

Annual Report 2012/2013

Gauteng City-Region Observatory



The Gauteng City-Region Observatory (GCRO), is a partnership of the University of Johannesburg, the University of the Witwatersrand, Johannesburg, and the Gauteng Provincial Government.

Photographic credits

Most of the photographs used in this annual report come from GCRO's photo-competition and exhibition, 'Portraits of a city region'. Where this is the case the page number and photographers name appear below. All other images are from the GCRO library. Copyright remains with the photographers.

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▶ Page 20: Kyle Brand

▶ Page 21: Teboho Ntsamai

▶ Page 22: Teboho Ntsamai

▶ Page 25: Solomon Legodi

▶ Page 26: Monyaka Naleli

▶ Page 31 (top): Teboho Ntsamai

▶ Page 38: Wikus Jordaan

▶ Page 41: Sinead Voller

Annual Report

2012/2013

Gauteng City-Region Observatory



Foreword

Professor Rob Moore

[Chair of GCRO board,
Deputy Vice Chancellor (Advancement and
Partnerships) University of the Witwatersrand]

2012/13 saw the Gauteng City-Region Observatory (GCRO) in its fourth full year of operation, and the second year of its three-year strategic plan. While still comparatively a young organisation, GCRO is showing maturity with a commitment to increasingly complex and innovative research, a widening portfolio of strategic support work for provincial and local government in the Gauteng City-Region (GCR), and a growing publications record.

Highlights of the 2012/13 financial year include:

- **The Gauteng Provincial Government's launch of the G2055 Discussion Document in July 2012.** GCRO helped with research for the document, produced most of its maps, and drafted specific sections. Through 2012 and early 2013 GCRO also played a role in task teams leading development of 14 'strategic-pathways' that will be at the heart of the final G2055 long-term development strategy.
- **The official launch of the 2011 Quality of Life (QoL) Survey and the development of an online QoL Survey Viewer.** Through the year GCRO actively disseminated the results of the 2011 Survey through presentations to provincial and local government departments, municipal Mayoral Committees, political forums and academic audiences. The innovative QoL Viewer is a key part of this process of availing data and insights from GCRO's flagship survey to both decision-makers and researchers.

- **A very successful 'Visualising the GCR' photographic competition.** The competition saw some 600 photographs entered by 150 artists – staff and students from universities across the GCR – giving their interpretation of people and places that make up our vibrant, diverse and fascinating region.
- **The publication of a special edition of *Politikon* on non-racialism in South Africa.** Various papers from the special edition were subsequently presented to an international audience at the 22nd World Congress of Political Science of the International Political Science Association (IPSA) in July 2012. In addition, Routledge approached GCRO to re-publish the collection as a book, due in mid-2013.
- **The joint organisation of two conferences with the School of Architecture and Planning at Wits:** one on *Sport and the City: impacts and effects of Mega-Events on Urban Development*, at the end of March 2012 at which two papers based on the GCRO's panel survey of 150 micro-traders and how they benefitted from the 2010 FIFA World-Cup; the second an L'Agence Française de Développement (AFD) and Wits funded colloquium on *Sustainability in Johannesburg and its wider metropolitan region: transforming urban structures and infrastructures for resilience*, in November 2012. Papers from the first conference have been accepted to a special edition of the journal *Transformation*. Proceedings from the second event, addressed by Minister

Trevor Manuel, Deputy Minister Jeremy Cronin, and the Executive Mayor and City Manager of Johannesburg, amongst others, are being written up as a Conference Report.

- **The start of an annual internship programme at GCRO.** In 2012/13 three interns – Potsiso Phasha, Kerry Bobbins and Kavesha Damon – leant their emerging skills to GCRO, and benefitted from its intensive and stimulating work environment.

The Observatory is now heading into the final year of its three year strategic plan, covering 2011/12 to 2013/14. This will be a big year ahead for GCRO. Its demanding three-year plan requires the finalisation of a number of large multi-year projects, over and above a third run of the QoL Survey and a second State of the GCR Review. In preparation for a renewal of the Memorandum of Agreement between the founding partners, a full evaluation of GCRO's five-year impact will be done in October/November 2013. In addition, the last quarter will see a new medium-term strategic plan formulated, this time synched with the five-year 2014-2019 term of office.

The year in review has laid a solid foundation for this intensive period ahead: GCRO has earned reputation and respect for the high standard of its innovative, data-driven outputs; a good team of both experienced as well as young and hungry researchers has been built; and the organisation is demonstrating growing confidence on the back of a well-balanced portfolio of academic and government policy-support work.

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01 Introduction and overview



This report covers the April 2012 to March 2013 financial year, the mid-point of the current three-year cycle of work of the Gauteng City-Region Observatory (GCRO). GCRO was publicly launched on 11 September 2008. 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), 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.

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.

This is not an easy position to occupy – 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. That is precisely what 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 year two 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 will come 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) and a review of the Observatory will be conducted, in line with the Memorandum of Agreement 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 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.

It is with some pride that we reflect back on a highly successful initial few years of life for GCRO. Below are examples of some of the projects that GCRO completed in previous years:

- Building on a study to benchmark sub-national responses to the global financial crisis (completed late 2009), and the Developmental Green Economy Strategy for Gauteng (completed January 2010), GCRO also provided support to the Gauteng Department of Economic Development to conclude a Gauteng Employment Growth and Development Strategy (GEGDS) in April 2010 (launched later in 2010).
- The first 'Quality of Life' Survey was completed in May 2010, including 6 600 interviews across the broader GCR; the second, comprising 17 000 interviews in Gauteng, was completed in 2012.
- A nation-wide study into civil society responses to xenophobia, working with partners from the University of KwaZulu-Natal (UKZN), the University of the Western Cape (UWC) and UJ. The project, which included 14 case studies and ten synthesis pieces, was launched in July 2010 with key pieces later converted into a special edition of the journal *Politikon* published April 2011.
- As part of a multi-case study project examining service delivery failings sponsored by the Presidency, GCRO researched municipal billings systems and front-line practices in Johannesburg and Ethekwini. This was completed in January 2011.
- On request from the Gauteng Planning Commission (GPC) we developed a list of indicators and an interactive tool to determine the 50 priority wards in the province. Delivered in April 2011, GCRO invested in additional functionality (to allow users to generate their own maps online) and launched an interactive web-based viewer in February 2012.
- Building on the Developmental Green Economy Strategy for the GCR, GCRO developed a comprehensive Green Strategic Programme (GSP) for Gauteng. Some nine sector reports analysed existing strategy and policy, followed by the strategy itself, delivered in June 2011. In the last two years we have helped disseminate the core messages in the GSP through many presentations.
- Strategic advice and detailed Terms of Reference were developed for the Department of Sports, Arts, Culture and Recreation on how to conduct an audit of all sports facilities in Gauteng, presented in July 2011.
- Working with the Ahmed Kathrada Foundation, a multi-author study (drawn from multiple academic and non-governmental organisations locally and internationally) into race, identity and non-racialism. The project involved commissioning 18 focus groups which authors used as their primary data. The papers were presented to a two-day symposium in October 2011, opened by Ahmed Kathrada, and converted into a special edition of the journal *Politikon*.
- GCRO conducted a 'survey of surveys', evaluating all major provincial and municipal household surveys (e.g. satisfaction surveys).
- Worked during 2010 to develop the first State of the Gauteng City Region - an interactive online and CD-based review in ten sections, also printed as a report, launched in October 2011. Work on the second State of the City-Region Review is now underway.
- Within the area of indicators and benchmarks, a range of new data products were launched in October 2011. We now produce vignettes, data briefs, interactive graphs and maps of the month on a regular basis, with the vignettes and maps being a monthly output.
- With work mainly done in 2010 and first half of 2011, GCRO supported the GPC and Organisation for Economic Co-operation and Development (OECD) to produce the OECD Territorial Review of the GCR, launched in November 2011.
- The second phase of our interactive GIS viewer was launched in December 2011, with a range of new functionality (e.g. option to download graph data) and new layers (e.g. land-cover change between 1990 and 2009).
- The second 'Quality of Life' Survey, this time with some 17 000 respondents, run between June (design) and December (mopping up the field) 2011. Data have been cleaned and are ready for analysis.
- A two-year FIFA soccer world cup panel survey, with some 150 traders surveyed at three different intervals - in June 2010, November 2010, and mid-late 2011 - with qualitative research to complement the quantitative work. Papers were presented to a symposium on 'Sport and the City' in March 2012 which GCRO is co-funding with the Johannesburg Development Agency (JDA) and others, and the papers have been submitted to *Transformation* for a special edition.
- GCRO out-sourced the FIFA world cup close-out assessment report, commissioned on behalf of Department of Sports, Arts, Culture and Recreation.
- GCRO continues to explore possibilities of a community facilities mobile mapping application, with academics and students.
- Support to GPG on conducting a Mid-Term Review of GPG. GCRO wrote an introductory overview section and commissioned a number of evaluation pieces.
- Preliminary work was undertaken during 2011 in support of GPG on their long-term G2055 strategy.

- *Ad hoc* support, presentations and small written pieces were produced for other provincial departments and municipalities. For example, GCRO provided support to the Department of Roads & Transport around a household travel survey for Gauteng.
- The metabolic flows and infrastructure transitions project was well underway by the end of 2011/12, with a background paper and four scoping papers produced, and chapters for a book with the African Centre for Cities and Stellenbosch University's Sustainability Institute underway.
- The green assets and infrastructure project was also well underway, including an exercise to collect digital data on green spaces from all municipalities. Cutting edge GIS maps have been developed in pursuance of this project.
- A major study into mobility in the GCR was configured, involving commissioning academics from UJ to work with students to prepare a report on commuting patterns, based mainly on 'Quality of Life' 2009 data. GCRO has also commissioned an academic at the University of Pretoria (UP) to provide a report modelling transport data based on QoL 2011. GCRO and the consultants we have used have been widely consulted by provincial and municipal transport authorities.
- There was (and remains) an on-going process of GIS data collection and acquisition.





During the year under review here, either in preparation or completed, in summary (and detailed later), we have:

- Launched the 2011 'Quality of Life' Survey, and presented the findings to a wide range of audiences in local and provincial government, the academy, the media, civil society and others.
- Completed the 'Quality of Life' data manipulator and viewer, allowing people to run their own x-tabs of the 2009 and 2011 surveys online and export the findings for their own work.
- Produced eight vignettes, one interactive graph, and ten maps of the month.
- Released a 2011 Census Data Brief within a day of the publication of the Census figures, synthesizing results for Gauteng.
- Published a global benchmarking prices and earnings Data Brief.
- Issued the Survey of Surveys Occasional Paper.
- Released a *Provocation* on Innovation in Brazil written by Prof Glaucio Arbix.
- Completed the study into Higher Education in the GCR, barring printing and launching.

- Commissioned a UJ economist to produce an academic piece on quality of life using Principal Component Analysis, to be published as an Occasional Paper.
 - Completed the spatial change book on Johannesburg, co-edited with Wits academics (book one of three) that is with Wits University Press for review.
 - Completed a book (currently at print), on non-racialism based on our project with the Ahmed Kathrada Foundation, previously published by *Politikon* but selected for special book printing by Routledge. It will be published in mid-2013.
 - Submitted a book manuscript on xenophobia (based on funds raised from the Atlantic Philanthropies and a project carried out with UJ, UKZN and UWC) has been submitted to UKZN Press for review.
 - Continued to support the GPC in the development of G2055, providing research and drafting on the G2055 Discussion Document, and actively participating in the Strategic Pathways Task Teams.
 - 15 journal articles, book chapters or reviewed papers as part of conference proceedings that have been published or accepted for publication.
 - Largely completed the Visualising the City-Region photography competition and exhibition during the year under review. The exhibition took place in the current financial year and was held at UJ's Faculty of Art, Design and Architecture (FADA) Gallery.
 - The on-going Faces of the City seminar series that continues to run weekly.
 - Co-organised the Agence Francaise Developpement conference with the SA Research Chare (SARCHi) Chair in spatial modelling.
 - Produced four Newsletters.
 - Continued with on-going formal academic presentations, presentations of our work, occasional teaching and on-going Masters and Doctoral supervision, external examining and reviewing for journals.
 - Had two Research Advisory Committee (RAC) meetings, and then initiated a process of re-engineering the RAC.
- We trust readers will agree that the first five years of life for the GCRO has been extremely productive.



02 Governance



The GCRO Board

- | | |
|---------------------|--------------------------|
| Prof Adam Habib | Ms Annette Griessel |
| Prof Fiona Tregenna | Mr Dan Mashitisho |
| Prof Helen Laburn | Councillor Pinky Mkhonza |
| Prof Rob Moore | Prof David Everatt |
| Mr Rashid Seedat | |

GCRO is overseen by a Board, made up of two representatives from UJ - Prof Adam Habib, Deputy Vice-Chancellor: Research, Innovation and Advancement and GCRO deputy-chair, and Prof Fiona Tregenna from the economics department; two representatives of Wits, Prof Helen Laburn, Deputy Vice-Chancellor: Research, and Prof Rob Moore, Deputy Vice-Chancellor: Advancement and Partnerships and Chair of the GCRO Board. The Head of the 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, and Mr Dan Mashitisho, Municipal Manager: Mogale City, representing local government in Gauteng.

During the period under review, the Board formally invited the South African Local Government Association (SALGA) to join the GCRO Board, and in addition to Mr Mashitisho, SALGA also elected Councillor Pinky Mkhonza to the Board. Also during this period, Prof Habib left UJ to join the University of the Witwatersrand as pro-Vice-Chancellor, and his position was filled temporarily by Mr Kerry Swift. During 2013/14 his seat will be taken up by the new Deputy Vice-Chancellor at UJ, namely Prof Tshilidzi Marwala, Deputy Vice-Chancellor: Research, Innovation and Post Graduate Studies.

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 RAC, made up of



RAC members and staff

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. It is separately written up below, but the period under review saw the RAC re-constituted with a clearer mission and new membership.

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 2012/13 are attached and mark our fifth successive clean, unqualified audit.

During the year, after detailed debate and careful consideration, 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.

In addition, GCRO has been visited twice by the Oversight Committee on 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 three 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. The only condition is that they, in turn, use it for teaching or research and not for private profit. 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.

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. 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, Senior Systems Analyst Mr Chris Wray, and Senior Researcher Prof Sally Peberdy, who joined us in the year under review.

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 Researchers Prof Sally Peberdy, who is working on both trade and core/periphery issues in the GCR; Ms Annsilla Nyar, who has been with GCRO for four years, and works primarily on life and people in the GCR; Ms Maryna Storie who works on the intersection of risk and disaster, from a sustainability perspective, but resigned towards the end of the year under review; and Dr Josephine Musango who is both a modelling expert and a sustainability researcher and will be driving our metabolic flow project. Amongst our Researchers, Ms Alexis Schäffler works primarily on sustainability issues; and economist Darlington Mushongera brought much-needed economic skills to the GCRO stable.

