indicators, Hague, Netherlands, 12 September 2013.

Graeme Gotz (September 2013), 'Resource crises and infrastructure transitions', Gauteng Planning Forum, 10 September 2013.

Chris Wray (July 2013), 'Collaboration opportunities for spatial analysis and data visualisation in the Gauteng City-Region'. Wits School of Statistics & Actuarial Science lunchtime seminar series, 25 July 2013.

Guy Trangoš (July 2013), 'Johannesburg: Dislocation | Fragmentation'. Brightest Young Minds Summit, Johannesburg, 25 July 2013.

Sally Peberdy (July 2013), 'Internal and cross border migration in Gauteng focusing on the City of Johannesburg', City of Johannesburg Business Forum, 25 July 2013.

Graeme Gotz, Alexis Shaffler and Kerry Bobbins (July 2013), 'Governing resource flows in the Gauteng City-Region'. Presented at the 19th International Sustainable Development Research Society (ISDR19) Conference, Spier Estate, Stellenbosch, 3 July 2013.

Graeme Gotz (June 2013), Closing synthesis at Centre for Development and Enterprise (CDE) workshop Cities of Hope, 27 June 2013.

David Everatt presented 'The GCR: What we know' to multiple audiences including the ANC and DA provincial caucuses over June and July 2013.

Graeme Gotz (June 2013), 'West Rand social and economic trends and dynamics', West Rand Transformation Committee, 18 June 2013.

Kerry Bobbins (May 2013), 'Beneath the surface: investigating Acid Mine Drainage (AMD) and its governance in the Gauteng City-Region (GCR)'. Presented at the Faces of the City Seminar Series hosted by the Wits School of Architecture and Planning, 14 May 2013.

David Everatt (May 2013), 'Keynote address – an overview of the GCR'. ESRI national conference, Champagne Sports, Drakensburg, 9-10 May.

Graeme Gotz & Alexis Schäffler (April 2013), 'Conundrums of an emerging green economy in the Gauteng City-Region', international workshop at Royal Holloway, London, Bearing the brunt of environmental change: understanding climate adaptation and transformation challenges in African cities, 17 April.

David Everatt (April 2013), 'Working with government'. Colloquium organised by Board Chair Prof Rob Moore, 16 April 2013.

Guy Trangoš (April 2013), 'Architecture and the City', Faces of the City Seminar, Wits University, 2 April.

### *Conferences, seminars and symposia organised by the GCRO*

As part of its intellectual life, GCRO continues to co-organise a seminar series with the NRF Chair of Spatial Planning and Modelling Prof Phil Harrison, and CUBES, at Wits. The seminar series is called *Faces of the City: Urban Form, Fabric and Function*.

GCRO hosted the Kathrada Foundation launch of its +20 democracy discussion series, at which Minister Paul Mashatile did the keynote presentation, at the Wits Club on 25 September.

GCRO hosted Prof Glaucio Arbix for the launch of his *Provocation* on innovation in Brazil, on 29 April. The event was widely covered in the media as he simultaneously launched the US\$16 billion Brazilian Innovation Fund.

### *Teaching and supervision and wider academic citizenship*

Graeme Gotz presented two lectures to the Urban Infrastructure Design and Management Masters Programme at UCT on 6 March 2014, one on the Phiri Water Case and the other on Johannesburg's Growth Management Strategy.

Sally Peberdy continues to be invited to examine PhD and Masters theses and examine PhD proposals. These have included a PhD thesis from UNISA, Master's thesis from the University of Johannesburg and a PhD proposal from the University of the Witwatersrand.

Chris Wray and Kerry Bobbins proposed 3<sup>rd</sup> year and postgraduate projects ideas for uptake by students in the UJ Geography Department for the 2014 academic year.

Chris Wray presented two lectures to second year geography students at Wits on 'GIS for spatial analysis and data visualisation in the Gauteng City-Region' and 'Web GIS and GCRO's Web GIS applications', on 4 October 2013.

Koech Cheruiyot lectured 'Quantitative Methods for Property Studies', a year-long course in the MSc (Building) Property

Development and Management, Construction Economics & Management, at Wits.

Koech Cheruiyot is co-supervising a PhD in Economics student in the Wits School of Economics and Business Science, with the research title 'Analysis of Local Housing Markets: Adoption of stock flow model of Investment'.

