

# GCR0 annual report 11/12





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## Foreword: Professor Rob Moore Board Chairperson



This year is the third full year of operation for the Gauteng City-Region Observatory (GCRO). The 2011/2012 year demonstrates how far the GCRO has grown into its mandate, and how it has developed the scope and scale of its operations. This has been helped by the appointment of four new staff members: Darlington Mushongera and Alexis Schäffler joined GCRO as full-time researchers and Dr Josephine Musango and Prof Sally Peberdy as senior researchers. These appointments mark the attainment of the sufficient level of 'critical mass' that was originally envisaged for the GCRO.

The research that was undertaken and completed by the GCRO in 2011/2012 demonstrates the value of the Observatory. This year saw the completion of a number of research projects which included the following:

- The Organisation for Economic Co-operation and Development (OECD) Territorial Review of the Gauteng City-Region (GCR) was released in a multi-media output. The review profiled, measured and benchmarked the GCR, establishing its parameters and providing a profile of the unique space and place of the GCR.
- The 2011 Quality of Life Survey was completed and the results released. This is the second such survey conducted by the GCRO, and it provides rich data on the lives and experiences of residents of Gauteng, as well as their opinions on a range of political and social issues, providing astute insights into the quality of their lives. The findings have been welcomed by policy makers across the province, even when they reflected disappointing progress against some of our social goals. The outcome of the survey will be further disseminated to government and academia. Together the 2009 and 2011 Quality of Life surveys provide valuable time-series data enabling the tracking of change in the province.



- The results of the 2010 FIFA World Cup survey, a longitudinal study (undertaken in June and November 2010 and July 2011) were released. It assessed the opportunities associated with hosting such mega-events, together with insights into whether or not these benefits in fact accrued as anticipated. It culminated in the GCRO co-hosting a conference with the Wits School of Architecture & Planning and the Johannesburg Development Agency in 2012, opened by Dr Danny Jordaan, on 'Sport and the City: Impacts and Effects of Mega-Events on Urban Development.'

Other multi-year projects continued to unfold as planned, and included the following:

- Retaining its commitment to providing research which will help to build an environmentally sustainable city-region, the GCRO has embarked on a new project exploring the 'urban metabolism' of the GCR as well as an analysis of the state of green infrastructure in the GCR. GCRO is also working on the intersection between disaster vulnerability and sustainability through projects exploring housing issues in dolomitic areas and the vulnerability of urban areas located in mine residue areas.
- In the economic sphere, the GCRO is undertaking a range of work including commissioning a series of case studies on Gauteng's urban space economy (2011-2013). Led by economist Darlington Mushongera, the GCRO is developing a Governance Barometer to show key development trends in the GCR in a user-friendly fashion. Other work on the transitions to a future economy in Gauteng continues. So too does work on transformation in higher education in the GCR, which explores trends in higher education institutions and whether they are meeting the needs of GCR's residents and economy.
- Spatial change in the GCR continues to be of interest with GCRO working with the NRF Chair in Planning and Modelling of the Wits School of Architecture and Planning to examine whether the spatial form, fabric and function of the GCR can cope with change.
- The first phase of GCRO research exploring mobility through transport flows in the GCR is complete and has strengthened relationships with the Universities of Johannesburg and Pretoria who continue to work with us on the project. Also concerned with mobility, but here of people and the economy, is the 'peripheries and rural-urban transitions' project where GCRO with the NRF Chair in Planning and Modelling is examining the demographic and socio-economic dynamics of change in those parts of the Gauteng which lie outside the urban core and rural-urban linkages.





A key role of the GCRO is to provide support through research to provincial and local government in Gauteng. In the past year the organisation has continued to develop in this area by responding to requests for research from government as well as to present results of completed research. A Green Strategy Programme was developed for the province and delivered in early 2012. Invited by the Gauteng Planning Commission, the GCRO has supported the development of the long-term planning strategy of the province, *G2055*, including providing research findings and papers, intellectual input and contracting the city-region specialist Greg Clark to frame a series of discussions around long-term planning for city-regions. The GCRO has also provided research and support to the Gauteng Departments of Economic Development; Roads & Transport; and Sports, Arts, Culture & Recreation; the City of Johannesburg; Mogale City and Tshwane Municipality, among others, as well as to the national sphere of government.

The other key component of the GCRO's work is a commitment to the academic project. In this arena relationships were established with academic institutions in South Africa and overseas as well as with individual academics. Overseas these include the Massachusetts Institute of Technology (MIT), Virginia Polytechnic Institute, the London School of Economics and University College, London, University of Oxford, and others. Various academic publications have emanated from the research. In the past year these include a special edition of *Politikon* based on the research undertaken with the Ahmed Kathrada Foundation on non-racialism. A book project on sustainability with partners in the Western Cape is underway, and the first book in a series on spatial change in the GCR is being edited by Graeme Gotz and Chris Wray from GCRO, with Professors Phil Harrison and Alison Todes from the Wits School of Architecture and Planning. Staff have produced 16 SAPSE publications in the past year. Three staff members, Josephine Musango (PhD), Alexis Schäffler (MSc) and Chris Wray (MSc) should be congratulated for completing their post-graduate degrees.

The 2011/12 year shows that the GCRO continues to fulfil its mandate to undertake and provide academically rigorous research and information that is useful to government, business, labour, civil society and the residents of the city-region, and which will help the region develop and grow to reduce inequality as well as to promote a region that it is spatially and socially integrated and inclusive. We look forward to the exciting work of the organisation continuing to develop and grow into the future.

## 01

## Introduction &amp; overview

This report covers the third full operating year of the Gauteng City-Region Observatory (GCRO) and the beginning of our second three-year cycle of support from the Gauteng Provincial Government (GPG). (We were operational for only the final quarter of 2008/2009, our first year, which formed part of the first three-year cycle which ended in March 2011.) GCRO was publicly launched on 11 September 2008. A partnership between the 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.

GCRO is an independent, university-based research centre, tasked with benchmarking the GCR's development; mobilising intellectual capital from both universities to help consider key policy issues; providing accurate, reliable data that talk to the spatial area that is the GCR (most datasets fall within administrative boundaries, which the GCR does not); and making this 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.