We also advertised for two internship positions, but received such quality applicants that we stretched the budget to cover three, namely Ms Kerry Bobbins,



The GCRO staff

Back row left to right

Prof David Everatt
Mr Chris Wray
Mr Graeme Gotz

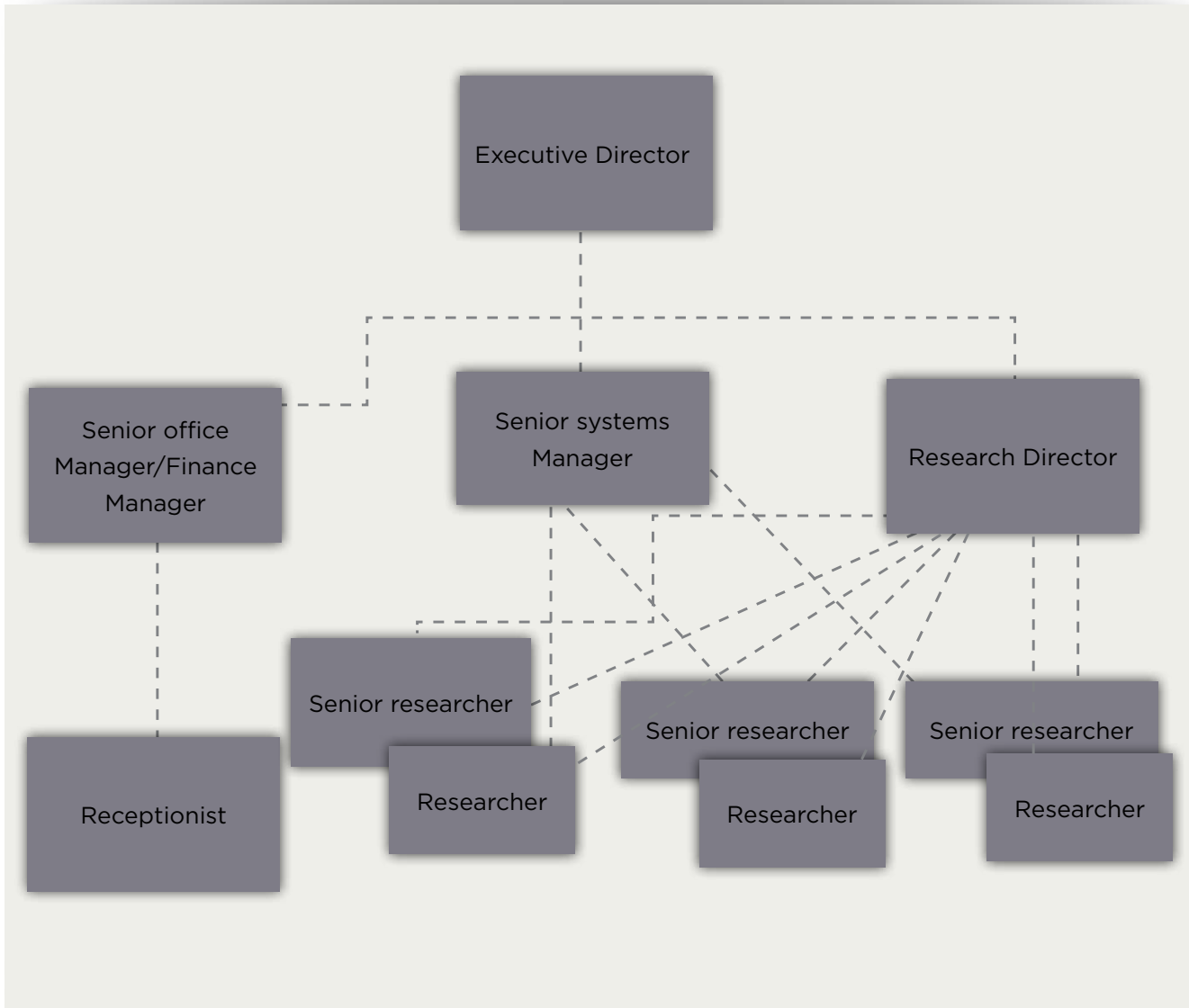
Middle row left to right

Mr Potsiso Phasha
Mr Darlington Mushongera
Prof Sally Peberdy
Ms Kavesha Damon
Ms Kerry Bobbins
Ms Annsilla Nyar

Front row left to right

Ms Maryna Storie
Mrs Adele Underhay
Ms Disemelo Masehe
Dr Josephine Musango
Ms Alexis Schäffler

GCRO organogram



who joined us with a double Masters and is both a GIS expert and sustainability researcher; Ms Kavesha Damon, who took up the internship specifically earmarked for GIS; and Mr Potsiso Phasha joined as a general intern, specialising in visualisation, including the use of photography and imagery. In brief, GCRO moved from being under-staffed and everyone working flat out to meet deadlines to having a full staff complement ... and still working flat out to meet expanded deadlines! Ms Disemelo 'Sammy' Masehe runs reception and our ever-growing resource centre.

As we grow, so the organisation becomes more complex, and the organogram is indicative rather than determinist. 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 the University of the Witwatersrand, Prof Rob Moore.

What the drive to recruit new staff has meant is that GCRO has got a critical mass of researchers, which we previously lacked; and has some important specialist skills that we also previously lacked. There are always gaps - but that is why we are based at two universities, so that we can work collegially rather than seeking to do everything ourselves. But with nine researchers working full-time on the GCRO research strategy, it is fair to say that this was a critical year in which GCRO stopped 'becoming' and arrived.

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 2012/13 financial year the following staff development activities occurred:

- Adele Underhay (Senior Finance and Office Manager) attended RIMS training provided by the Research Offices Wits in October 2012.
- Alexis Schäffler (Researcher) attended a training course, ArcGIS Desktop 1 - Getting started with GIS (NQF Level 4) at ESRI South Africa from 14-18 May 2012.
- Annsilla Nyar (Senior Researcher) completed her first year of her three year doctoral study programme in the Department of Political Studies at Wits.
- Chris Wray (Senior Systems Analyst) attended two courses:
 - Spatial Statistics at Wits in June 2012.
 - Migrating to ArcGIS V10.1 for Server - ESRI South Africa in February 2013.
- Darlington Mushongera (Researcher) submitted a second Masters degree for examination to the Institute of Poverty & Agrarian Studies (PLAAS), Faculty of Economics and Management Sciences, UWC. He also attended two courses:
 - Modelling of Illegal behaviour in Natural Resource Management in Developing Countries at UCT during January 2013.
 - Econometric analysis in environmental economics using Matlab at UP in February 2013.
- Kavesha Damon and Kerry Bobbins (Interns) both attended the ESRI ArcGIS III course at ESRI South Africa in Midrand during January 2013.
- Maryna Storie (Senior Researcher) continued her PhD at Wits, registered at the School of Architecture and Planning.



03

The year in review



Before briefly detailing the on-going and new projects GCRO is or will be involved in during 2013/14, it is important to note that the end of this three-year framework coincides with a turning point for GCRO itself. The core functions of an Observatory are to know its own space extremely well; to know how it stacks up against similar, relevant comparators elsewhere in the world (which requires detailed work to find what and where those places are); and to undertake trend analyses that allow the Observatory to predict with some certainty where the city-region is heading, and thus what policy changes might be needed to improve future prospects (often referred to as 'futurology'). In 2013/14, GCRO will commission our third 'Quality of Life' Survey, and with three points in time (the surveys of 2009/2011/2013), we will for the first time be able to offer future scenarios for the GCR based on reliable data, a significant shift in the suite of offerings we have for government. Already staff are undertaking the appropriate statistical training sessions to prepare for the tasks ahead.

What form the work of GCRO will take after this initial five-year period is over will be the outcome of discussions between the Board, staff and the RAC. The assumption is that GCRO will maintain its base in quantitative research, but turn to more modelling work; far more international comparative work using benchmarking based on indicators that are not static but include future trends; more theorising of urbanisation, managing densities in our specific post-apartheid position, and other projects that will arise during the year ahead.

Moreover, it seems clear that a National Observatory is going to be created, developing and driving a National Spatial Framework. How the two Observatories relate to each other, collaborate, avoid duplication and maximise synergies and so on, will be key to the future work of GCRO. The Habitat approach - a series of local Observatories feeding data to a National Observatory - may be taking shape in South Africa, and GCRO is being looked at as an exemplar of how to go about setting up Observatories. (How appropriate this is, given our unique government/university partnership, remains to be seen.)

The development of a national Urban Policy began after the year under review but will impact on the content and direction of our work. There is also the possibility of a national Cultural Observatory being set up by the Department of Arts & Culture, which has already impacted on GCRO's planned work (i.e. a 'below the line' possible project mapping cultural industries in the Gauteng City-Region has been put aside since it was in the draft workplan of the Cultural Observatory, a more appropriate location for it).

In other words, the governance, policy and research landscapes are changing rapidly, and it cannot be 'business as usual' for GCRO in that context. Nonetheless, GCRO - which, we should recall, remains small and with limited capacity - must remain focused on our core mandate, and deliver against the Strategic Framework approved by the Board. In short: this is the end of the first cycle of GCRO's life. A new *modus operandi* and new *foci* may emerge for the period that begins in 2013/14/15. We now summarise the work completed by GCRO during 2012/13.

Applied research

The work of the GCRO falls into a set of key themes or 'pillars', which are set out below. In addition to our core work, reflected in a three-year strategic framework and annual workplans, we also undertake a large amount of work in support of provincial and local government. These activities are set out later in this report.

Government, governance and intergovernmental relations

Conceptualising the GCR

The development of a conceptual framework for the GCR is a key focus of GCRO work. The complex and dynamic nature of the city-region raises important questions regarding its form and extent that render short and long-term government planning difficult. In order to better understand these complexities as well as lay a sound basis for regional planning, theoretical and analytical research work buttressed by empirical evidence is needed. To this end, and over the past year, the GCRO undertook a number of initiatives, which include: (i) in-depth historical research; (ii) learning trips to Europe and Asia; and (iii) hosting internationally renowned experts in cities and city-regions. Prof Alan Mabin from the



School of Architecture and Planning at Wits was commissioned by the GCRO to undertake analytical research on the philosophy of regional planning as reflected in various planning frameworks, such as the 'Southern Transvaal', the Pretoria-Witwatersrand-Vaal (PWV), and more recently Gauteng, over the last century. GCRO Researcher Annsilla Nyar, who is also the project lead, went on a learning and knowledge sharing trip to Madrid (Spain), where she engaged with local metropolitan officials. She was also part of a joint delegation that toured Shanghai and Chongqing (China) in October 2012. The tour, organised by the GPG, was undertaken with a view to forge relationships that would enable comparative research work in the area of long-term strategic planning between these cities and the GCR. Ongoing work such as the G2055 is set to benefit from partnerships with Chinese institutions in the two cities.

As a part of a learning process, the GCRO in agreement with GPC invited Greg Clark, a UK-based international advisor on cities and city-regions, to share his knowledge and experience in city and city-regional planning. Clark was instrumental in framing a series of strategic conversations for the G2055 process involving the GCRO, the GPC and a number of other stakeholders. An opportunity to share knowledge with other people doing similar work on cities and

city-regions across the world was also availed. On the 20th of September 2012, Greg Clark hosted a GPC organised event on City-Regional Governance and a number of GCRO staff participated.

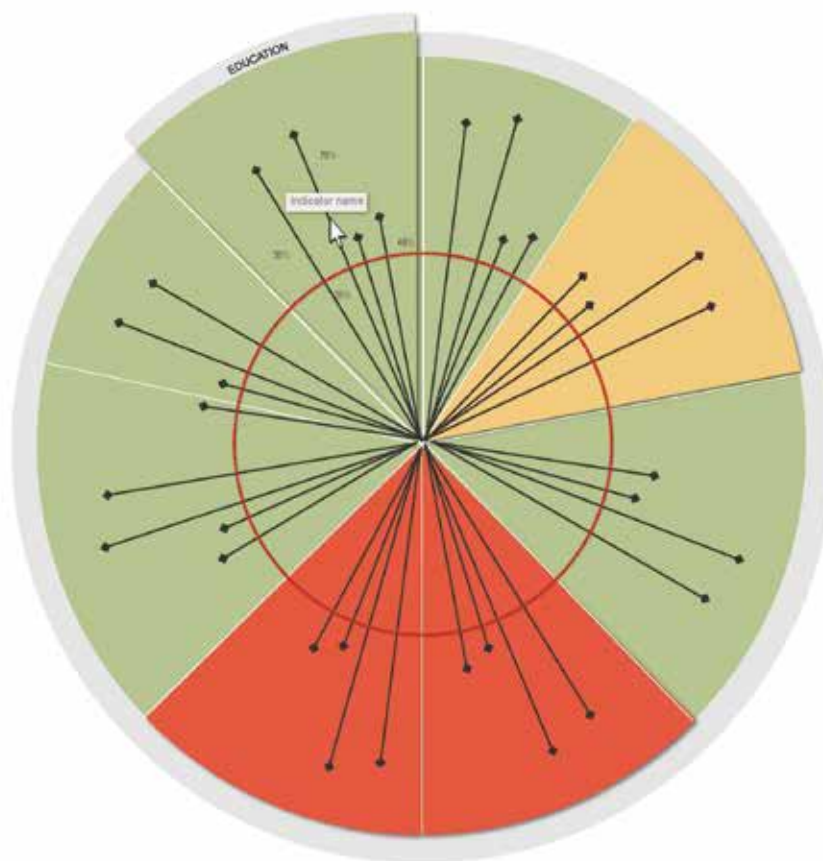
Transformation and change in the Gauteng Higher Education Sector and its role in the city-region

There is consensus that economic growth in the GCR relies heavily on the capacity and robustness of the Higher Education (HE) sector. However, following years of race-based inequality, the HE sector is marred with relics of the old order. Albeit difficult, the process of transforming HE is necessary if a competitive city-region economy is to be realised for the future. The GCRO developed a research project around this theme with a view to generate knowledge on the state of HE in the GCR. GCRO Researcher Annsilla Nyar led the project. Key trends in higher education institutions, such as student and staff profiles by race, sex and field of study, were outlined and key opportunities and challenges confronting the GCR in relation to the sector were identified. Prof Pundy Pillay from the School of Public and Development Management (P&DM) at Wits was commissioned by the GCRO to facilitate a series of strategic engagements on the contribution of higher education to the development trajectory of the city-region. The outcome of this

exercise is a report titled The Higher Education Collaboration for Development in the Gauteng City-Region which will be published as a GCRO Occasional Paper after the period under review. A preview of the findings was published as a GCRO Data Brief titled Higher Education Collaboration for Development in the Gauteng City-Region, in March 2013 and can be accessed on www.gcro.ac.za/reports-data/data.

Governance barometer

Data and information on development challenges and progress, as well as government performance, is frequently inaccessible and difficult to decipher. The Governance Barometer project is an attempt by the GCRO to collate, analyse and present data on development trends in the GCR in a way that can be easily understood by the general public. The project utilises datasets from both public and private sector sources as well as data generated from GCRO research projects, in particular the 'Quality of Life' Survey. A set of 38 development indicators spanning across ten sectors was agreed upon after consultation with the GPC, to constitute the first version of the Barometer. These indicators were carefully chosen so that they reflect not just progress but also allow for benchmarking against other city-regions elsewhere in the world. The format of the Barometer was envisaged as a graphic image with space enough to fit and



display all the 38 indicators. The GPC was generally in agreement with the format adopted by the GCRO and ITL Design (Ltd) was contracted to develop a web-based version of the Barometer. A process of collating and analysing data on each of the indicators across time (starting in 1995 where data is available) was initiated. Once published, the Barometer is expected to be viewable from the GCRO website and viewers will have access to printable analytical information in PDF format on each of the indicators. The Barometer is expected to serve a useful tool for assessing government progress on development and will be updated annually.

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. Work on this project started with initial interviews and a literature review with a view to understand the reasoning behind the idea, how the idea is being activated in visions and plans, and the likely benefits and costs of a further round of municipal amalgamations.