Koech Cheruiyot is informally (awaiting approval) co-supervising as an external supervisor an M.A. (Economics) student at Morgan State University, Maryland, USA, with the research title 'Sub-national growth rate differentials in South Africa: A spatial econometric analysis'.

Chris Wray assisted a group of 3<sup>rd</sup> year geography students from UJ with their GIS in the workplace project.

Chris Wray and Kerry Bobbins devised 3<sup>rd</sup> year and postgraduate projects ideas for uptake by students in the Wits Geography department for the 2014 academic year.

David Everatt worked with the Kathrada Foundation Executive and Research Director on their future planning around a 'non-racialism observatory'.

Potsiso Phasha was invited to be an external examiner in a first year Urban & Regional Planning course in the School of Architecture & Planning at Wits.

Potsiso Phasha was invited to give a guest lecture in a Masters research methodologies course in the School of Architecture & Planning at Wits.

GCRO was visited by Common Purpose in partnership with the Commonwealth Association, for a discussion around 'intractable city challenges'.

Graeme Gotz gave three lectures to a third year Wits planning course, Johannesburg as a city in Africa, in August 2013.

Sally Peberdy was invited to present a lecture to postgraduate students in the School of Architecture and Planning at Wits

University 'Cross border traders and research methodologies', 13 August 2013.

Sally Peberdy was invited to be part of a jury informally examining PhD proposals from UC Berkeley, Brown University and Wits University for the ACMS of Wits University and the Social Science Research Council of the USA.

The three MA students supervised by Sally Peberdy at UWC successfully graduated.

David Everatt is supervising a doctorate student looking at determinants of poverty and inequality using StatsSA data.

David Everatt supervised to completion a Masters student from the School of Public & Development Management, Wits.

Guy Trangoš lectured '*History and Theory of Urban Design*' to Urban Design Masters students at Wits University during February and March 2013.

Guy Trangoš was a teaching assistant on '*Introduction to Environmental Interpretation*' to 1st year Town and Regional Planning students at Wits University for the first semester 2013.

Caryn Abrahams teaches a module on a Masters course in Development Studies at the Nelson Mandela Metropolitan University, where she focuses on the discourse(s) of development.

### *Editorial boards and reviewing of journal articles*

Some GCRO staff sit on the editorial boards of peer reviewed journals and act as peer reviewers for articles.

Sally Peberdy continues to act as a reviewer for various journals and sits on the editorial boards of the African Migration and Development Review and Immigrants and Minorities.

Koech Cheruiyot reviewed an article titled 'Linking Settlement Type and the Census Undercount' for the Town and Regional Planning journal hosted by the University of Free State.

### *Resource Centre*

The GCRO continues to build its resource centre. The centre holds hard-copy and electronic resources. The holdings are captured on an MS Access database and in March 2014 comprised over 2 500 items. They range from popular media, to grey literature, to peer reviewed articles and books.



## PUBLIC PLATFORMS

# 06.

### *Stakeholders and partnerships*

The RAC acts as a portal between the governmental and academic work of GCRO and is comprised of senior academics with representation from government, the private sector and civil society. RAC meetings held in 2013-2014 included reviews of the GCRO 2013-2014 workplan and the mandate and functioning of the RAC. The RAC was reformulated in 2012-2013 which saw the appointment of new RAC members. The revised structure of the RAC was intended to enable the RAC to play a stronger role in providing input into on-going GCRO research work. The work of the RAC and its interaction with GCRO indicates that we still need to work on how to maximise the potential input of the RAC, both as an entity and by bringing in RAC members individually or in groups around specialist topics, to help with GCRO projects.

Current membership of the RAC was approved in March 2013 and has subsequently undergone some revision with GCRO Board approval. The following have kindly agreed to be members of the RAC: Prof Fethi Ahmed (Wits); Neeshan Balton (Director, Ahmed Kathrada Foundation); Prof Thea de Wet (UJ); Rudi Dicks (Presidency); Prof William Gumede (public intellectual); 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); Dr Noor Nieftogodien (Wits); Prof Edgar Pieterse (UCT); Prof Chris Rogerson (UJ); Michael Sachs

(National Treasury); Dr Aurelia Segatti (Wits); Mfanafuthi Tsela (Dept. of Communications); Prof Rex van Olst (Wits); Dr Christo Venter (University of Pretoria); Lisa Vetten (civil society); and Prof Colleen Vogel (University of Pretoria).