## 02

## Governance



GCRO Board: Ms Annette Griessel, Prof Adam Habib, Mr Rashid Seedat, Prof Helen Laburn, Prof Rob Moore, Prof Fiona Tregenna, Mr Daniel Mashitisho, Prof David Everatt

GCRO is overseen by a Board, made up of two representatives from the University of Johannesburg – 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 the University of the Witwatersrand, 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 Gauteng Planning Commission, Mr Rashid Seedat, sits on the Board alongside Ms Annette Griessel, Deputy Director-General: Policy and Governance from the Office of the Premier, Gauteng Provincial Government, and Mr Dan Mashitisho, Municipal Manager: Mogale City, representing local government in Gauteng.

While Wits and UJ serve as GCRO's anchor institutions, our mission involves the harnessing of a range of academic and intellectual resources in Gauteng. A key mechanism in this regard is

the Research Advisory Committee (RAC), made up of senior academics and public intellectuals from a range of academic and other institutions. The RAC is not a decision-making structure, but a sounding board and quality assurance mechanism for GCRO and is now a fully functioning part of GCRO's work.

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 12-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 2011/12 are attached and mark our fourth successive clean, unqualified audit.



GCRO has also 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. Remaining fully accountable to three partner institutions remains 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, the University of the Witwatersrand continues to host the offices and funds of GCRO and takes responsibility for its financial administration. During 2010/11, the Executive Director was charged with finalising a Constitution for GCRO, which was finalised by all parties. The Constitution sets the rules for all partners and staff of GCRO and how GCRO operates.



## 03

# Staff & structure



▲ GCRO Staff: Adele Underhay, Senior Finance and Administration Manager, Graeme Gotz, Director Research, Josephine Musango, Senior Researcher, Darlington Mushongera, Researcher, Maryna Storie, Senior Researcher, Prof David Everatt, Executive Director, Annsilla Nyar, Senior Researcher, Dr Sally Peberdy, Senior Researcher, Chris Wray, Senior Systems Analyst, Alexis Schäffler, Researcher, Insert: Sammy Masehe, Receptionist

GCRO is led by Executive Director Prof David Everatt, supported by Research Director Mr Graeme Gotz, Financial and Office Manager Mrs Adele Underhay, and Senior Systems Analyst Mr Chris Wray. They are joined by senior researchers Ms Annsilla Nyar and Ms Maryna Storie, while Ms Disemelo 'Sammy' Masehe runs reception and our ever-growing resource centre.

During the April 2011 to March 2012 period under review, GCRO grew to almost the size and shape originally intended (this process will be complete in 2012/2013 when we hire our first batch of interns). On the downside, we lost the services of Ms Ferrial Adam, who left us to spend more time doing activist work in support of the green causes that brought her to GCRO in the first place. As a result, GCRO went on a recruitment drive at both researcher and senior researcher levels.

Ms Alexis Schäffler, who had been a part-time researcher on sustainability issues,

having received a first class Masters from the University of Stellenbosch's Sustainability Institute, joined us full-time as a researcher. Economist Darlington Mushongera also joined as a researcher, bringing some much-needed economic skills to the GCRO stable. Ms Josephine Musango joined GCRO as a senior researcher – and became Dr Musango about a month later. Josephine is both a modelling expert and a sustainability researcher and will be driving our metabolic flow project (see below). Finally, we were also able to secure the services of Prof Sally Peberdy, who joined in early 2012 from the University of the Western Cape. A geographer by training, Sally brings a wide range of skills, as well as academic seniority, to the organisation.

## GCRO Organogram

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 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 twice a year at least by the Executive Director, who in turn has his

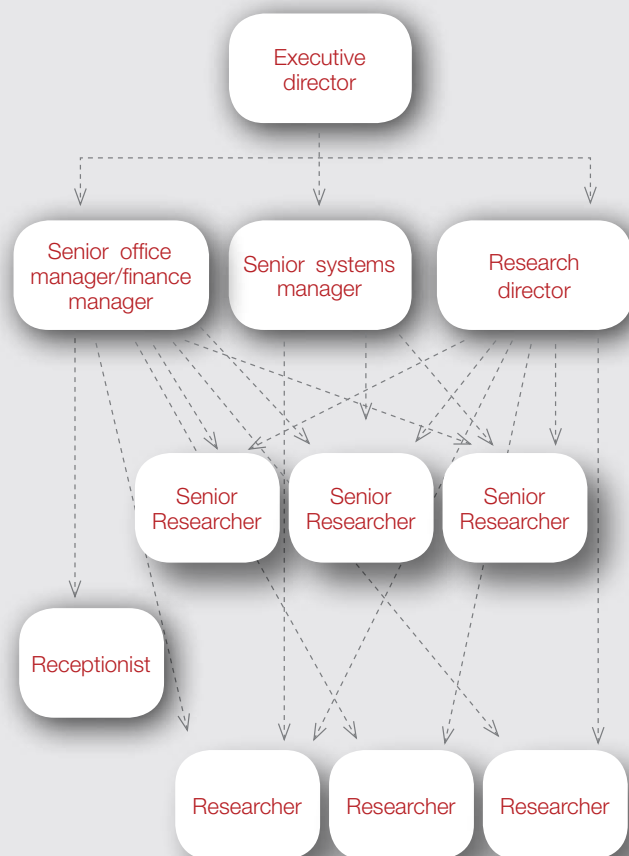
performance regularly assessed by his manager at the University of the Witwatersrand, Prof Rob Moore.

At the end of the period under review, GCRO advertised for two internship positions and, at the time of writing, had received over 130 applications. We expect next year to be reporting on the work of what look like a group of highly qualified, highly competent applicants.

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.

### GCRO staff development 2011/12

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.



GCRO Organogram 2011/12

*During the 2011/12 financial year the following staff development occurred:*

**Alexis Schäffler and Josephine Musango** – attended a 3-day Fundamental modelling in Anylogic on 17-19 October 2011. Both had just completed their degrees (a Masters for Alexis, a Doctorate for Josephine).

**Annsilla Nyar** – registered for a PhD with the School of Politics supervised by Prof Rupert Taylor. Her work involves critically examining anti-Indian racism in South Africa.

**Chris Wray** (Senior Systems Analyst) graduated and received his MSc degree in Engineering at Wits in November 2011. He also attended a First Aid Level 1 Course at CLTD (Wits).