Future regional economies

Understanding Gauteng's urban space economy

Understanding the distribution of economic activity in space, i.e. the 'Urban space economy', is a key facet of GCRO work. Consensus exists that the spatial form of cities impacts on economic activity and *vice versa*. Given the nature and size of the GCR economy, understanding how this relationship plays out is of paramount importance, in particular the manner in which economic opportunities and constraints are structured by spatial form, fabric and function. Significant mapping work, based on existing GCRO datasets was undertaken to visually represent the changes in economic activity over the period 2001 to 2009. The Chair of the GCRO Board, Prof Rob Moore, also requested that GCRO initiates work to assess the implication of the Maropeng developments for inclusive economic growth in the Cradle of Humankind as part of the urban space economy project. A budget was reserved by the GCRO to cater for this component of the project and Prof Chris Rogerson of UJ was appointed to lead the project with a mandate to explore the limits of inclusive economic growth in the Cradle.

Transitions to a future economy - trade in the GCR

The economic significance of the GCR in the Southern African Development Community (SADC) region and Africa as a whole cannot be overemphasised. There exist strong trade and economic relations and linkages (both small and large scale) between South Africa in general and the GCR in particular, as well as the rest of the sub-region. These linkages have both positive and negative effects on the GCR economy, and knowledge on how and why this happens is crucial. The project lead, Prof Sally Perbedy, went on a scoping trip to Swaziland and Mozambique, a process that helped shape the methodology of the project. Potential synergies and collaborations were explored with a number of organisations including the Ekurhuleni Metropolitan Municipality (EMM), Airports Company of South Africa (ACSA), Eduardo Mondlane University (Mozambique), Senate Advisory Research Committee (SARC) at Queen's University (Canada) and the African Centre for Cities (ACC) at the University of Cape Town (UCT). Prof Peberdy and Potsiso Phasha, both from the GCRO, attended a SARC team project-planning workshop in Cape Town to further explore these synergies. This workshop led to the drafting of a Memorandum of Understanding (MOU) between GCRO and the other institutions. Much of this work will occur in the 2013/14 financial year.



Sustainability in the GCR

Metabolic flows and infrastructure transitions

A key challenge for the GCR is to extend infrastructure networks and rehabilitate existing ones to address capacity limitations and manage the growth in demand for resources, such as water, energy, food and raw materials, as well as the growth in the production of waste sewage and pollution. These insights emerge from the argument that it is no longer possible to grow economies while assuming unlimited resources, researchers have concluded that it is vital to determine cities' ability to reduce their socio-economic material and energy inputs as well as their waste outputs. The starting point for this assessment 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.

Preliminary work for this project began in 2011 when GCRO set to investigate a fresh conceptual framework for analysing infrastructure in the city-region through the idea of resource flows. This investigation saw two GCRO staff undertake a research collaboration



visit to institutions in the USA leading the global agenda on urban metabolism thinking. This included research engagements at Massachusetts Institute of Technology (MIT) with Professor Johan Fernandez, an expert on modelling the metabolism of the urban built environment, and his PhD students involved in long-term metabolism research around the world. This comparative work emphasised the critical role of a fine-grained understanding of resource flows and the infrastructure networks channelling these flows. With these insights in mind, the GCRO concluded four scoping studies for assessing the urban metabolism of the GCR in terms of waste, water, energy and biomass (food) flows, which laid the foundation for an intensive data collection exercise for these respective flows. GCRO took responsibility for data collection for energy and other materials data and collaborated with service providers with expertise in the areas of waste (Jeffares and Green), water SSI (trading as RoyalHaskoningDHV) and food (Siyakhana).

Running parallel to data collection, the GCRO worked on deepening collaboration with the ACC and the Sustainable Institute in Stellenbosch to interrogate the dynamics of multi-country and multi-region infrastructure transitions. This collaboration, due to take hold through a book project, provisionally titled Sustainable Urban Transitions & Government, has seen

four chapters authored by GCRO and which were presented at a three day workshop in June 2012 at the Sustainability Institute.

In order to ensure a comparative basis for metabolic flow analysis, GCRO co-organised a two-day roundtable with the L'Agence Française de Développement (AFD) and the Wits School of Architecture and Planning, under the auspices of the DST-funded Resilient Cities project. The roundtable was titled *Sustainability in Johannesburg and its wider metropolitan region: transforming urban structures and infrastructure for resilience* with keynote speaker, Sabine Barles, urban metabolism expert from the University of Paris. These kind of engagements, coupled with the technical exercise of data collection and refining, are helping to tease out the practical implications of modelling the urban metabolism of the GCR, a task which requires sophisticated understandings of how infrastructure networks are configured and how their flows are understood and managed by their controllers and users. The implications of this integrated approach to understanding infrastructure through a resource flows perspective defines the next phase of research, which looks to merge the technical basis for modelling the quantum of resource flows with the theoretical case for new approaches to infrastructure through investigating how these ideas are permeating government objects and operations.

Green assets and infrastructures

In rethinking infrastructure and resource use, an important but often neglected consideration is how green infrastructure can function as an augmentation, or even an alternative, to existing built infrastructure systems, dramatically improving cost efficiency and effectiveness in over-stressed systems. The green assets and infrastructure project assesses whether green assets, open spaces and ecological systems, as green infrastructure, are being valued in the same way as the conventional utility systems, the hard 'grey' bulk infrastructure of our city-region.

A critical part of this project has been developing a robust understanding of the physical state of green infrastructure in the GCR to connect spatial data to tangible quantitative estimates of the coverage of different features in the city-region landscape. Work on this began in 2011, in collaboration with EcoGIS, to collect and collate all publicly available digital spatial data on green spaces in Gauteng. Following the conclusion of data collection in 2012, the project team undertook a map creation exercise showing component parts of the GCR's green infrastructure network. This work was presented to leading academic and policy units in the USA in the area of urban sustainability, including Virginia Techs Green Infrastructure Leadership Forum, MIT's



Building Technology Programme, the Conservation Fund (in Washington DC) and the US Environmental Protection Agency's Greening Capital Programme, as well as New York City's Green Infrastructure unit.

In addition to a series of physical assessments, the project includes an analysis of public and private decisions shaping the use of and investment in green infrastructure and various interrogations of how this infrastructure is continuously reinstated through local landscape investments in the city-region. This culmination of this work is the publication of a State of Green Infrastructure Report (SoGIR), a fusion of academic writing, policy analysis, photographic elements and interpretations of the way green infrastructure is experienced across the GCR. The SoGIR is also a collaborative work, working with artist and photographer Natasha Christopher, landscape architect Emmarie Otto, researcher Mduduzi W. Nhlozi, and a group of resource economists from de Wit Sustainable Solutions (Pty Ltd). While the report is unique in that it is conceptual and methodological diverse, a common theme has been the original mapping outputs, which researcher Kerry Bobbins has pioneered.

Intersection between disaster vulnerability and sustainability

There is currently a limited understanding of the disaster risks that face the GCR and even less is known about the exposure and impact of these

risks on different settlement types within the region. Focusing on dolomitic land, flood prone areas and acid mine drainage as major disaster risks, this project aims to investigate the vulnerability and resilience of low income housing communities in the GCR. In 2011, a three-year project framework was developed, defining the overarching research theme and identifying a series of sub-projects. Year one of the project, 2011/12, investigated human settlements located over dolomite and began a process of analysing the vulnerability of urban areas to floods. The current 2012/13 financial year built on this, focusing on the collection of GIS data on flood and flood prone areas. This data provided the basis for a conference paper at the international FloodRisk Conference in Rotterdam in November 2012, as well as a journal article submitted to the *Journal of Flood Risk Management*. During this year work also continued on the vulnerability of a diverse range of settlement types situated on dolomitic land.

As part of the further sub-project, Kerry Bobbins investigated the risks and impact of acid mine drainage in the GCR. A data and literature collection process was undertaken to formulate the approach and viewpoint for this piece. Through a stakeholder engagement process it was found that factual information around acid mine drainage developments is very limited, with very few channels of communication between government, stakeholders and the public.

Life and people in the GCR

Social fabric of the GCR: social cohesion and inclusivity in the city-region

In 2011/12 the Life and People pillar focused on the specific issue of race and non-racialism. Some of this work has continued into 2012/13 with publishing plans for translating GCRO's *Politikon* journal special issue on race and non-racialism into an academic book for Routledge Publishers.

In 2012/13 the focus of the Life and People pillar has broadened to that of social cohesion and inclusivity. GCRO is working on research which attempts to understand how to reinforce the fraying social fabric of the city-region, given the increasing visibility of racism, xenophobia, violence, crime, sexism and high levels of inequality. This research has been strongly influenced by ongoing work for Gauteng's G2055 programme, i.e. Strategic Pathway 9: Concrete Measures to Move from a Divided to an Inclusive and Cohesive Society. Toward this end the research project Social Fabric of the GCR: Social Cohesion and Inclusivity in the City-Region, draws on GCRO's 2009, 2011 as well as the forthcoming 2013 'Quality of Life' surveys, in order to assess the extent to which stronger and more sustainable communities are being built for the future city-region. GCRO's 'Quality of Life' surveys provide a rich source of time series data on crucial attitudes toward race, nation-building, identity, notions of belonging, and so forth. We are working on producing general indicators on social cohesion and establishing a base of comparative knowledge about the ways in which social cohesion has been defined and conceptualised in other diverse societies.





Poverty and inequality in the GCR

GCRO's project on poverty and inequality in the GCR addresses the serious concern about increasing levels of inequality in the city-region. Led by Darlington Mushongera, this research aims to understand the nature and extent of poverty and inequality in the GCR, as well as unpack its underlying causes, drivers and dynamics. Experts from the Development Policy Research Unit (DPRU) at UCT and two others from the School of Economics and Business Sciences (SEBS) will be commissioned for the purposes of mapping and analysing the nature and extent of poverty and inequality in the city-region. A draft concept note has been prepared toward this end.

Visualising the GCR

'Visualising the GCR' is a new and intriguing addition to the Life and People pillar which looks to expand the scope of the pillar toward more imaginative and creative arenas of research. The aim of the project is to enable creative visualisations of the city-region space. GCRO intern Potsiso Phasha conceptualised and managed a cutting-edge digital photography competition which invited students of higher education institutions and other creative/ photography/art schools and/or institutions, to submit their photographic evaluations of the city-region. The competition was jointly run with the FADA Gallery at UJ and merged with FADA's own annual Exposures

photography competition. Gauteng-based higher education institutions such as Tshwane University of Technology (TUT) and Vaal University of Technology (VUT) supported the competition in different ways, for example, by allowing promotional opportunities through campus radio stations. We also met with specific departments at various tertiary institutions to encourage them to use the competition as a brief assignment to get students to critically reflect on the GCR through the photographic medium.

The competition opened in the first week of February 2013 and ran until 18 March 2013. It attracted nearly 600 entries from 150 photographers. Sixty-two of the best images were selected for the competition. They were evaluated by a distinguished judging panel consisting of professional photographers Jodi Bieber, Roger Ballen and the Chief Curator of Soweto Museums, Khwezi Gule.

Formally launched on 17 April 2013, the exhibition proved to be a resounding success in GCRO's ongoing documentation of the dynamics and undercurrents of life in the city-region. The exhibition was also widely covered in the media, for example by popular newspapers (e.g. *The Citizen*) and radio stations (e.g. SAFM, 702 and university radio stations). The images are available online at <http://www.gcro.ac.za> and are being used by GCRO in various research projects.

Space and mobility

Spatial change in the GCR

Gauteng is confronted by 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. This project has two components. The first links into Professor Philip Harrison's National Research Fund (NRF) Chair research to map and model spatial change in Gauteng cities. The core output is a series of books on spatial change in Gauteng, starting with Johannesburg and Pretoria.

The first book in the series on spatial change in the GCR entitled *Changing Space: Johannesburg within its City-Region*, co-edited by Graeme Gotz and Chris Wray from the GCRO, and Professors Philip Harrison and Alison Todes from the Wits School of Architecture and Planning, is currently in a peer review process expected to be completed in May / June 2013.

The second component of the GCRO research into spatial change involved the commissioning of two Occasional Papers to specifically to deepen our understanding of the past of the GCR. The paper





by Brian Mubiwa and Harold Annegarn explores the historical spatial evolution of the GCR and examines key spatial changes that have shaped the region over a century. It provides a remarkable picture, based on satellite imagery, of regional spatial growth in the last two decades. The companion paper by Alan Mabin asks the different but related question of 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. These papers were launched as part of a GCRO Occasional Paper series, at a Faces of the City seminar on 12 March 2013.

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 impacts 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), the Gautrain and the bus rapid transit (BRT) system.

In September 2012, project leads Graeme Gotz and Chris Wray reviewed a draft report of the UJ 2009 'Quality of Life' Transport Analysis. An agreement was reached whereby instead of working on a substantial

number of edits and rewriting the draft report, UJ would compile a 20-30 page report which would highlight the key aspects of the historical and 2009 'Quality of Life' analysis. This would then form a chapter in an integrated GCRO transport report that combines inputs from the UJ study and Professor Christo Venter's two phases of work, with additional mapping and analysis completed internally. A draft report from UJ was received in January 2013. The final UJ report was submitted and the UJ analysis is now complete.

Prof Christo Venter's phase 1 draft report was submitted in August 2012 and made available to the GPG's Department of Roads and Transport and their consultants working on the Gauteng Integrated Transport Master Plan. The GCRO commented on the report in detail, Prof Venter worked on revisions, and the final report was submitted to the GCRO in November 2012.

A proposal for a second phase of analysis by Prof Venter and the University of Pretoria (UP) - which utilises "access envelopes" and advanced mapping to provide a more in-depth analysis of patterns of access exclusion and economic participation at a community level - was received and a contract for this second phase of analysis was signed. The GCRO clarified the sequence of work on Professor Christo Venter's phase 2 analysis and assigned the 'Quality of Life' points to a list of 20 priority townships. Prof Venter has started the analysis and the expected delivery date for the phase 2 draft report is mid-2013.

The various commissioned reports will be combined into the GCRO transport report to be released in the second half of 2013.

Peripheries and rural/urban transitions - understanding the region's small-towns and peri-urban areas

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

The project grappled with which criteria to use to define core and periphery and the finalisation of specific geographic areas for study. The latter took place in conjunction with the NRF-SARChi team.

Various methods documented in literature were examined to see which provide the most scientific and useful results and are relevant to the South African/GCR context. Also, a preliminary examination of data from the 2011 'Quality of Life' Survey was undertaken at ward level for all the places named in the GCRO/NRF-SARChi proposal. This helped in assessing and selecting sites for focused research.

The NRF-SARChi team collected datasets from the GCRO, and after a meeting of the two teams to discuss the preliminary findings and the process for selecting sites was held on 17 July 2012, indices for defining core and periphery were identified and preliminary maps using five indicators drawn up. The GCRO undertook further investigation and refinement of the indicators and possibilities of developing an index to define core and peripheral areas was made to ensure a rigorous and defensible methodology. This was finalised during the fourth quarter and now allows for binary analysis of the periphery and core of the GCR with a focus on socio-demographic change. The NRF-SARChi team continued to focus on developing research questions and data for the original selected sites.