GCRO staff occasionally write for other media or contribute substantially to articles in media about GCRO work. In addition GCRO has a social media presence through Facebook and Twitter accounts.

Guy Trangoš (April 2013) 'What is Design' article in City Press, 29 April 2013 with Zahira Asmal.

Guy Trangoš (July 2013) 'Soweto Striker' article in Canadian Architect, 1 July 2013.

Guy Trangoš (August 2013) 'Not so rigid, please' article in Financial Mail, 29 August 2013.

Kerry Bobbins (September 2013) contributed to 'IsiZulu, English Gauteng's most spoken languages', Gauteng News article written by Vuyo Sabani.

Guy Trangoš (October 2013) 'B(l)oom time for Jacaranda City' article in Earthworks Magazine, October/November 2013 with Thomas Coggin.

Christina Culwick and Kerry Bobbins contributed to a published article in the October edition of Urban Green File entitled, 'Gearing up for Gauteng going green'.

Kerry Bobbins (November 2013) contributed to 'Acid mine drainage under the spotlight' in the Northcliff & Melville Times, written by Zakiya Mckenzie.

Kerry Bobbins (November 2013) contributed to 'acid water problem "neglected by government"', Business Day, written by Sue Blaine.

Guy Trangoš established and manages GCRO's Facebook and Twitter presence online. This has proven to be a successful means of disseminating the GCRO's multiple and varied outputs while generating a broader online discussion about research findings and event presentations.

#### *Visitors and Internships*

GCRO hosted Jennifer Williams, a Doctoral Student in Urban Planning at the Taubman College of Architecture and Urban Planning, University of Michigan, Ann Arbor, USA. She presented her preliminary doctoral research proposal titled, *Mixed income housing in Johannesburg: A poverty reduction strategy* to the GCRO staff. She plans to return for a final fieldwork in the future.

GCRO also hosted LaDawn Haglund, an Associate Professor in the Global Institute of Sustainability at Arizona State University at Arizona State University, and her PhD student, Julie Gwiszcz. They were undertaking research for a comparative study across Johannesburg, Delhi and Sao Paulo into the legal, institutional, and political mechanisms by which social rights – specifically, the human right to water and the right to a healthy environment – are being claimed and realised in practice. Prof Haglund presented preliminary insights from her research at a Faces of the City Seminar on 1 April. Future opportunities for collaboration are being explored.

As part of its successful internship programme, the GCRO appointed Daniel Kibirige as a GIS intern in 2013/14 financial year.



PHOTO: TEBHO NTSAMAI

# FINANCIAL REPORT

# 07.



The Board  
Gauteng City-Region Observatory  
The University of Witwatersrand  
Johannesburg  
Private Bag 3  
Wits  
2050

Dear Sirs

*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 2013 to 31 March 2014. 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 Gauteng City Region Observatory. Our procedures were performed solely to assist you in reporting on the Financial Information of the Gauteng City- Region Observatory which are summarised below:

1. Obtain a project schedule of income and expenditure schedule of the Institution for the period 1 April 2013 to 31 March 2014
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 trace to supporting documentation to ensure correctness and validity of the expenses.
5. Obtain a general ledger analysis of the Institution from the University of the Witwatersrand, Johannesburg for the period 1 April 2013 to 31 March 2014 to ensure that the accounting records of the GCRO are in accordance with that of the University of the Witwatersrand, Johannesburg and prepare Statements of Income and Expenditure, and Assets and Liabilities for the period ended 31 March 2014.



We report our findings below:

1. Obtained a project schedule of income and expenditure schedule of the Institution for the period 1 April 2013 to 31 March 2014.
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 traced to supporting documentation to ensure correctness and validity of the expenses.
5. Obtained a general ledger analysis of the Institution from the University of the Witwatersrand, Johannesburg for the period 1 April 2013 to 31 March 2014 to ensure that the accounting records of the GCRO are in accordance with that of the University of the Witwatersrand, Johannesburg and prepared Statements of Income and Expenditure, and Assets and Liabilities for the period ended 31 March 2014 (Annexure A).

No exceptions were noted as a result of 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 2013 to 31 March 2014.

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 the 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 the Gauteng City Region Observatory, taken as a whole.



D Desai  
Director  
Chartered Accountant (SA)  
Johannesburg







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