**Josephine Musango** – passed her PhD entitled “Technology assessment of Renewable Energy Sustainability in South Africa.” She was enrolled at the Faculty of Economics and Management Sciences, Stellenbosch University.

**Sammy Masehe** – attended an Events Management Course at CLTD (Wits) on the 4 and 5th July 2011.



## 04

## The year in review



In brief – because this report fleshes out quite what a year it has been for GCRO! – it should be noted that this was a critical year for the Observatory. The completion of the mammoth Territorial Review by the Organisation for Economic Co-operation & Development (OECD) and GCRO signalled the coming of age of the city-region itself. It has now been systematically profiled, measured against all global competitor and/or collaborating city-regions, and our strengths and weaknesses clearly identified. We know where we stand in the global league table and the identity of Gauteng has been considerably advanced. The Review also put to bed arguments that the city-region was somehow ‘not real’ or was ‘not big enough’ or ‘not like New York or London’ – all arguments we have heard since 2008. The Gauteng City-Region is a unique space, both because of the negative inheritance from our apartheid past – high density, high poverty townships located far from job opportunities – but also the unique positives, such as the space and potential for growing density in a planned

and strategic manner, allowing us to locate people near public transport nodes and route them to and from work and work opportunities; and of course our green spaces, including both the Cradle of Humankind and the largest urban forest in the world. Are we different from New York, London, Paris, Rio, Shanghai and the rest – of course, and it is from that difference that we are able to both find our niche and identify our competitive edge.

At the same time as the intellectual base of the GCR was being firmed up, GCRO has come of age. Readers of previous Annual Reports will know that we have been chasing down an ambitious research agenda, with generous support from our partners, but an insufficiently large research staff to get the work done. That changed this year, with new staff bringing both new energy and new skills to the organisation. We now have a critical mass of researchers – to be beefed up next year with interns – that is both broad in range of skills and flexible in allowing us to take on both academic and project work,



and the often unexpected requests from local or provincial government for support or research in particular areas.

That said, in the following pages we outline a highly ambitious research agenda, which cuts across five main strategic pillars and includes multiple projects, each of which in turn include multiple partners, many with local and international linkages, all of which need to have policy relevance for government and meet the needs of the academy. The Observatory remains an intense place to work, populated by highly skilled staff determined to meet these multiple objectives.

## Applied research projects

GCRO's core intellectual work is underpinned by our medium to longer-term applied research programme which provides much of our information, data and knowledge about the GCR. The research projects aim to broaden the range of our knowledge about the various challenges and opportunities facing the GCR. Research projects may either be commissioned or self-initiated by GCRO staff. Generally the research projects are longer-term, substantive and analytically complex pieces of work. The research is disseminated through a specific set of outputs such as analytical reports (GCRO Research Reports, Occasional Papers, Provocations and so on) and academic publications (journal articles and books).

GCRO's applied research work grew substantially in 2011/12.

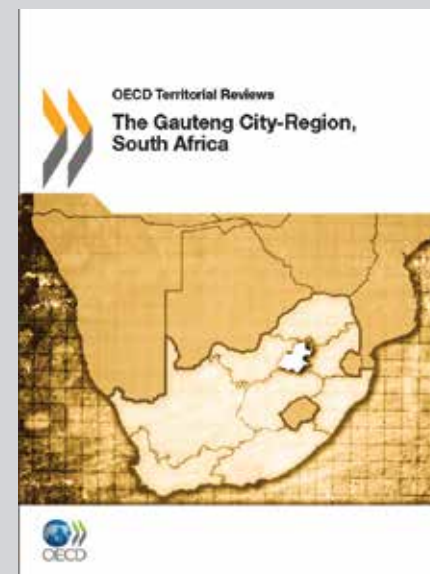
### OECD Territorial Review

The Organisation for Economic Co-operation and Development (OECD) Territorial Review for Gauteng has been GCRO's largest project to date.

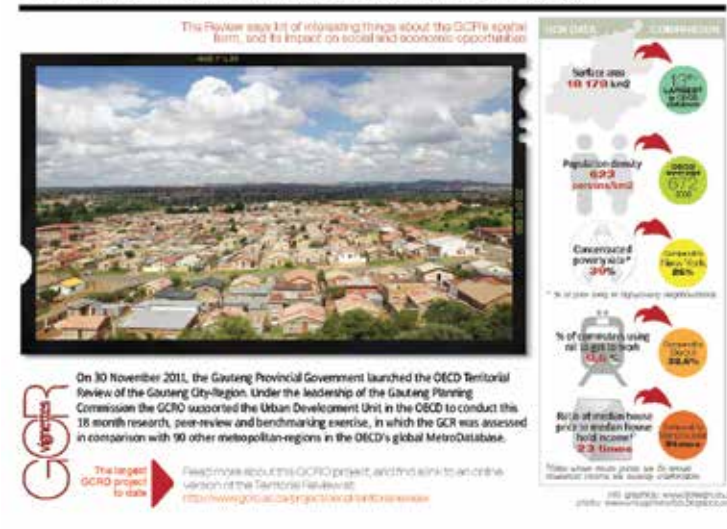


For GCRO, the conclusion of work on the Territorial Review in 2011 represented the culmination of an intensive 18-month research and consultation process involving multiple engagements between the various key stakeholders – GCRO, the GPG, the Gauteng Planning Commission (GPC) and the OECD. GCRO worked closely with the OECD throughout 2010 and 2011. The OECD delivered a preliminary draft of recommendations in early December 2010, the first two chapters of the Review in late December 2010 and the third and final chapter in mid-February 2011. This initiated a review process that included Steering Committee members, GPG readers, external quality control specialists and GCRO's own staff. The headline assessment points and key recommendations contained within the draft were also presented to, and discussed by, the GCRO RAC and Heads of GPG Departments.

Over April, May and June 2011, GPC took a strong leadership role in receiving comments from all provincial departments and GCRO



### 05 OECD TERRITORIAL REVIEW of the GCR



assisted in consolidating and summarising the comments received. Such comments were subsequently directed to OECD through GPC. In addition to preparing detailed comments on the draft report, GCRO assisted with providing missing data and information around key gaps.