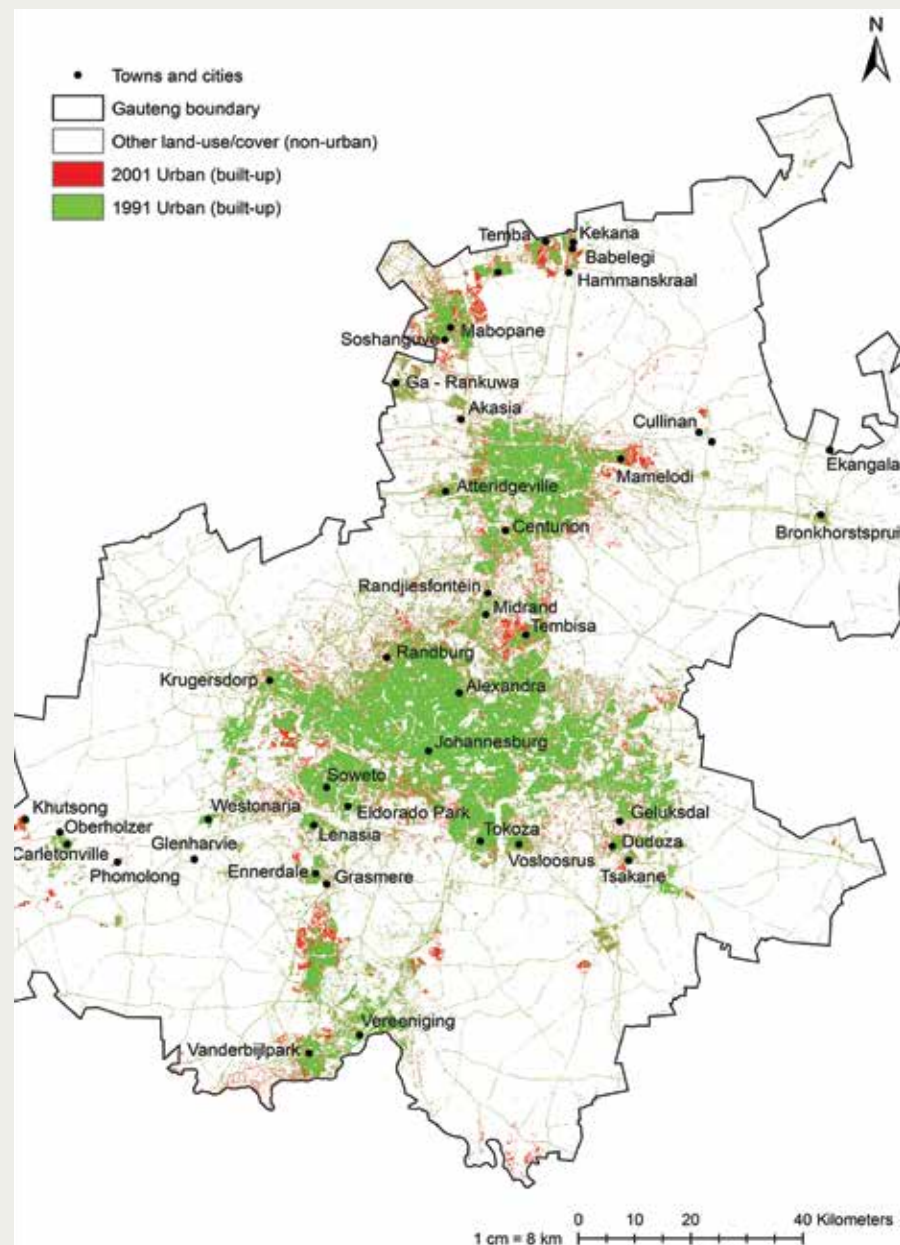
A Steering Committee was established to provide a broader sense of accountability for the project. The committee includes Prof Karl von Holdt and others, with David Everatt representing GCRO. Senior Researcher, Prof Sally Peberdy has led this project since its inception in 2012 and the first reports are expected in mid-2013.

Spatial change – Brian Mubiwa

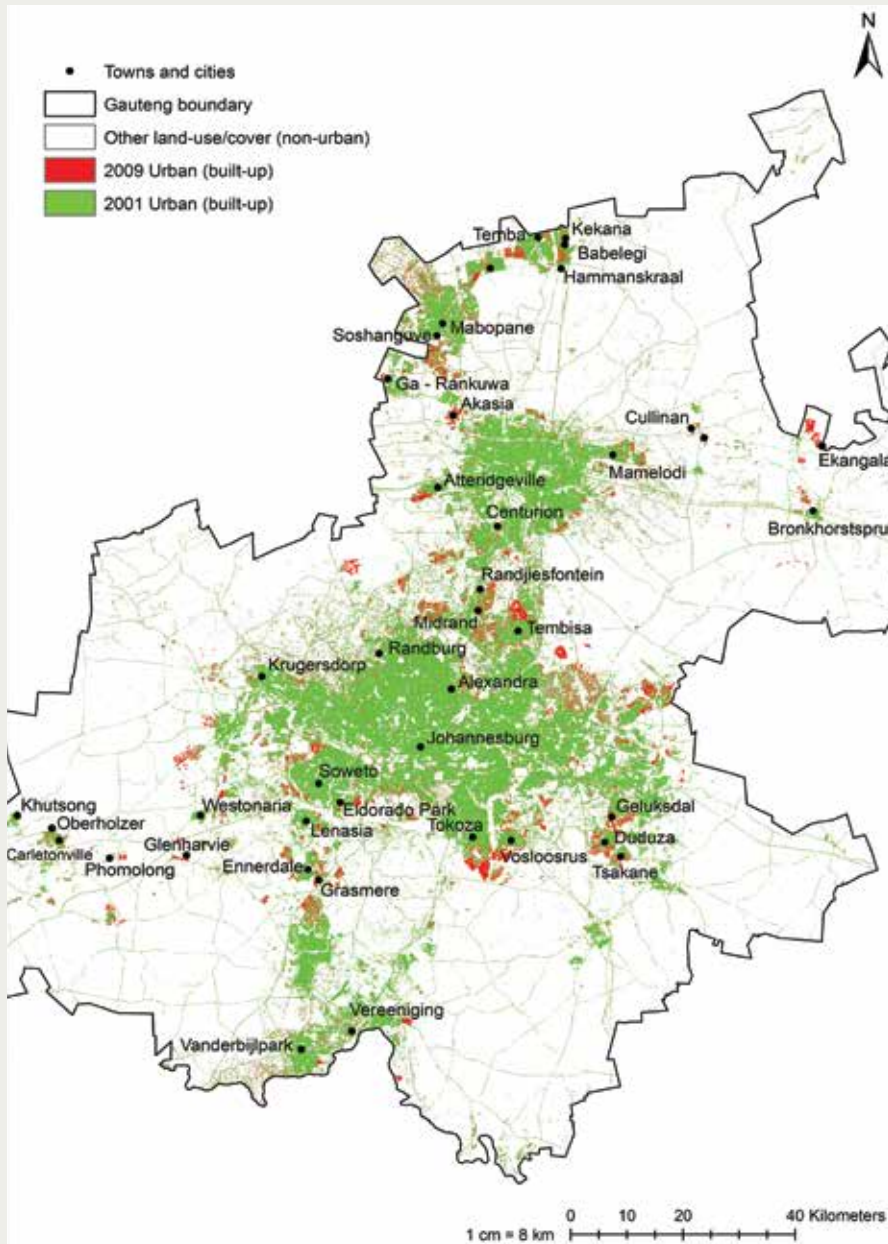
Modelling urban spatial change in the GCR

One of the key tasks of urban observatories is to provide futures modelling. Led by Senior Systems Analyst, Chris Wray, this project investigates what modelling is currently being undertaken to analyse urban change and predict future urban development. The results will be compiled into a research report, which, together with significant urban spatial data that GCRO has collated, may inform the development of an urban spatial change model.

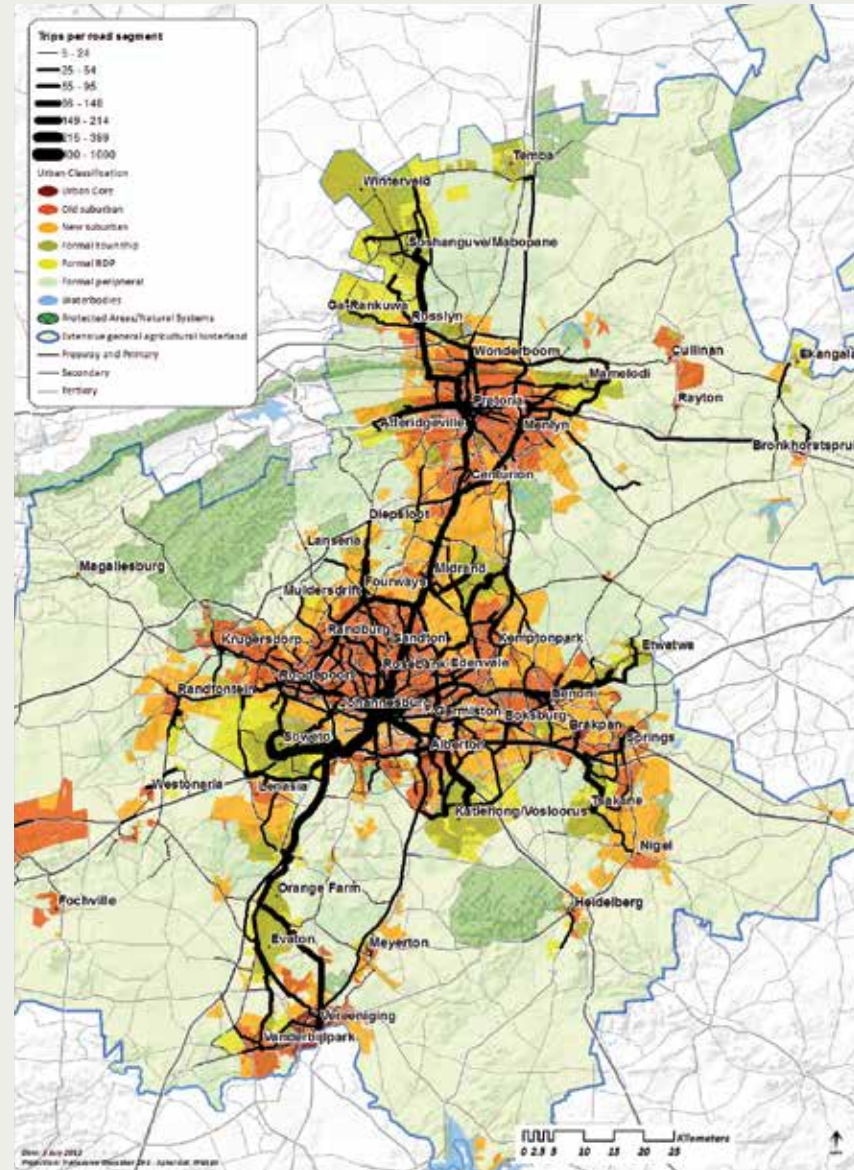
The research kicked off formally in September 2012 and a number of interviews were held with experts responsible for various South African modelling projects, such as the Council for Scientific and Industrial Research (CSIR) UrbanSIM modelling team and City of Johannesburg Development Planning and Facilitation Directorate. The literature review and interviews were completed by November 2012. A workshop on spatial and demographic modelling for G2055, jointly arranged by GCRO and the GPC, was held on 23 November 2012 which identified a number of short to medium-term modelling initiatives. The draft research report was completed in February 2013, and it is envisaged that it will be published online as a GCRO Occasional Paper once finalised.



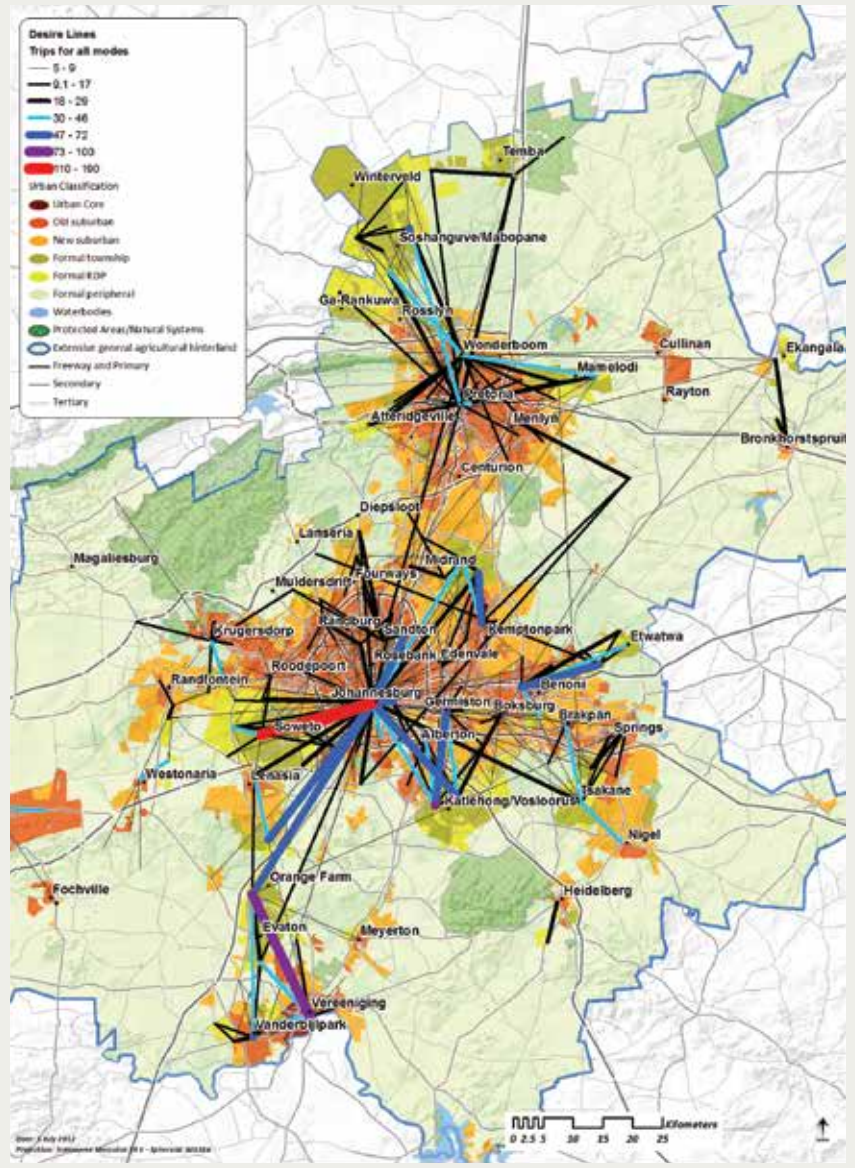
Spatial change - Brian Mubiwa

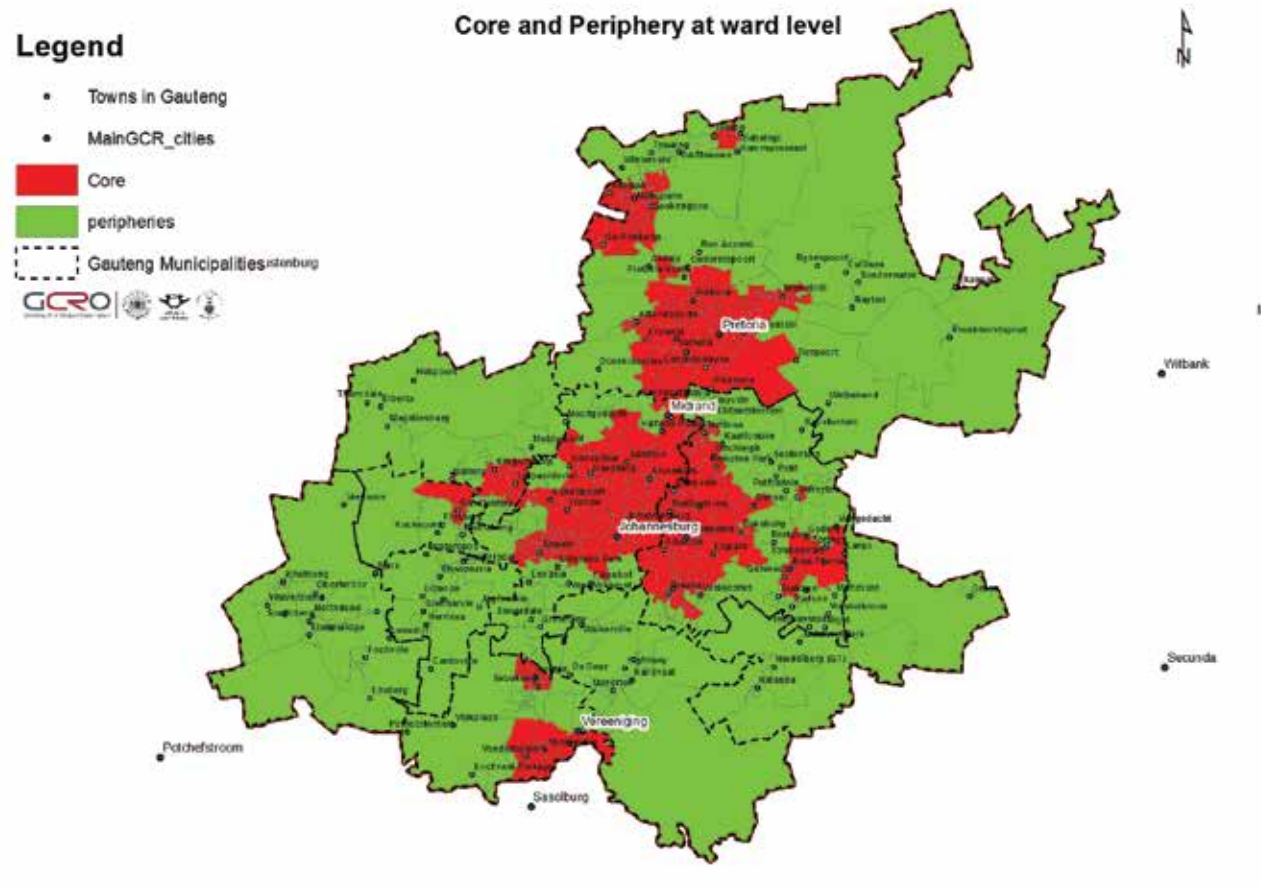


Major movement patterns – all road-based trips (shortest time)



Major movement patterns - all trips





Core and peripheries:

Data, data infrastructure, data visualisation, indicators and benchmarks

Data are key to understanding and visualising trends in the GCR. During 2012/13 GCRO continued to negotiate access to, acquire and hold GIS data from, a variety of public and private sector sources, including:

- Gated communities from Afrigis: the latest version (February 2012) with significant updates of residential enclosures
- 2010 colour (RGB) and colour infra-red (CIR) digital aerial photography for Gauteng from the National Geo-spatial Information Department
- 2010 2.5m provincial-wide land cover from GeoTerraImage (GTI)
- GTI open and green space land use / land cover for the City of Johannesburg (CoJ)
- 2010 land use per building datasets from GTI, which contain a new category that maps backyard shacks
- StatsSA 2011 Enumerator Area (EA) boundaries with associated land use per EA
- StatsSA Census 2011 GIS shapefiles and supercross database
- Gauteng Department of Education schools dataset
- CoJ updated region boundaries and City Parks' layers
- South African National Biodiversity Institute (SANBI) national land cover 2009
- EcoGIS green data: a collection of green layers collated by EcoGIS for the Gauteng extent.

GCRO is also responsible for generating primary data – with the ‘Quality of Life’ Survey the main project in this regard. The first survey, a 6 600 sample survey to measure the quality of life, socio-economic circumstances, attitudes to service delivery, psychosocial attitudes, value-base and other characteristics of the GCR, was commissioned in 2009. A second ‘Quality of Life’ Survey (QoL II) was undertaken in 2011, this time with some 17 000 sample points across Gauteng. The first quarter of 2012/13 saw the presentation of an initial set of QoL II findings to a range of forums on special request. This included the GPG extended Lekgotla on 22 May 2012 and a workshop convened by the member of the executive council (MEC) and head of department (HoD) of Roads and Transport on 12 July 2012.

The second ‘Quality of Life’ Survey was formally launched on 23 July 2012, at an event attended by the Premier of Gauteng, the Vice-Chancellor of Wits and the Deputy Vice-Chancellor Research of UJ. The launch of the results had a major impact, with widespread coverage on radio and television and in the print media. The results were also widely presented to a range of different audiences: Tshwane Mayoral Committee (15 August); Johannesburg Mayoral Committee (16 August); Gauteng Advisory Council (17 August); SALGA Gauteng (24 August); and the Ahmed Kathrada Foundation seminar (29 August). Gender-related findings from the Survey were presented to the gender group in the Office of the Premier (13 September). Demand for presentations picked up as the year wore on, with further presentations made to various cities as well as various provincial

structures included: Johannesburg Department of Economic Development (5 October); Ekurhuleni Mayoral Lekgotla (16 October); the Ahmed Kathrada Foundation Conference (11 October); African Centre for Migration and Society (ACMS) (30 October); the ANC Caucus in the Provincial Legislature; the ANC Caucus in the Ekurhuleni Legislature (6 March); and the ANC Caucus in the Tshwane Legislature (8 March). Later iterations of the presentation were adapted to include data from the OECD Review through the QoL II to specific project outputs such as green assets and infrastructure, to ensure deeper engagement with a wide range of issues.

GCRO has always maintained an open data policy and made the ‘Quality of Life’ data available on request (in SPSS format) for research/non-financial gain purposes. However, not everyone has access to statistical software and often a basic or quick query is all that is required. The GCRO ‘quality of Life’ Survey viewer was therefore developed – as part of the Public Information on the GCR project – to provide easy online access to the QoL survey data. The viewer offers users the choice of a single or multiple variable report. Single variable reports produce a table and graph once a variable is selected, whereas multiple reports provide the functionality to select an indicator variable and crosstab it by a list of selected demographic variables. Tables (and single variable graphs) can be viewed as row or column percentages. The reports are generated at a Gauteng or municipal level, in the case of the 2011 data, or at a Gauteng, municipal or city-regional level for the 2009 data. The results can also be printed or exported to Excel, PDF

or Word format. It is hoped that the ‘Quality of Life’ Survey viewer will promote access to, and extended use of, these valuable sets of data by researchers, students, local and provincial government officials and the general public, enabling a better understanding of the GCR.

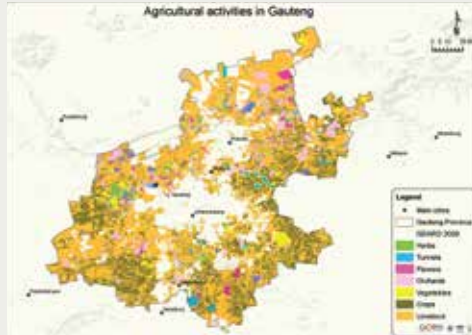
The ‘Quality of Life’ viewer, however, is just one example of an on-going effort to assemble information on the GCR into innovative data products and information systems. The data products (summarised in the table below) range from a monthly map of the month, which showcase unique spatial visualisations 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 are accessible via the GCRO website.

Although no development on the interactive GCRO GIS website took place during 2012/13, it remains one of the main information systems for disseminating spatial information. The GIS website’s popularity continued to grow in 2012/13 with the number of website visitors increasing by 110% from 1 248 in 2011/12 to 2 626 in 2012/13. An intensive GCRO GIS website data update is scheduled for 2013/14 to ensure the latest spatial GCR data are accessible.

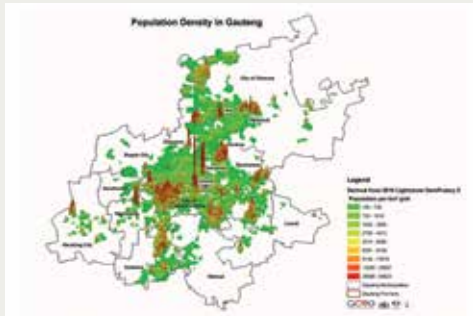
Summary of GCRO data products

1st Quarter

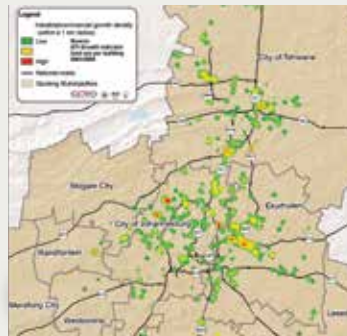
Map of the month



April 2012: Agricultural activities in Gauteng

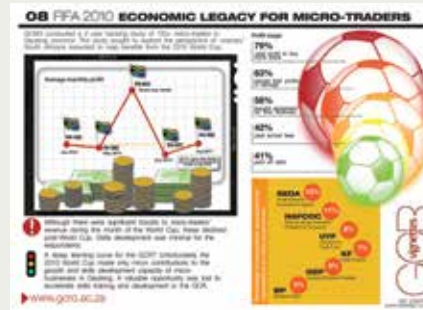


May 2012: Population density

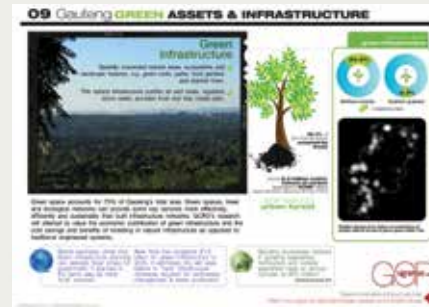


June 2012: Growth in new industrial and commercial buildings (2001-2009)

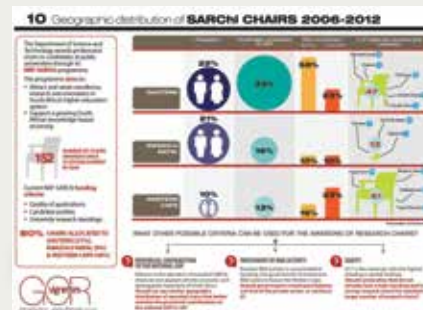
Vignettes



Vignette No. 8: FIFA 2010 Economic legacy for micro-traders

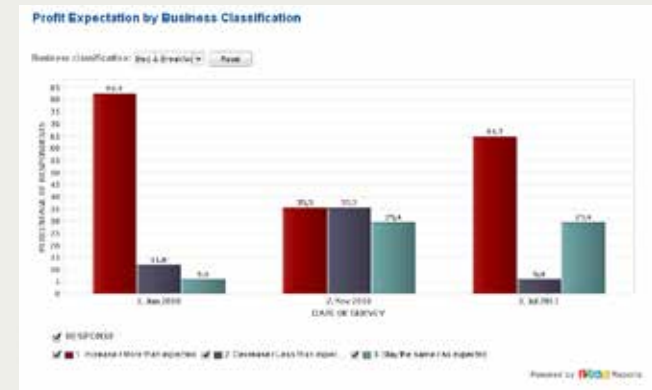
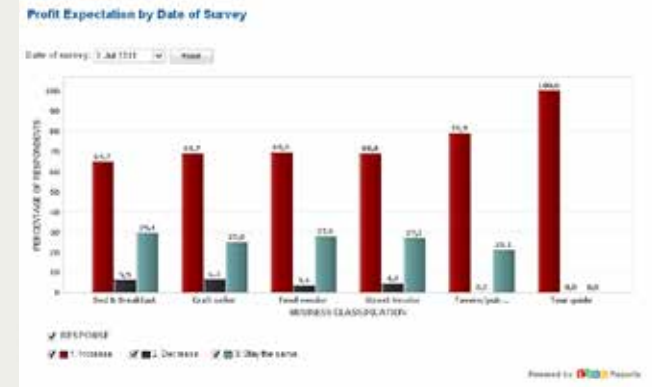


Vignette No. 9: Gauteng green assets and infrastructure



Vignette No. 10: Geographic distribution of SARChI chairs

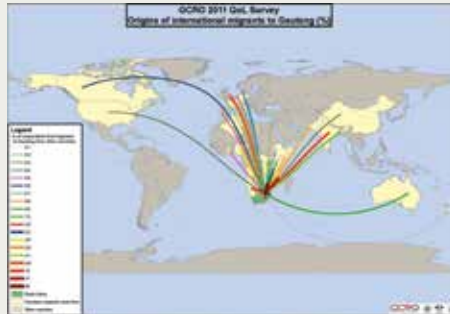
Interactive graph



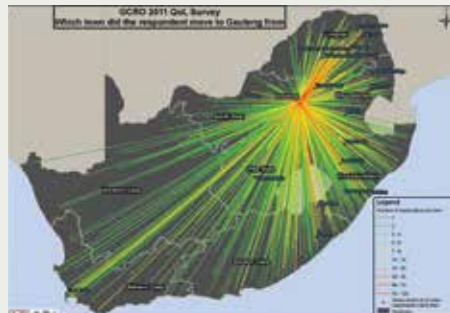
FIFA 2010 research into the economic legacy for micro-traders

2nd Quarter

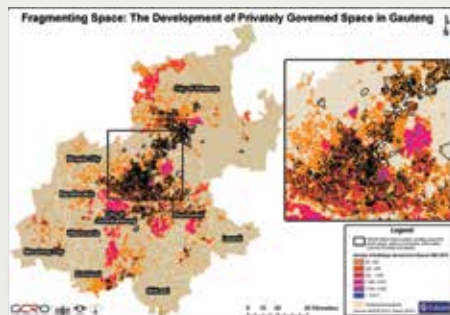
Map of the month



July 2012: 2011 QoL Survey, Origins of International migrants



Aug 2012: 2011 QoL Survey, Origins of South African migrants

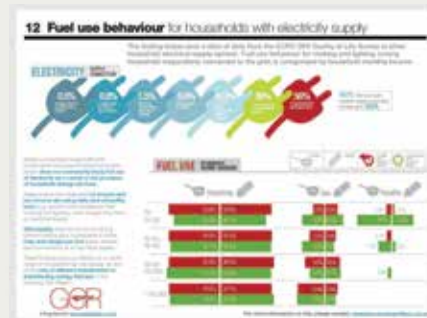


Sep 2012: Fragmenting Space: The Development of privately Governed Space in Gauteng

Vignettes



Vignette No. 11: Quality of Life II Survey



Vignette No. 12: Fuel use behaviour for households with electricity

Data briefs

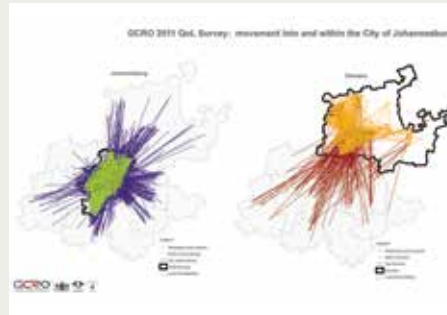


Data Brief No. 2: Key findings from Census 2011 for Gauteng

Finally, work was initiated in the second half of 2012/13 on the second State of the GCR Review. The State of the GCR is a report (both written and interactive) based on information collected from the 'Quality of Life' Survey, benchmark indicators development and GIS data acquisition. The review aims to contribute to ideas around building an integrated and globally competitive city-region which provides more equal opportunities and a better quality of life for all its residents. The first edition was released in 2011 in a printed and interactive (website and DVD) format. The second review is scheduled for release in the second half of 2013 and will draw on all the latest research from the various GCRO projects and newly released data such as the second 'Quality of Life' Survey and the latest Census. The review will again feature an interactive version, accessed through the GCRO website, offering advanced visualisation of data with interactive infographics, graphs and maps.