In June 2011, Graeme Gotz joined a high-level delegation from GPG – headed by the provincial Director General – to the OECD headquarters in Paris, where the province's views on the report's strengths and weaknesses were presented, the Review debated and finally adopted by the OECD Territorial Development Policy Committee. A 'drafting session' also took place in June where the executive summary of assessment and recommendations was carefully discussed and corrected. Following this, GCRO assisted GPC to prepare final comments and corrections on the final draft of the Review report.

The Review was formally published and released in November 2011. A launch event, in partnership with GPC, took place at the Sandton Convention Centre on 30th November 2011. This well-attended event was chaired by David Everatt and addressed by the MEC for Finance, Mandla Nkomfe, speaking on behalf of the Premier, as well as two representatives from the OECD. This event and the publication received considerable press and radio coverage.

A dissemination plan was developed for the distribution of the Review following its formal publication. The dissemination plan has been implemented through the following: a fact sheet on the Review placed in the media and participant packs at the launch; the preparation of an op-ed piece written with the Head of the GPC; the preparation of a Vignette circulated in February 2012; the preparation of a briefing note to MEC Nkomfe on extracted results from the OECD MetroDatabase, which, in turn, has been converted into a GCRO Data Brief; and, finally, a presentation on the Review delivered to a colloquium at Wits in February 2012.

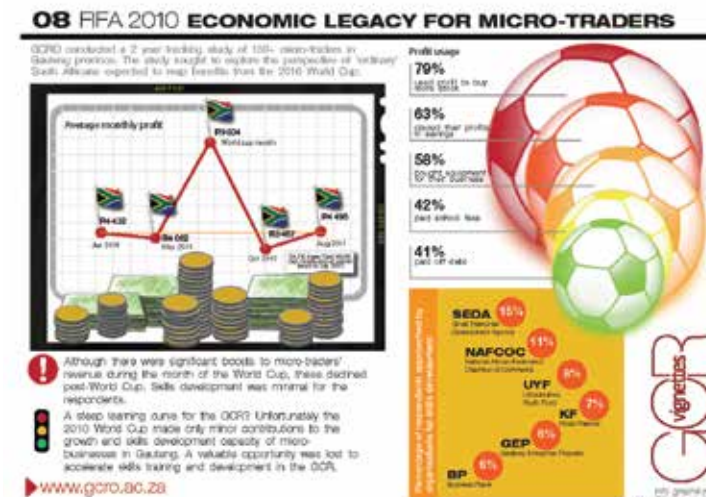
100 black and white copies of the Review were received from OECD for the launch event and 1000 colour copies were subsequently sent by OECD. The consignment was split between GCRO and GPC, with GPC receiving 600. The remaining 400 have been posted out by GCRO to key contacts and stakeholders.

### Promises, expectations and residents' experiences of the 2010 FIFA Soccer World Cup

In theory, mega-events such as the 2010 FIFA World Cup provide host cities with opportunities to present themselves on a global stage, fast-track developments that improve social and economic infrastructure, promote job creation

and improve the quality of life. Assessments of whether mega-events in fact achieve this tend to be dominated by quantitative cost-benefit analyses and descriptive case studies. This longitudinal qualitative ethnographical research examines the impact of the 2010 FIFA World Cup on small and micro-scale traders in Gauteng who had expectations of business prospects improving around the World Cup. GCRO conducted three panel surveys in June 2010, November 2010 and the final one in July 2011.

Topline results from the first and second phases of the research were shared with GCRO Board members and were covered by Radio 702 on the anniversary of the World Cup. The final leg of the panel survey was challenged by the non-



availability of specific respondents who had moved their place of trading. However, we were able to complete the final phase of the survey.

In order to disseminate the findings, GCRO co-hosted a 'Sport and the City: Impacts and effects of Mega-Events on Urban Development' conference, together with the Wits School of Architecture & Planning and the Johannesburg Development Agency (JDA) on 26 and 27 March 2012. Given that the Wits School of Architecture and Planning had completed a longitudinal study on the impact of the World Cup (and associated infrastructure delivery) on people living near the stadia, the conference represented a remarkable collaborative opportunity for GCRO and the Wits School of Architecture & Planning.

The 'Sport and the City' conference was opened by Dr. Danny Jordaan, who is now special advisor to the 2014 FIFA World Cup in Brazil. There were many international participants, including those from the United Kingdom (preparing for the Olympics), Brazil (next World Cup and Olympics), Germany (who track FIFA) and others. David Everatt and Annsilla Nyar presented papers on both days of the conference, which are set to be published in journal publication form over the next two years in time for the 2014 FIFA World Cup.

## Conceptualising the Gauteng City-Region

A conceptual starting point for GCRO is that the broader region of towns and cities needs to be thought about as an integrated regional space, which ultimately needs coherent territorial policies to promote economic competitiveness, social cohesion and sustainability. Further research on what constitutes the Gauteng City-Region is required in terms of the theoretical and analytical work on the 'construct' of the GCR – to better define its footprint and the flows of people, goods and services that structure it. Empirical work is also needed to understand the geographies of everyday life of the people who live in the GCR, to better understand how the region's residents conceive of the place in which they live and define their social, economic and political identities in relation to it. Ultimately, the research intends to critically unpack the concept of the city-region and assemble multiple 'footprints' or conceptualisations of the city-region.

Our planning for the research process has evolved over the past year. GCRO plans to produce a set of research outputs to address the deficits in current understandings of the GCR. Our first research product is intended to be an interim product – an 'atlas-style' synthesis on



ways to think about the 'footprints of the GCR', which will be produced in the third quarter of 2012/13. The 'atlas-style' mini-research report will lay a foundation for a Roundtable Discussion which will in turn lead to chapters for a book on *Conceptualising the Gauteng City-Region*. Our work in this regard is enriched by the addition of work currently being undertaken by Alan Mabin to trace the way in which regional thinking has historically featured in planning frameworks for Gauteng (or for the Southern Transvaal or the PWV region as it was previously known). It is envisaged that GCRO will emerge from this research project with a critical and detailed idea of Gauteng as a city-region.

## 2011 Survey of surveys

This is a short project which involves determining exactly how many government satisfaction/quality of life and/or related surveys are being conducted by Gauteng municipalities and government departments. The project builds a case for a more integrated approach to subsequent GCRO quality of life surveys, which through co-investment by all parts of government in the region may become a much larger sample survey, enabling comparative data at much smaller geographic scales and, ideally, with representivity at ward level.