3rd Quarter

Map of the month



Oct 2012: Movement into and within Gauteng's Metros



Nov 2012: A comparison of housing settlement typologies using 2.5m land cover



Dec 2012: Grey vs. Green Infrastructure

Vignettes



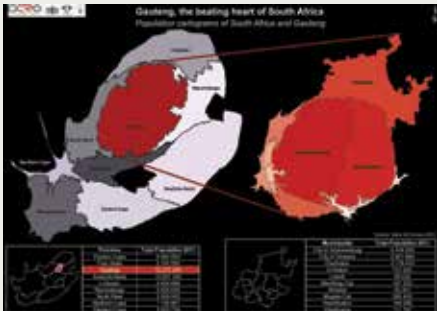
Vignette No. 13: Attitude towards gender-based violence in the GCR

4th Quarter

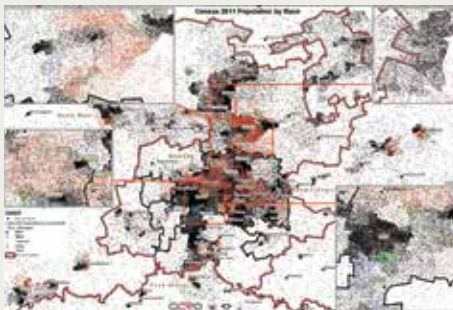
Map of the month



Jan 2013: Visualising Gauteng's green infrastructure network



Feb 2013: Census 2011 population cartograms of Gauteng and South Africa



March 2013: Census 2011 Population by race

Vignettes



Vignette No. 14: Comparative analysis of salaries for primary school teachers in the GCR

Data briefs



Data Brief No. 3: Prices and earnings in the GCR, Johannesburg in comparison to major world cities



Data Brief No. 4: Higher education collaboration for development in the GCR



Research support to government

One of the core roles of the GCRO is to provide research support to provincial and local government in the city-region. This role can be understood in three ways.

First, while *all* the ‘applied research’ projects in our three year strategic framework – reported on elsewhere in this Annual Report – were designed on the basis that government will benefit from the information and analysis they will generate, many have been defined to be immediately and directly relevant in that they provide crucial data needed for policy and programme development. GCRO’s value added here is in the form of primary data collection to generate original information not available from anywhere else, and also the innovative packaging of its own and other data in forms that are easily accessible to government and the public. A few notable examples include:

- The Governance Barometer - an interactive online repository of historical and current data for some 40 outcome indicators, giving an easily digestible view of development progress in the region.
- The Indicators and Benchmarks project - this project provides a steady stream of useful and

interesting data about the GCR in the form of vignettes, interactive graphs, data briefs and maps of the month.

- The Interactive GIS facility – this provides a host of GIS layers on a series of themes and topics, including the GCR’s administrative geography, economy, environment, and spatial configuration.
 - The ‘Quality of Life’ Survey – 2009 and 2011 saw fieldwork for the first two ‘Quality of Life’ surveys. In 2012/13 GCRO officially launched results from the 2011 survey, presented comparative results from the two surveys to a host of government meetings and forums, and disseminated the data through a wide variety of data products.
 - Public information on the GCR – this project involves the development of innovative facilities through which government and citizens can access information on the GCR. In 2012 it saw the launch of the 50-priority wards interactive viewer and the 2009 and 2011 ‘Quality of Life’ data viewer.
 - The State of GCR Review – this product presents a comprehensive analysis of the current state of the GCR in an interactive online format and published report. The first GCR Review was launched in 2011, and 2012/13 saw the design and data synthesis begin for the second Review, to be launched in October 2013.
- Second, on an almost weekly basis GCRO staff present customized presentations on the data we have collected, or the analysis we have done, to various government structures and meetings. The full list of presentations can be seen later in this report, but notable examples in 2012/13 have included:
- ‘Quality of Life’ Survey 2011 findings presentations to the following: GPG extended Lekgotla (22 May 2012); transport planning workshop convened by the MEC and HoD of Roads and Transport (12 July 2012); ‘Quality of Life’ Survey 2011 official launch (23 July 2012); Tshwane Mayoral Committee (15 August 2012); Johannesburg Mayoral Committee (16 August 2012); Gauteng Advisory Council (17 August 2012); SALGA Gauteng (24 August 2012); Gender machinery group in the Office of the Premier (13 September 2012); Johannesburg Department of Economic Development (5 October); Ekurhuleni Mayoral Lekgotla (16 October); Ahmed Kathrada Foundation Conference (11 October); ANC Caucus in the Provincial Legislature (February 2013); ANC Caucus in the Ekurhuleni Legislature (6 March 2013); and ANC Caucus in the Tshwane Legislature (8 March 2013).
 - ‘The State of Green Infrastructure in the Gauteng City-Region’, presented to the Gauteng Integrated Infrastructure Master Plan Workshop convened by the Gauteng MEC for Infrastructure Development, 8 February 2013.
 - ‘Conundrums for an emerging green regional economy: The Gauteng City-Region’, presented to the KZN Green Growth Conference, Durban, on 5 February 2013.
 - ‘Demographic modelling and the implications of the results from census’ and ‘Modelling urban spatial change: a preliminary review of South African initiatives’, presented to a workshop on Spatial and demographic modelling for G2055, arranged by GCRO and the GPC, 23 November 2012.
 - ‘Understanding and measuring urban metabolism: the GCR perspective’, presented to the AFD-Wits Roundtable, Sustainability in Johannesburg and its wider metropolitan region, 7-8 November 2012. The roundtable was attended by Ministers, Deputy Ministers officials from the GPG, politicians, and officials from Gauteng municipalities.
 - ‘Acid Mine Drainage in the Gauteng City-Region: some of the facts and concerns’, presented to a City of Johannesburg Ward Councillor Meeting, 1 June 2012.
 - ‘Dolomite issues in the Gauteng City-Region: preparing for community engagement’, Workshop with community leaders of the Protea South settlement and land planners, 13 April 2012.

- 'Secondary cities: criteria for segmentation - indicators and data', presented to an SACN and SALGA workshop on The Differentiated Approach to Local Government: South Africa's Secondary Cities, 3 April 2012.
- 'Dolomite risk in the Gauteng City-Region', presented to the Gauteng Department of Local Government and Housing's Provincial Cross-boundary Forum, 28 March 2012.

Third, and most significantly, GCRO responds to requests from governments in the GCR to provide direct research support in policy and strategy development processes. In the first few years of GCRO's existence some key examples of this role have included:

- At the request of the Gauteng MEC for Economic Development, a study benchmarking how cities and regions across the world were responding to the financial crisis.
- To elaborate on the indication in the Benchmarking Responses to the Crisis report that many cities were pursuing green economy initiatives to re-ignite their local economies, the design of a Developmental Green Economy Strategy for Gauteng.
- Assistance to the Department of Economic Development to draft and edit the Gauteng Growth Employment and Development Strategy (GEGDS).

- To further detail core policy proposals in the Developmental Green Economy Strategy, the design of a comprehensive Green Strategic Programme which was adopted to the Provincial Cabinet in July 2011.
- Support to the GPC in its leadership of the OECD Territorial Review of the GCR process, notably in the preparation of a comprehensive background report, management of OECD information requests, and management of two OECD study-missions,
- At the request of the GPC, the development of a set of indicators, and the collection of data, to identify 50 wards for priority attention in the province,
- Strategic advice to the Department of Sports, Arts, Culture and Recreation on how to conduct an audit of all sports facilities in Gauteng, presented in July 2011,
- Support to GPC on conducting a Mid-Term Review of the GPG's 2009-14 term of office. GCRO wrote the introductory overview section and helped to commission a number of evaluation pieces in late 2011 and early 2012.

In 2012/13, this role saw GCRO focusing mainly on support to the Gauteng Planning Commission led G2055 process. G2055 is a long-term development plan that aims to guide generational change in the city-region. Work on the plan started some years ago, and picked up pace in late 2011 and early 2012.

In the first quarter of 2012 GCRO provided significant support to the finalisation and launch of the G2055 Discussion Document. We assisted GPC's lead consultant with data and information for the final version of the Discussion Document, and also helped to edit some sections of the work. After the launch of the Discussion Document at end May, GCRO met with the GPC team to plan the way forward, with a specific focus on the kind of research to be undertaken for the full G2055 strategy. Initial discussions at a workshop on 8 June provided input into a draft list of 19 research topics. These were presented to an extended RAC meeting convened by GCRO on 21 June. The RAC discussions suggested that the proposed research may not be feasible and useful within the time allowed, and on this basis the GPC/GCRO team met again in late June and early July to revise the plan. An outline of the envisaged final G2055 document, and a proposed set of strategic pathways - to be managed by task teams - were developed.

In the second quarter GCRO assisted GPC to execute the plan for the establishment of task teams. GCRO staff were involved as resource people to draw on in all but one of 14 strategic pathways. On the 4th of August GCRO also facilitated part of a session with PARI / Princeton academics on a future public service.

In the third quarter GCRO participated actively in the strategic pathways, attending a host of initial task

team meetings. GCRO staff wrote first drafts of the green economy, inclusive society and international positioning pathways documents, and advised closely on the drafting of the infrastructure transitions and urban sustainability one. GCRO organised and facilitated a workshop on demographic and spatial modelling as a contribution to the process, and drafted a Terms of Reference to contract Edgar Pieterse to write the future scenarios section of the document.

In the final quarter of the year GCRO helped to develop a synthesis of the G2055 planning work done to date, subsequently presented to the Gauteng Advisory Council and various Lekgotlas. GCRO also agreed with GPC to dedicate own funding to contract the lead consultant for additional time on the project, and to contract Edgar Pieterse to write the 'GCR's possible futures' section.

In addition to G2055, GCRO also responded to various *ad hoc* requests for support from various parts of provincial government. For example:

- In the first quarter GCRO concluded its support to GPC on the 2009-14 Mid-Term Review with the receipt of final deliverables from evaluators of selected projects.
- In September GCRO assisted the Head of the GPC in preparing a presentation to the World Urban Forum on infrastructure and metabolic flows in the GCR.

- In June 2012 GCRO provided the Gauteng Department of Roads and Transport with an early version of a report, prepared by Prof Christo Venter from the University of Pretoria and using 2011 'Quality of Life' Survey data, on commuting patterns in Gauteng.
- On 16 November 2012, in response to a request from the MEC for Roads and Transport, GCRO arranged for Prof Christo Venter to present results of his transport analysis to a workshop with Transport MMCs and transport industry opinion makers.
- In December 2012, GCRO was requested to participate in a process, convened by the Deputy Minister of Co-Operative Government, to develop an Integrated Urban Development Framework (IUDF). A GCRO staff member sat on a Panel of Experts through the last quarter of the financial year, and this work will continue into 2013/14.

The fourth quarter saw GCRO contribute to a Gauteng Integrated Infrastructure Master Plan Workshop from 6-8 February, hosted by the Gauteng Department of Infrastructure Development. This included a presentation on green infrastructure at the workshop as well as a GCRO representative chairing a panel discussion on the trajectory of infrastructure development in the province.



04 Academic contributions

SAPSE and other publications

Publishing our research in peer reviewed academic and other publications continues to be a core part of the work of the GCRO. 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. The outputs of staff increasingly reflect the research work being undertaken by the GCRO and the number of published and forthcoming articles, including those in progress (completed and submitted) has doubled to 33 since the previous financial year.

One of the highlights of the GCRO publication record is the quality of the journals that papers are being published in. In addition, a significant number of articles and book chapters have been requested by book editors and editors of special editions of journals. Members of the GCRO have also been involved in editing books. This includes David Everatt and his forthcoming book on *Non-racialism and the future of South Africa*; Graeme Gotz who has worked on a submitted manuscript *Changing Space: Johannesburg within its City-Region*; Sally Peberdy is editing a manuscript of papers on xenophobia and civil society; and Dr Josephine Musango worked with Profs Edgar Pieterse and Mark Swilling editing a book due for publication in 2013, *Sustainable Urban Transitions & Governance*.

Breakdown of publications by category

Category	Published	Forthcoming	In progress/ submitted	Total
Peer reviewed journals	9	3	6	18
Books, book chapters & reviews	0	6	1	7
Conference proceedings	3	0	0	3
Other	4	0	1	5
Total	16	9	8	33

Published and forthcoming in peer reviewed journals

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

Nyar, A. and Wray, C. (2012), 'Understanding Protest Action: Some Data Collection Challenges for South Africa', *Transformation*, Issue 80, pp.22-43.

Wray, C. and Van Olst, R. (2012), 'Enabling g-government in the Gauteng City-Region', *African Journal of Information and Communication*, Issue 12.

Everatt D. (2013, submitted for special edition), 'The economic impact of the 2010 FIFA World Cup on informal sector small traders in Gauteng: Results from a two-year tracking survey', *Transformation*.

Schäffler, A. and Swilling M. (2012), 'Valuing Green Infrastructure in an urban environment under pressure - the Johannesburg case', *Journal of Ecological Economics: special edition*, Online publication on 12 June 2012.

Schäffler, A. (2012), 'Developmental Green Economy Strategy for Gauteng, South Africa', *Urban Patterns for a Green Economy: Clustering for Competitiveness, UN Habitat*, June 2012.

Musango J.K., Brent A.C., Amigun B., Pretorius L., Müller H. (2012), 'A system dynamics approach to technology sustainability assessment: the case of

biodiesel development in South Africa', *Technovation* 32: 639-651.

Ncube M., Zikhali P., Musango J.K. (2012), 'The impact of climate variability on water and energy demand: the case of South African local governments', *Water and Environment Journal*, May 2012.

Nyar, A. (2012), 'Some new perspectives on Indian South Africans and non-"racialism"', *Politikon* (39) (1) April 2012.

Everatt, D. (2012), 'Non-racialism in South Africa: Status and Prospects', *Politikon* (39) (1) April 2012.

Wray C. (2012), 'Promoting g-government in the Gauteng City-Region (GCR)', *PositionIT*, March 2012.

Peberdy S. (forthcoming 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)*.

In preparation/awaiting publication

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'. Discussions are underway with Prof David Simon from Royal Holloway, University of London, to include the piece in a special edition of the *Urban Studies* journal that he is editing.

Graeme Gotz has been requested to contribute a book chapter on city-region discourse and strategy in

Gauteng for an edited volume on *Urban Governance in post-Apartheid South Africa*.

Alexis Schäffler has been approached to submit an article as part of a special edition in the journal *Landscape and Urban Planning*, 'Green Urban Infrastructure and Climate Adaptation'. Her article is titled 'Integrating green infrastructure into urban planning consciousness - challenges and reflections from Southern Africa'.

Maryna Storie is revising her paper, following substantial comments, for submission to *Geoforum*. The paper is titled 'Representations of space: a case of karst, community and change in the urban landscape'.

Annsilla Nyar has prepared and submitted an 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 with Dr Prudence Kwenda, lecturer in the Wits School of Economic and Business Sciences, on 'Income inequality trends in Gauteng over the last 10 years', using Stats SA General Household Survey data from 2002-2011.

Books and book chapters

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

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

A book manuscript for the book *Changing Space: Johannesburg within its City-Region* has been finalised, submitted to Wits University Press, and is in review. Four chapters have been prepared by GCRO staff: '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 'Johannesburg within its city-region frame' (Graeme Gotz and Chris Wray with Brian Mubiwa). Graeme Gotz and Chris Wray, both editors of the collection, have also contributed substantially to the editors' Introduction.

Musango J.K. 'Conceptual foundations and approaches to urban metabolism assessment'. In preparation as a book chapter for the book Swilling, M., Pieterse, E. and Musango, J. *Sustainable Urban Transitions & Governance*, due for publication in 2013.

Musango J.K., Schäffler A., Mushongera D., Storie M. 'Towards assessing the metabolism of Gauteng City-Region'. In preparation as a book chapter for the book Swilling, M., Pieterse, E. & Musango, J. *Sustainable Urban Transitions & Governance*, due for publication in 2013.

Schäffler, A. 'Sustainably managing storm water in Johannesburg?'. In preparation as a book chapter for the book Swilling, M., Pieterse, E. and Musango, J. *Sustainable Urban Transitions & Governance*, due for publication in 2013.

Sally Peberdy, Annsilla Nyar and David Everatt are working on converting pieces previously published on the xenophobia project into a book. Authors have been contacted to revise their chapters/manuscripts for the book, and contributing GCRO staff are finalising their chapters. The book is being edited by Sally Peberdy.

Conference proceedings

Wray, C. and Storie, M. (2012), 'Developing a tool to select priority wards in Gauteng', 2012 GISSA Ukubuzana conference proceedings, Ekurhuleni, 2-4 October 2012.

Storie, M and Ngie, A. (2012), 'Potential for urban transformation through the utilisation of storm water infrastructure - considerations from the Gauteng City-Region,' Conference paper accepted for publication as part of the conference proceedings of FloodRisk2012, Rotterdam, November 2012.

Everatt D. (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 Centre for Development and Enterprise (CDE).

GCRO publications

The GCRO produces publications under its own aegis including an 'Occasional Paper' series and a 'Provocations' series. The second report in the Provocations series *Brazil: Innovation and Development* authored by Glauco Arbix, Demétrio G.C. Toledo and Rafael G. Felizardo was published in 2012. Two Occasional Papers were printed in 2012/13. The first by Ross Jennings is entitled *Survey of*

surveys: A survey of citizen-based surveys conducted by provincial and local government in Gauteng (October 2012). The second, authored by Brian Mubiwa and Harold Annegarn, explores *Historical spatial change in the Gauteng City-Region* (March 2013). This latter Occasional Paper is to be followed by a paper authored by Alan Mabin, *Concepts of Gauteng: Gauteng's spatial evolution and planning history*, which will be published in mid-2013.

GCRO also produced three data briefs (available for download on the GCRO website) in 2012/13. These include an analysis of the key findings for Gauteng from the South African 2011 Census; a comparison of Johannesburg to major world cities in the areas of prices and earnings; and a study of the developmental potential of Higher Education Institutions in the GCR. Also available on the website are 'Maps of the month' and 'Interactive graphs'. These provide quick views of data from research currently being undertaken by staff of the GCRO using GCRO data, new data from other sources and/or new ways of looking at existing data.

Presentations

GCRO staff continuously participate in academic citizenship and scholarship by presenting our work to academic and other audiences. The number of presentations made by GCRO staff in 2012/13 increased by more than a third compared to 2011/12. This excludes the large number of presentations made by GCRO staff based on the results of the GCRO 2011 'Quality of Life' Survey. Presentations have been made at conferences, seminars and on research visits outside South Africa (on the rest of the continent as well as overseas).

Annsilla Nyar (March 2013), 'A critical examination of anti-Indian racism', India in Africa: new frontiers in South-South relations conference hosted jointly by the Economic and Social Research Foundation (ESRF) in Tanzania and the Department of Political Science (Africana Studies and International Studies) at Vassar College, New York State, 15-17th March 2013, Dar es Salaam, Tanzania.

Sally Peberdy (March 2013), 'Who was a real white South African? The South African state, whiteness and national identity', University of Johannesburg Whitewash 1: Negotiating whiteness in 21st century South Africa, 19-20 March 2013.

Alexis Schäffler (February 2013), 'Urban Age Electric City Report Back to DST / NRF Resilient Cities group', 14 February 2013.

Alexis Schäffler (February 2013), 'The State of Green Infrastructure in the Gauteng City-Region', Gauteng Integrated Infrastructure Master Plan Workshop, 8 February 2013.

Graeme Gotz and Alexis Schäffler (February 2013), 'Conundrums for an emerging green regional economy: The Gauteng City-Region', KZN Green Growth Conference, ICC Durban, 5 February 2013.

Josephine Musango (November 2012), 'Modelling green economy', 1st National Conference on Global Change, Birchwood Conference Centre, 26-28 November 2012.

Graeme Gotz and Chris Wray (November 2012), 'Demographic modelling and the implications of the results from census' and 'Modelling urban spatial change: a preliminary review of South African Initiatives' respectively, joint workshop on Spatial

and demographic modelling for G2055, arranged by GCRO and the GPC, 23 November 2012.

Josephine Musango (November 2012), 'Understanding and measuring urban metabolism: the GCR perspective', AFD-Wits Roundtable, Sustainability in Johannesburg and its wider metropolitan region, 7-8 November 2012.

Sally Peberdy (October 2012), 'A province of migrants? Internal and cross border migration in Gauteng', African Centre for Migration Studies, Wits University, 30 October 2012.

Sally Peberdy (October 2012), 'Migration & migration policy: Reflections on migration & xenophobia in the GCRO Quality of Life Survey II', Ahmed Kathrada Foundation Annual Conference, Unity and Diversity: What does it Mean for Nation-building and Non-racialism, 12 October 2012.

David Everatt (October 2012), 'The black middle class and the future of politics in South Africa', Brazil/Indian/South Africa workshop on the nature and role of middle classes in emerging democracies, funded by the CDE, Sao Paulo, Brazil, October 7-11.

Annsilla Nyar (September 2012), 'Nation-building, Africanism and the 2010 FIFA World Cup: what did they do for social cohesion in post-apartheid South Africa?' Centre for Urbanism and Built Environment Studies (CUBES) seminar, 26 September 2012.

Alexis Schäffler (September 2012), 'Sustainably managing storm water in Johannesburg', NRF/GCRO/CUBES Faces of the City Seminar Series, 25 September 2012.

Annsilla Nyar (September 2012) successfully presented her PhD proposal 'An examination of anti-Indian racism in post-apartheid South Africa', to an open meeting of the Department of Political Studies at Wits University, 13 September 2012.

Maryna Storie (August 2012), 'Acid Mine Drainage: facts and future', CUBES seminar, 16 August 2012.

Graeme Gotz and Chris Wray (July 2012), 'The GCRO's 2011 Quality of Life Survey: Early transport analysis', presented to a GPG Department of Roads and Transport workshop on the proposed 25-year transport master plan, 12 July 2012 (slides for this presentation were prepared by Prof Christo Venter and added to by Graeme Gotz and Chris Wray).

Annsilla Nyar (July 2012), 'Some new perspectives on Indian South Africans and non-"racialism"', International Political Science Association (IPSA), 22nd World Congress of Political Science, 'Reshaping Power and shifting boundaries', Madrid, 8-12 July 2012.

Alexis Schäffler (June 2012), 'Green infrastructure trends and research in the Gauteng City-Region', CUBES Urban Sustainability Theme Roundtable Discussion, 28 June 2012.

Josephine Musango (June 2012), 'GCRO's metabolic flows and infrastructure transitions work', CUBES Urban Sustainability Theme meeting held at the School of Architecture and Planning, Wits University, 28 June 2012.

Maryna Storie (June 2012), 'The choices we make determine the path we take: vulnerability of low income settlements in the GCR', City of Johannesburg Disaster Management Advisory Forum, 22 June 2012.

Sally Peberdy (June 2012), 'Making a home? Migrants in the Gauteng City Region (GCR)', Society of South African Geographers Conference, Cape Town, 22 June 2012.

Josephine Musango (June 2012), 'Conceptual foundations and approaches to urban metabolism assessment', GCRO-ACC-SI workshop, 13-15 June 2012, Stellenbosch.

Josephine Musango, Alexis Schäffler, Darlington Mushongera, and Maryna Storie (June 2012), 'Towards assessing the metabolism of Gauteng City-Region', GCRO-ACC-SI workshop, 13-15 June 2012, Stellenbosch.

Alexis Schäffler (June 2012), 'Green infrastructure trends and research in the Gauteng City-Region: Head in the Clouds - Reflections on managing storm water as a resource', GCRO-ACC-SI workshop, 13-15 June 2012, Stellenbosch.

Graeme Gotz (June 2012), 'Infrastructure transitions in Jo'burg - failing to use a crisis?' GCRO-ACC-SI workshop, 13-15 June 2012, Stellenbosch.

Maryna Storie (June 2012), 'Intersections between disaster risk and settlement types', GCRO-ACC-SI workshop, 13-15 June 2012, Stellenbosch.

Chris Wray, (June 2012), 'A city-regional observatory perspective: GCRO spatial data initiatives, GCRO GIS website & g-government', South Africa Geospatial Forum conference, 6 June 2012.

Maryna Storie (June 2012) 'Acid Mine Drainage in the Gauteng City-Region: some of the facts and concerns', City of Johannesburg Ward Councillor Meeting, 1 June 2012.

David Everatt, (May 2012), 'Quality of Life in the Gauteng City-Region: 2011 findings', GPG Lekgotla, 22 May 2012.

Maryna Storie (May 2012) 'Intersections between sustainability and vulnerability in the Gauteng City-Region: the role of the GCRO', South African National Disaster Management Centre and the World Bank: Disaster Management Specialist Unit for East Asia & the Pacific Infrastructure, 11 May 2012.

David Everatt, (April 2012), 'Youth as a 'ring of fire'', Wits Colloquium responding to the NPC, 25 April 2012.

Maryna Storie (April 2012), 'Dolomite issues in the Gauteng City-Region: preparing for community engagement', Workshop with community leaders of the Protea South settlement and land planners, 13 April 2012.

Alexis Schäffler (April 2012), 'Green infrastructure research in the Gauteng City-Region', Virginia Tech-GCRO Research Visit, 11-12 April 2012.

Alexis Schäffler (April 2012), 'Green infrastructure research in the Gauteng City-Region', MIT-GCRO Research Visit, 4 April 2012.

Graeme Gotz, (April 2012), 'Secondary cities: criteria for segmentation - indicators and data', The Differentiated Approach to Local Government: South Africa's Secondary Cities Launch & Conversation, South African Cities Network (SACN) and SALGA, 3 April 2012.

Maryna Storie (March 2012), 'Dolomite risk in the Gauteng City-Region', Gauteng Provincial Department

of Local Government and Housing: Provincial Cross-boundary Forum, 28 March 2012.

'Quality of Life' Survey 2011 presentations

Following the launch of the 2011 'Quality of Life' Survey in July 2012 key invited presentations of the survey results included: Johannesburg Department of Economic Development (5 October); Ekurhuleni Mayoral Lekgotla (16 October); Ahmed Kathrada Foundation Conference (11 October); African Centre for Migration and Society (ACMS) (30 October); GPG gender machinery (13 September); ANC Caucus in the Provincial Legislature; ANC Caucus in the Ekurhuleni Legislature (6 March); and the ANC Caucus in the Tshwane Legislature (8 March).

Conferences, seminars and symposia organised by the GCRO

As part of the intellectual life of the Observatory, GCRO partners with other academic departments and research centres to run academic dialogues of various kinds. In this regard the GCRO has continued to co-organise a seminar series with the NRF Chair of Spatial Planning and Modelling Phil Harrison and the Centre for Urban and Built Environment Studies (CUBES) at Wits. The seminar series called Faces of the City: Urban Form, Fabric and Function has attracted academics from across the country as well as overseas.

Under the auspices of the DST-funded Resilient Cities Project and together with AFD and the Wits School of Architecture and Planning, GCRO organised a two-day roundtable titled Sustainability in Johannesburg and its Wider Metropolitan Region: Transforming

Urban Structures and Infrastructures for Resilience, held on 7 and 8 November 2012.

On 26 and 27 March 2012 the GCRO co-hosted with the Wits School of Architecture and Planning and the Johannesburg Development Agency a conference on Sport and the City: Impacts and Effects of Mega-Events on Urban Development. Danny Jordaan (CEO of the 2010 FIFA World Cup) was the keynote speaker and findings from the GCRO panel survey on the impacts of the FIFA 2010 World Cup experienced by small traders were presented by David Everatt and Annsilla Nyar alongside a number of other presentations.

Teaching and supervision and wider academic citizenship

GCRO staff continue to contribute to teaching and learning in various universities. This is primarily through lecturing and supervision, but also in other ways including informal discussions with postgraduate students regarding their work. David Everatt is involved in a number of academic centres based at Wits as well as at UCT. Sally Peberdy was appointed as an Extraordinary Professor at the University of the Western Cape. Alexis Schäffler has become a principal member of the SA Food Lab. Alexis Schäffler has also helped establish the Wits food garden, a student initiative situated above the Matrix. A number of academic articles and research reports are expected to emerge once the garden is more mature.

Teaching and supervision

Graeme Gotz presented a lecture to third year Architecture and Planning students at Wits on 'Metropolitan areas & city regions: Johannesburg & Gauteng', in March 2013.

Graeme Gotz presented two lectures to the Urban Infrastructure Design and Management Masters Programme at UCT on 7 March 2013, one on the Phiri Water Case and the other on Johannesburg's Growth Management Strategy.

Maryna Storie presented two lectures, one on 'Climate Change and Urban Planning', and one on 'Disaster Risk Management with a focus on Critical Infrastructure', at the Wits School of Architecture and Planning on 13 and 20 September 2012 respectively. The output from students were posters depicting an integrated view of climate change and disaster risk, as applied to urban planning and design.

Graeme Gotz presented three guest lectures on the Wits School of Architecture and Planning course 'Johannesburg as a City in Africa', on 16, 23 and 30 August 2012.

Maryna Storie was discussant of a paper presented by PhD Candidate Scelo Zibagwe at UJ at the end of July 2012, entitled 'Aerial Photography as Technology of Power and Resistance from below in Cape Town's Informal Settlements'.

Maryna Storie presented a seminar on 'Acid Mine Drainage and Mine Residue Areas: the latest murmurs', at the Wits School of Architecture and Planning, 7 June 2012.

Josephine Musango gave lectures for the M Phil Course, 'Introduction to system dynamics modelling' at the Sustainability Institute / Stellenbosch University, 7-18 May 2012.

Josephine Musango reviewed two conference papers for the International Society of System Dynamics.

Maryna Storie presented a seminar on 'Storm water infrastructure and floods: considerations from the Gauteng City-Region', at the Wits School of Geography, Archaeology and Environmental Studies, 12 April 2012.

Members of GCRO staff also act in supervisory capacities for students at various institutions and are invited to act as external and internal examiners for postgraduate student theses.

David Everatt's student Nompumelelo Phakathi passed her Masters with a 70% score.

David Everatt's Masters student Mduduzi Mbada has submitted his thesis for examination.

David Everatt is co-supervising (with Dr Michael Muller of the School of Public & Development Management at Wits) Ms Kefiloe Masiteng's PhD on poverty trends since 1996.

Sally Peberdy's three Masters students, Kris Agbor Tabi, Lameez Eksteen and Winston Jerome Harris all successfully passed their Masters degrees at UWC.

Alexis Schäffler assisted Tsholo Diphoko with her honours project on market access dynamics of urban agriculture in Orange Farm.

Josephine Musango was an internal examiner for a Master's proposal in the School of Architecture and Planning, Wits.

Alexis Schäffler finalised her supervision of a Masters student at Wits, Mduduzi Nhlozi, who was awarded a DST/NRF grant as part of the GCRO's collaboration with Wits' Resilient Cities programme. His topic was 'Towards a Sustainable Green Space System:

Understanding Planning and Management Dynamics in the City of Johannesburg'. The work received a B.