The work draws on insights from a set of facilitated discussion groups conducted in November 2011 with key stakeholders in the GCR which examined the configuration of relationships between the higher education sector and the other key sectors of government, business, civil society and organised labour. The discussion groups succeeded in bringing together a number of HEIs from different parts of the city-region including University of the Witwatersrand (Wits), University of Johannesburg (UJ), University of Pretoria (UP), Tshwane University of Technology (TUT), University of South Africa (UNISA) and Monash University. Discussions focused mainly on the possibilities for synergies amongst the different institutions in order to drive the development trajectory in the city-region. An idea emerging from the discussion was for the need to develop a regional network of different stakeholders in higher education. International best practice examples of successful collaboration between HEIs and the cities and regions in which they are located were discussed, as were the prospects or otherwise of replicating such successful collaborative initiatives in the GCR.

Professor Pundy Pillay from the Wits School of Public and Development Management (P&DM) is working with GCRO in order to finalise the research report. The report includes key reference to the National Strategic Plan 2010-2015 of the Department of Higher Education and Training

(DHET) within a provincial context. Data from the recently-released Gauteng Master Skills Plan prepared by the Gauteng Department of Education (GDE) is also included.

### Governance Barometer

Data and information on development challenges and progress, as well as government performance, is frequently inaccessible and difficult to decipher. This project involves pulling together a range of disparate information sources into a Governance Barometer, which will represent and reflect on key development trends in an easy to digest form. It will be based on existing, but often under-utilized datasets from official and private-sector sources, as well as trend analyses from some of GCRO's own data generation projects. This project was revitalised with the employment of a new GCRO researcher, Darlington Mushongera. Work began on identifying a definitive list of indicators for which the relevant data will be collected. In February 2012, various design options for the Barometer were identified and presented to an internal GCRO forum. A draft of the visual graphic was subsequently produced by an IT developer. Funds have been allocated from the 2012/13 budget in order to develop the final version of the visual graphic in an interactive format.



### Understanding Gauteng's urban space economy

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



In 2011/12, the project involved commissioning of a series of case studies. Various potential authors were identified and approached to write case studies in March and April 2011; however, the project was postponed due to pressures on the Green Strategic Programme and the OECD Review. The project resumed with the development of a project framework which sets out a two-year research agenda. The first phase will see the production of three papers: (1) 'An overview of Gauteng's space economy', (2) 'A history of spatial economic development initiatives by the Gauteng Provincial Government' and (3) 'The Ethiopian Quarter in inner city Johannesburg'. Following



the circulation of a Terms of Reference (ToR) document, a proposal for the Ethiopian Quarter case study was received and a researcher was contracted. The ToR for the 'History of spatial economic initiatives' was also circulated. When completed, the three pieces will lay the foundation for a further set of detailed case studies to be done in the 2012/13 financial year.

### Transitions to a future economy

This project collects multiple perspectives on possible transitions to a future economy. These perspectives offer views on what a future GCR economy might look like and viable routes to this future, considering issues such as the green economy, the youth unemployment crisis, the GCR's place in the unfolding global strategies of major economic powers, the city-region's vulnerability to future economic shocks and the viability of different state-led economic adjustment options to counter negative structural trends. Two key outputs are envisioned for the project: (a) a series of op-ed pieces (similar to those produced by <http://www.project-syndicate.org>); and (b) a series of strategic dialogues between academics, government and key decision-makers. New research capacity in GCRO will invest new energy into the conceptual and analytical form of the project.



## Life and people in the GCR

Understanding quality of life in the GCR



Following on from 2009, GCRO conducted its second large sample Quality of Life Survey in 2011. The second Quality of Life Survey has enabled a wealth of time-series data on key indicators across the two years. We are mindful that this data be rapidly turned into informative and useful analysis of the nature of quality of life in the region in order to inform public debate, government action and more targeted academic enquiry on relevant issues. Over the next year, we intend to follow up the 2011 quality of life survey with government and academic engagements, invite comments from key thinkers and benchmark the results from the two surveys against available comparative data from other city regions to deepen our understanding of quality of life in the GCR.

In late 2011, GCRO commissioned advanced analysis (using Principal Component Analysis) of 2009 QoL indicators from Ms Talita Dalton-Greyling at the University of Johannesburg. Talita has produced a detailed working paper which is intended to be turned into a journal article. She presented draft results of her work at a seminar at GCRO on 21 February 2012, which largely confirmed our own multi-variate Quality of Life analytic approach.



## Non-racialism project with the Ahmed Kathrada Foundation

GCRO worked with the Ahmed Kathrada Foundation (AKF) and, through the AKF, a number of local and international specialists on a research project examining non-racialism in South Africa. The project involved a series of case-studies by local and international authors on the challenges of building a non-racial future. The non-racialism project is the first of a series of similar projects that will roll out over the next few years, focusing on different aspects of the social fabric of the GCR, including nation-building, class and the status of women and youth.

In 2010 GCRO commissioned 18 focus groups, in partnership with the AKF, to hear what South Africans had to say about the state, meaning and future prospects of non-racialism in South Africa. The innovation in this project involved assembling a panel of high-level authors, presenting them with the same primary set of data (i.e., the focus group transcripts) and allowing them free rein to uncover what they thought the data contained. Papers were presented at the AKF Conference – ‘From words to action: the challenges of deepening non-racialism in South Africa’ – held from 12-14 October at Wits University. GCRO co-funded and co-organised the event. David Everatt and Annsilla Nyar presented papers at the conference.

In order to disseminate the research findings, GCRO secured a special edition of the political science journal, *Politikon – the South African Journal of Political Studies*, to be guest edited by David Everatt. Ahmed ‘Kathy’ Kathrada has written the preface to this edition of *Politikon*. Some of the key papers will be published in the journal. It is intended for publication in April 2012 as the first edition of 2012.

Prof Rupert Taylor and David Everatt will co-chair a session on non-racialism in South Africa at the World Congress of the International Political Science Association (IPSA) in Madrid in 2012. Annsilla Nyar will also be presenting the results of her research into race, South African Indian identity and non-racialism at the IPSA conference.

## Sustainability in the GCR

Metabolic flows and infrastructure transitions



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.





A foundation for this project was laid in March 2011, when GCRO funded a *Comparative Dialogue on Sustainable Infrastructure Transitions and Governance*, jointly hosted by the African Centre for Cities (ACC) and the Sustainability Institute (SI) in Stellenbosch. Four GCRO staff participated in this dialogue. The workshop was also attended by the Indian Institute for Human Settlements and the Centre for Sustainable Urban and Regional Futures at the University of Salford, amongst others. Discussions laid a basis for a multi-country, multi-region study into assessing urban metabolism and the challenge of transforming infrastructure for more sustainable resource use.

The idea of a book, *Sustainable Urban Transitions & Governance*, emerged from the comparative workshop. The plan is for the book to be co-edited by GCRO and its Western Cape partners and for GCRO to contribute four chapters to the book. The book is intended for publication in 2012/13. As part of the on-going collaboration between GCRO, the ACC and the SI, a second comparative dialogue workshop is intended to be held in June 2012 in order to reflect on the first draft of the book project and help tease out the practical implications of understanding urban metabolism.

With this project in mind, GCRO hired a new senior researcher, Dr. Josephine Musango, and researcher, Alexis Schäffler. For the modelling

component of this multi-year study, AnyLogic Modelling Software has been identified as software enabling System Dynamics Modelling – an integrated approach to modelling resource flows and their interactions with infrastructure networks and socio-economic factors. In October 2011, our GCRO members attended a 2-day AnyLogic course at the CSIR to develop software and modelling skills for System Dynamics Modelling.

Following the development of a project proposal in August 2011 and a methodological framework in December 2011, the project produced scoping papers detailing the data requirements in four chosen sectors of waste, water, energy and biomass. Following the development and circulation of a TOR document for an external research agency specialising in the waste sector, a successful bidder was appointed in December 2011. GCRO staff took responsibility for the water, energy and biomass studies in consultation with various stakeholders with experience and expertise in the three sectors. The final scoping studies are due for completion in May 2012, after which the focus will turn to the collection, loading and formatting of the required data for modelling metabolic flows in the GCR to understand the infrastructural dynamics of resource choices.



## Green assets and infrastructures

The project analyses the state of our green infrastructure. It asks whether this infrastructure and its services are adequately being recognised as equivalent to those of hard engineering, bulk infrastructure. In addition to assessing how green assets and ecological systems services are being or should be valued, the project includes an analysis of public and private decisions shaping green space.

A project framework for this project was developed in September 2011, setting out a series of academic and policy outputs to be completed over the next three years. These include, inter alia: 'A State of Green Infrastructure Report for Gauteng', 'A framework for valuing ecosystems services in a GCR municipal context', 'An analysis of the GCR as a series of interconnected ecological systems', and work which will contribute to a 'Mock Green Infrastructure plan for the GCR'.

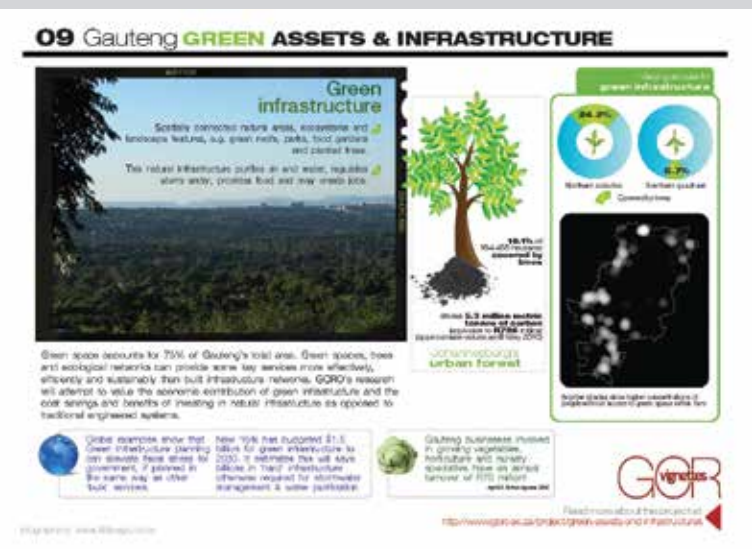
A key component of this project is benchmarking the GCR against other city-regions' green assets and the valuation and planning practices in other parts of the world. In 2011, GCRO hosted Virginia Tech (VT), USA, a global player involved in creating a green infrastructure 'community of practice', with a particular focus on mainstreaming this idea in developing countries. GCRO has subsequently been invited

on a research visit of green infrastructure projects, sites and policy units in the USA, organised by Courtney Kimmel, associate director of global programmes at VT's Natural Resources and Environment Programme. The visit is planned for April 2012.

A starting point is to assess the existing knowledge and data relating to green assets held by official custodians of our ecological networks. A Terms of Reference for a fieldwork agency was circulated in 2011 and, in conjunction with the successful bidder, GCRO collected and collated into a set of data layers the most recent available green space data in Gauteng. Using this data, the project has generated a series of high-resolution maps, including 3D images, of green assets in the GCR, with the help of Tsholo Diphoko, an honours student at Wits. These are key components of the 'State of Green Infrastructure Report' to be launched in February 2013 and will help lay the foundation for valuing ecosystem services in a municipal context in the GCR.

## Intersection between disaster vulnerability and sustainability

This project takes its impetus from the paucity of knowledge on the disaster risks facing the GCR, the resilience of communities and households to a major disaster and how the vulnerability of the region is being exacerbated by factors





such as the design of human settlements and the growing variability of our climate. This project analyses disaster-related vulnerabilities in the GCR and accordingly assesses the resilience of the region in the face of these.

In 2011, a three-year project framework identified research foci for the coming years. Year one investigates the intersection of human settlements on dolomite, the vulnerability of urban areas to floods and air pollution related to the location of mine residue areas and the impact of wood- and coal-fired cooking. Central to this research are the characteristics of low income settlements – in particular the type, location and density of dwelling units – and how these impact on the vulnerability of certain communities. The project also investigates settlement development in the face of flooding, particularly given the effects of climate change on increasing storm severity.

The project has involved a number of multi-stakeholder engagements in both policy and academic arenas. In November 2011, a dolomite policy dialogue was held with national role players such as the Department of Human Settlements, provincial stakeholders and local municipalities as well as planners, geologists, geotechnical specialists and structural engineers. The discussion focused on growing concern about low-income settlement expansion and densification on dolomite in Gauteng. March

2012 saw an information session with ward councillors of wards underlain by dolomite to enhance community understanding of the issues related to settlement and the upgrading of services on dolomitic land.