Maryna Storie with Prof. H. Annegarn of UJ supervised Adeline Ngie who graduated with an MSc in Environmental Management from UJ in October 2012 with a dissertation entitled 'A GIS Approach for Flood Vulnerability and Adaptation Analysis in Diepsloot, Johannesburg.' Adeline is the first UJ student to graduate as part of the GCRO and UJ collaboration.

Sally Peberdy acted as an external examiner for Masters theses from UJ, UNISA and UCT.

Maryna Storie was an external examiner for a Tshwane University of Technology MTech student dissertation, entitled 'Human Reaction to Fire and Emergency Evacuation Plans in Tshwane High Schools'.

Maryna Storie was discussant of a paper presented by PhD Candidate Scelo Zibagwe at UJ at the end of July 2012, entitled 'Aerial Photography as Technology of Power and Resistance from below in Cape Town's Informal Settlements'.

Maryna Storie, Chris Wray and Kavesha Damon assisted a number of students and researchers with accessing spatial and other data that is available at the GCRO, for research and study purposes.

Chris Wray is an external examiner for a Wits fourth-year Information Engineering project, supervised by Prof Rex van Olst, investigating transport infrastructure and population/urban growth.

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.

David Everatt has been invited to review papers for various academic journals. He also acted as external examiner to PhD and Masters theses from the University of Stellenbosch, UCT and elsewhere.

Sally Peberdy has been appointed to the editorial boards of *Immigrants and Minorities*, *Journal of Immigrant and Refugee Studies*, *Journal of International Migration and Integration*, and the *African Migration and Development Review*.

Sally Peberdy continues to review articles for various academic journals including the *African Geographical Review*, *Immigrants and Minorities*, the *Journal of Immigration and Refugee Studies*, *Politikon*, the *South African Geographical Journal* and *Urban Forum*.

Josephine Musango reviewed a paper for the *International Journal for Cleaner Production*.

Public platforms

GCRO staff are at times invited to speak on radio and television, usually in relation to their areas of expertise.

David Everatt was invited to speak on radio several times (including SAFM, 702, Radio Today) regarding a range of issues related to the work of the GCRO.

Alexis Schäffler was a non-studio guest on 702's David O'Sullivan show speaking about her storm water research.

Sally Peberdy was invited to speak on e.tv. news on migration issues around the release of Census 2011 results.

Sally Peberdy's presentation of 'Quality of Life' results on migration presented at the ACMS was quoted on various programmes of the South African Broadcasting Corporation (SABC) including PM-Live on SAFM.

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 2013 comprised almost 2 500 items. They range from popular media, to grey literature, to peer reviewed articles and books.

Internships

In early 2012 approval was given by the Board for the GCRO to initiate an internship programme. As we noted above, in the first year, the positions attracted very high quality applicants, and three appointments were made. We hope to appoint interns each year going forward, but this will be determined by the quality of applicants. The 2012 applicants set the bar very high.

Stakeholders and partnerships

Research Advisory Committee (RAC)

The RAC acts as a portal between the governmental and academic work of GCRO. The RAC is comprised of senior academics with representation from government, the private sector and civil society. RAC meetings held in 2011-2013 included reviews of the GCRO 2012-2013 workplan and the mandate and functioning of the RAC, as well as an extended RAC with additional academic experts from across the GCR which looked at proposed research to support the drafting of G2055. The year 2012-2013 saw the end of the term of RAC members. It also saw a review of the role of the RAC and its organisation. Following discussions with the GCRO, with existing RAC members and the GCRO Board, the structure of the RAC was revised to enable the RAC to play a stronger role in providing input into on-going GCRO research work. The revision still allows the RAC to assist GCRO in determining its future research agenda. Meetings of the RAC now constitute a plenary session supplemented by themed meetings based on research being undertaken in the five research pillars of the GCRO. This will allow for more detailed input by RAC members into specific research projects and stronger input into the research process from conceptualisation to conclusion.

The GCRO Board approved the revised structure in July 2012. The new membership of the RAC, which includes some members of the previous RAC (all members of the previous RAC were asked if they wished to continue), was approved in March 2013.

The following have kindly agreed to be members of the RAC: Dr Caryn Abrahams (Ahmed Kathrada Foundation); Prof Fethi Ahmed (UJ); Neeshan Balton (Director of the 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); Dr Siphon Pityana (private sector); Prof Chris Rogerson (UJ); Michael Sachs (National Treasury); Dr Aurelia Segatti (Wits); Mfanafuthi Tsela (Department of Cooperative Governance and Traditional Affairs); Prof Rex van Olst (Wits); Dr Christo Venter (UP); Lisa Vetten (civil society); Prof Colleen Vogel (UP); and Prof Karl von Holdt (Wits).

Outreach and partnerships

The year 2012-2013 saw GCRO continue to develop partnerships and outreach work internationally, nationally and locally with government, research, academic and other institutions and organisations. GCRO continued its close engagement with government at national, provincial and local levels. Beside involvement with the GPG in policy support work, GCRO provided support to the GPC in the development of its G2055 strategy and document with staff acting as resource people to the process. GCRO also contributed to the development of the GPG Mid-Term Review. Discussions were held with the GPC as to provision of further assistance in evaluation. Meetings were held with the Department of Local Government and Housing and the Department of Infrastructure.

Engagement with the Gauteng Department of Roads and Transport and metros and municipalities has continued with particular focus on the findings on transport from the GCRO 'Quality of Life' Survey. Meetings were also held with representatives of the CoJ, Mogale City and the municipalities of Ekurhuleni and Tshwane. Nationally, meetings were also held with Statistics South Africa and the National Department of Arts and Culture to discuss their creation of a national Cultural Observatory.

Relationships were established and/or maintained with a number of other learning institutions and urban experts in South Africa and overseas. Internationally, a relationship was maintained with Prof Glauco Arbix from Brazil and with Prof Jonathan Crush of the Southern African Migration Programme, Queens University and the CIGI Chair in global migration and development at the Balsillie School of International Affairs in Canada. There has been continued engagement with Prof Jenny Robinson of University College, London. Greg Clark a UK-based international advisor and expert on cities and regions who has acted as advisor to several city governments was hosted by the GCRO and provided a session on city regional governance options to the GPC as well as the GCRO. The latter resulted in a research trip by Annsilla Nyar to develop relationships with the Fundación Metropoli in Madrid, the Bilbao Metropoli-30 and stakeholders from the Metropolitan Strategic Plan of Barcelona. Links were made with academics and researchers at the London School of Economics Cities Programme.

In South Africa, relationships have been further developed with researchers in the partner institutions

of UJ and Wits. David Everatt was asked to advise UJ on setting up a 'mega-city' institute and its relationship with the City of Johannesburg as well as the proposed Well-Being and Development Institute. Joint research projects and publications continue to emanate from the relationship with the NRF-SARChi Chair team of Prof Phil Harrison in the School of Architecture and Planning at Wits. GCRO is an active participant in the jointly run 'Faces of the City' seminar series run through the School of Architecture and Planning. GCRO has continued to work in the area of education (with Prof Pundy Pillay) and the green economy (with Prof Ivor Sarakinsky) at Wits P&DM. GCRO has maintained its relationships with the ACC at UCT. There is an on-going relationship with the Department of Geography and Environmental Studies at the UWC where Sally Peberdy holds the post of Extraordinary Professor.

The team working on the State of Green Infrastructure Report have worked closely with de Wit Sustainable Options (Pty) Ltd., and Natasha Christopher in the Fine Art Department at Wits. Established relationships continue with the CSIR and the Consortium for Refugees and Migrants in South Africa (CORMSA).

Workshops, conferences and seminars

As noted elsewhere, in 2012-2013 GCRO continued to co-host the Faces of the City seminar series with the Department of Development Planning in the School of Architecture and Planning at Wits. Members of staff take an active role in seminars. Together with the AFD, and the Wits School of Architecture and Planning, under the auspices of the DST-funded Resilient Cities project, GCRO helped to

organise a two-day roundtable in November 2012 titled Sustainability in Johannesburg and its Wider Metropolitan Region: Transforming Urban Structures and Infrastructures for Resilience. In March 2012 the GCRO co-hosted with the School of Architecture and Planning at Wits, and the Johannesburg Development Agency, a conference on Sport and the City: Impacts and effects of Mega-Events on Urban Development. Findings from GCRO's panel survey on the impacts of the FIFA 2010 World Cup experienced by small traders were presented by David Everatt and Annsilla Nyar, alongside a number of other presentations. Dr Danny Jordaan was the key-note speaker. GCRO facilitated part of a session with PARI and Princeton academics on a future public service.

The second 'Quality of Life' Survey was launched in July 2012 at an event attended by the Premier of Gauteng, Vice-Chancellor of Wits and the Deputy Vice-Chancellor Research of UJ. The launch of the results had a major impact, with widespread coverage on radio and television and in the print media. The results were also widely presented by a range of GCRO staff. Presentations included: Tshwane Mayoral Committee; Johannesburg Mayoral Committee; Gauteng Advisory Council; SALGA Gauteng; and the Ahmed Kathrada Foundation seminar. Gender-related findings from the Survey were presented to the gender group in the GPG. Other requested presentations made during the year included: Johannesburg Department of Economic Development; Ekurhuleni Mayoral Lekgotla; the Ahmed Kathrada Foundation Conference; African Centre for Migration and Society (ACMS); the ANC Caucus in the Provincial Legislature; the ANC Caucus

in the Ekurhuleni Legislature; and the ANC Caucus in the Tshwane Legislature.

Chris Wray and Prof Christo Venter of the University of Pretoria presented preliminary 'Quality of Life' Survey 2011 transport results to a workshop, convened by the MEC and HoD for Roads and Transport, to discuss the 25 year transport master plan for Gauteng. GCRO also contributed to a Gauteng Integrated Infrastructure Master Plan (GIIMP) Workshop from 6-8 February hosted by the Gauteng Department of Infrastructure. This included a presentation on green infrastructure at the workshop as well as a GCRO representative chairing a panel discussion on the trajectory of infrastructure development in the province. GCRO arranged for Prof Christo Venter to present results of his first phase transport analysis of the 'Quality of Life' Survey results to a workshop with Transport MMCs and transport industry opinion makers in response to a request from the MEC for Roads and Transport. The Presidency referred to the 'Quality of Life' transport results when inviting the press to a visit by the President to Gauteng to experience the Gauteng public transport system during morning rush hour on 14 June 2012.

Staff were invited to participate in a number of other forums internationally and locally. Internationally, Annsilla Nyar attended and presented a paper 'Some new perspectives on Indian South Africans and non-racialism' at the 2012 IPSA World Congress in Barcelona, Spain. A paper by David Everatt on 'The meaning and future of non-racialism in post-apartheid South Africa' was presented at the same conference. Annsilla Nyar also presented a paper at conference

exploring 'India in Africa' hosted by the Economic and Social Research Foundation in Tanzania and the Vassar College, New York State held in Tanzania. David Everatt presented a paper on 'The black middle class and the future of politics in South Africa' to a Brazil/Indian/South African workshop, funded by the CDE, in Sao Paulo, Brazil. Alexis Schäffler attended the Urban Age Electric Cities conference organised by the London School of Economics Cities Programme. Alexis Schäffler also presented papers on green infrastructure research to seminars at Virginia Tech. and MIT in the United States.

The GCRO co-hosted two-day roundtable entitled Sustainability in Johannesburg and its Wider Metropolitan Region: Transforming Urban Structures and Infrastructures for Resilience. GCRO staff facilitated a session and presented work on metabolic flows. Alexis Schäffler and Graeme Gotz were invited to present the Gauteng Green Strategic Programme and reflections on Gauteng's approach to the green economy to the KZN Green Growth Conference organised by the KZN Department of Economic Development. Kerry Bobbins attended various stakeholder workshops and public meetings related to acid mine drainage. Alexis Schäffler presented papers to the DST/NRF Resilient Cities Group and a paper on the state of green infrastructure to the Gauteng Integrated Infrastructure Master Plan Workshop. Graeme Gotz and Chris Wray presented work on demographic modelling and modelling urban spatial change respectively to a joint workshop on Spatial and Demographic Modelling for G2055 organised by the GCRO and the GPC. Graeme Gotz also presented a paper on secondary cities to a

workshop held by the South African Cities Network and SALGA. Josephine Musango presented work on modelling green economies and understanding and measuring urban metabolism to the 1st National Conference on Global Change in Ekurhuleni and the AFD-Wits Roundtable respectively. Annsilla Nyar presented her research on nation-building and the 2010 FIFA World Cup to a Wits Centre for Urbanism and Built Environment Studies (CUBES) seminar. Maryna Storie also presented her work (on acid mine drainage) to a CUBES seminar as did Alexis Schäffler (green infrastructure) and Josephine Musango (GCR's metabolic flows and infrastructure transitions). Sally Peberdy presented work on migration to the African Centre for Migration Studies at Wits and to the Ahmed Kathrada Foundation Annual Conference as well as to the Society of South African Geographers Conference in Cape Town. Maryna Storie was invited to present work on vulnerability of low income settlements to the City of Johannesburg Disaster Management Advisory Forum. Josephine Musango, Alexis Schäffler, Graeme Gotz, Chris Wray and Maryna Storie all presented papers to the GCRO-ACC-SI co-hosted workshop in Stellenbosch where a paper co-authored by Josephine Musango, Alexis Schäffler, Darlington Mushongera and Maryna Storie was also presented.

Participation on Boards and Committees

Staff members of GCRO have been invited to sit on various boards and committees including:

- David Everatt: African Centre for Cities Advisory Board (UCT); Development Bank of Southern Africa Board Research Committee; GCRO representative on Wits 'Cities Institute' working group; steering

committee of the 'Resilient Cities' project; and the management committee of the CLEAR project.

- Sally Peberdy: Advisory Board of the African Migration and Development Policy Centre (AMADPOC).
- Maryna Storie: Representative on the Cross-boundary Advisory Committee: Gauteng Department of Local Government and Housing; and representative on the City of Johannesburg and City of Tshwane's Disaster Management Advisory Committees.

Input into other research processes and media appearances

Members of staff were also approached to provide input into other research processes. Graeme Gotz in his role on the Advisory Board has, and is, providing input into the National Integrated Urban Development Framework. Sally Peberdy was asked for input to a project for the Department of Social Development coordinated by the Prof Olivier of the ILSP.

Staff were invited to, and have taken part in, public forums to discuss the work of GCRO. Prof David Everatt has been invited to speak on radio related to the results of the 'Quality of Life' Survey as well as other research. Sally Peberdy was quoted on various SABC radio stations following recording of her presentation at ACMS. She was also asked to appear on e.tv. news to answer questions regarding migration following the release of Census 2011.



Gauteng City-Region Observatory
The University of Witwatersrand
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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 2012 to 31 March 2013. 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 2012 to 31 March 2013
2. Test the mathematical accuracy of the project schedule.
3. 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.
4. Obtain a general ledger analysis of the Institution from the University of the Witwatersrand, Johannesburg for the period 1 April 2012 to 31 March 2013 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 2013.

We report our findings below:

5. Obtained a project schedule of income and expenditure schedule of the Institution for the period 1 April 2012 to 31 March 2013
6. Tested the mathematical accuracy of the project schedule.
7. 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.
8. Obtained a general ledger analysis of the Institution from the University of the Witwatersrand, Johannesburg for the period 1 April 2012 to 31 March 2013 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 2013 (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 2012 to 31 March 2013.

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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