Project leader Maryna Storie has also engaged with a number of other key stakeholders: the Wits Faculty of Engineering and the Built Environment regarding informal housing investigations; the African Centre for Disaster Studies at North West University; key persons in Carletonville, Johannesburg (including Lenasia) and Ekurhuleni; Prof W Kombe from Ardhi University in Dar es Salaam regarding sustainable land use; the Department of Human Settlements regarding housing delivery in the face of marginalised land; the Wits School of Law to discuss informal settlements and service delivery court cases; and Prof Chiara Sebastiani from the University of Bologna in Italy, regarding the influence of governance on the vulnerability and sustainability of human settlements.

In November 2011, Maryna Storie also met with Margot Rubin of the Wits School of Architecture and Planning and Karen Hetz, consultant at the German Association for International Cooperation (GIZ, formerly DED) and PhD candidate, regarding collaboration on writing two peer reviewed journal articles: one on floods and climate change; the other on low income housing and governance.



In 2011/2012, data were collected on the delineation of Gauteng's flood plains, which are being mapped in 2012, whilst a working paper will reflect on the risks faced by vulnerable communities in the event of severe storms. The next stage of this project is an evaluation of low-lying and level areas where water does not necessarily appear in the form of river floods, but as 'sheet' flooding, or where areas are inundated for long periods of time after heavy rains due to limited infiltration and run-off characteristics of the topography. The results may highlight different approaches to flood plain management. A key question is the intersection between areas underlain by dolomite and flood plains, given the growing risk of dolomitic land affected by increased run-off and ponding of water.

## Space and mobility

### Spatial Change in the GCR

Gauteng confronts the mounting concern that spatial trends may be compounding the effects of apartheid, the possibility that 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 start is to understand the rapid spatial changes that are already occurring, for example, in terms of population growth and changing land use.



This project links to Prof Philip Harrison's NRF chair research to map and model spatial change in Gauteng cities. The project's core output is a series of edited volumes on the city-region around Johannesburg, as a partnership between the NRF Chair in Development Planning and Modelling, the Wits School of Architecture and Planning and GCRO, namely:

1. Johannesburg (with some focus on the near-Johannesburg areas that make up what has been historically called the Witwatersrand).
2. Pretoria and its hinterland.
3. The industrial and mining arc, stretching around Johannesburg from the East Rand, south to Vereeniging-Vanderbijlpark-Sasolburg and west to the mining towns of Carletonville and Westonaria.

The first book in the series on spatial change in the GCR, *Changing Space: Johannesburg within its City-Region*, is being co-edited by Graeme Gotz and Chris Wray from GCRO, and Professors Philip Harrison and Alison Todes from the Wits School of Architecture and Planning. The book is currently in progress and will include contributions from over 30 scholars. Other book chapters being written by GCRO staff for the first of the series include: 'Trends in the Gauteng/Johannesburg space economy' (Graeme Gotz and Alison Todes), 'Changes in the natural landscape' (Maryna Storie), and 'Spatial dimensions of poverty and inequality'





(David Everatt). A commitment was originally made to Wits University Press to deliver a full draft manuscript for review by the end of 2011, but this was revised to be April 2012.

GCRO has also commissioned a paper “Spatial change within the Gauteng City-Region: Land-use/cover mapping, trends and possible impacts”, authored by Brain Mubiwa, under the guidance of Professor Harold Annegarn, drawing on Mubiwa’s PhD work. The authors are currently working on finalising the report.

### 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 on business efficiency and, in-turn, regional competitiveness, as well as the quality of life of residents. For both reasons, it is important to understand the existing flows of traffic across the GCR and to gauge the impact of key transport interventions such as the Freeway Improvement Programme (and associated tolling), Gautrain and BRT. The UJ Departments of Civil Engineering Science and Geography, Environmental Management and Energy Studies, were jointly commissioned to carry out transport research in the GCR, using the 2009 Quality of Life survey as well

as previous transport surveys such as GTS2000 and the 2003 National Household Transport Survey. A contract was finalised in May 2011 and the project is being led by Zach Simpson, a lecturer from the Department of Civil Engineering Science in UJ, and Tracey McKay, Deputy HOD at UJ’s Geography, Environmental Management and Energy Studies. The work is being performed by a group of fourth year UJ Civil Engineering students and supported by third year Geography students. An expert consultant in the field of transportation policy and planning (Prof Christo Venter from the University of Pretoria) was retained for quality control purposes. The final output will be a report that compares current and historical transport surveys and depicts key commuter flow corridors within the GCR.

The first phase of the project was completed in June 2011 following a workshop to review and discuss a revised set of transport questions for the 2011 Quality of Life survey. A report with a revised set of transport questions was submitted and proposals included in the draft 2011 Quality of Life Survey questionnaire. The UJ students also completed a literature review and collected historical transport data from 1975/1985 Transvaal Provincial Administration Roads Department (PWV) transport studies, the 2000 Gauteng Transport study (GTS) and the 2003 National Household Transport Survey. The data formed the basis for a report, entitled *Past*



*and Present Travel Patterns in the GCR*, delivered in November 2011.

In May 2011, GCRO was also approached by Prof Christo Venter for input and budget assistance on a project to study the impact of the Gauteng open-road tolling on drivers. However, funding was subsequently secured from SANRAL and so no GCRO funding was required. Instead, GCRO has moved to commission Prof Venter to develop a report for the Department of Roads and Transport analysing data from the transport sections of the 2011 Quality of Life Survey. A contract was signed with Prof Venter that will produce a set of topline results and then the final report and detailed analysis of transport patterns (including maps and GIS data visualisations) by mid-2012.

The research will be extended in the 2012/2013 financial year, bringing together the reports and analyses from UJ, UP and GCRO research.

*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. There is 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. The research is centrally focused on understanding the dynamics of peripheral areas and movement between rural and urban areas.

This research project is planned to be jointly conducted with the NRF Chair for Development Planning and Modelling in the Wits School of Architecture and Planning, and others with interests in this research area. GCRO will be working with the NRF Chair of Development Planning and Modelling, Prof Phil Harrison, to look at small towns, commercial farming areas and zones of displaced urbanisation on the periphery of the GCR. GCRO also met with Dr. Lulu Gwagwa and with the Director and staff of the Helen Suzman Foundation, who are interested in the same issues. In July 2011, the NRF Chair appointed a part-time staffer in October 2011, co-funded by GCRO, in pursuing this project. A Memorandum of Understanding (MOU) to define the terms of GCRO's financial contribution to the NRF Chair for the purposes of the project was finalised in November 2011. At the end of August 2011, GCRO convened





a discussion with Phil Harrison, some of his researchers and Dr. Sally Peberdy, to clarify the next steps in the interim until dedicated researchers on both sides were in place. A follow-up meeting was held in November 2011, where exploratory work, based on preliminary visits to a range of peripheral areas, was presented by the NRF Chair's team. GCRO's new senior researcher, Dr Sally Peberdy, who started in January 2012, will devote considerable time to this project. A more concrete project plan covering focus areas and activities in 2012 is being finalised between GCRO and the NRF Chair's team.

#### Ad hoc support to government

One of GCRO's key roles is to undertake applied research in support of policy and strategy development in both provincial and local government in the province. This is different from research that we ourselves define as necessary and which is approved by the Board as part of the three-year strategic framework. In response to explicit requests for support, GCRO may either deploy its own capacity or leverage academic resources from the Universities of Johannesburg and the Witwatersrand. As much as this type of research benefits government, it grounds GCRO in the current dilemmas and challenges facing the city-region, thereby helping to keep our applied research programme focused and relevant and helping to build insights and understanding both within

GCRO and the academic community of which we are a part.

Ad hoc support to government is typically requested by the GPC, municipalities or provincial government departments, and then agreed through developing ToR and signing a contract. Alternatively, it is built on a partnership basis, where GCRO is involved in defining the project parameters together with the relevant provincial department or local municipality and in co-funding the project. The research may be qualitative and/or quantitative in nature and be either systematically planned or 'as required' work.

In 2011/12, GCRO undertook a number of projects in response to requests from government for support. The two most important were the conclusion of the Green Strategic Programme and support to the GPC on G2055.

#### Green Strategic Programme

In November 2010, GCRO was tasked, through the Gauteng Provincial Department of Economic Development, to develop a Green Strategic Programme for Gauteng (GSP). In August 2011, the GSP was approved by the Gauteng Executive Council (EXCO). The Green Strategic Programme built on previous work done by GCRO for the Department of Economic Development in late 2009 and early 2010 on a Developmental Green Economy Strategy for Gauteng.



The aim of the GSP is to inform objectives and activities of departments and municipalities in the province, so that all might align their visions and programme commitments around a clear programme to build a city-region economy that is sustainable in the full sense of the word. The GSP sets out clear commitments for a green economy in the 'narrow' sense of the term. However – on the basis that a regional economy that continues current patterns of unsustainable resource use will not be able to avoid future crises – it also proposes actions and interventions in such areas as air quality, transport, energy and others.

The programme was developed through two phases of research and consultation from January to June 2011. The previous financial year saw the first phase of work, which involved researching and summarizing all relevant policies and strategies into nine sector reports. The more important second phase of the work fell into the 2011/12 financial year. In this phase of the process, the analysis in the Sector Reports was checked with provincial and local government during a workshop on 20 May 2011, and thereafter a new set of targets and activities were distilled into nine Programme Statements that provide the substantive policy commitments of the GSP. GCRO's final draft of the GSP was submitted to the Department of Economic Development on 15 June 2011. DED then took the work through a set of technical and

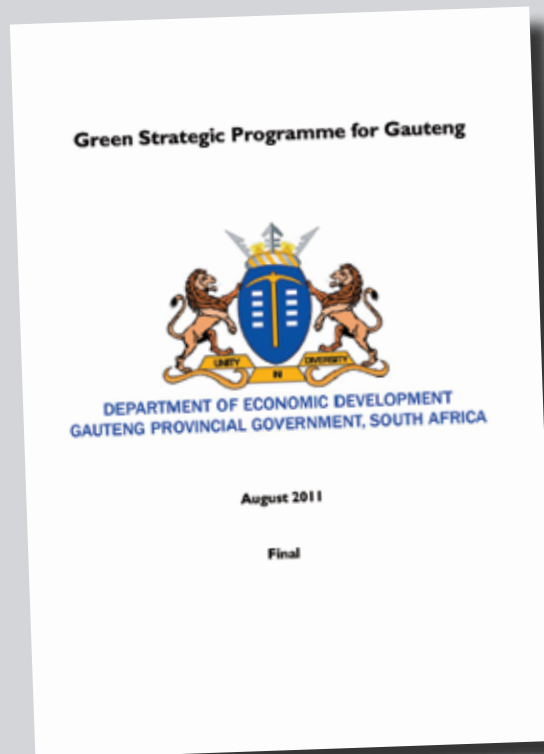
political committees, and refined the document on the basis of comments received from all provincial departments. An implementation road-map, clarifying the steps for giving effect to the proposed Programme, was also prepared by the Department.

GCRO's work on the Green Strategic Programme led to a number of requests from stakeholders for GCRO to share insights that may be relevant to other strategic planning processes. For example:

- On 30 May 2011, Graeme Gotz and Alexis Schäffler delivered a presentation on 'Gauteng's green economy strategy', to a conference organised by the national Department of Economic Development, as part of a panel on 'The Green Economy: case studies of technology developments in South Africa';
- On 18 October 2011, GCRO did a presentation on the GSP to the 2011 Grasslands Partners Forum, the theme for which is 'Biodiversity: Powering the Green Economy', organised by the South African National Biodiversity Institute (SANBI);
- On 16 November 2011, Alexis Schäffler, Graeme Gotz and Josephine Musongo presented aspects of the GSP to the SACN, DBSA Infrastructure Dialogues, Infrastructure and Greening the Future, as part of a presentation titled, 'Current Research and initiatives for a Green Gauteng City Region'; and







- On 24 January 2012, Graeme Gotz & Alexis Schäffler delivered a presentation on, 'Green Economy Transitions: Gauteng's Green Strategic Programme', to the Nedbank Sustainability Forum.

The GSP process has also been useful for internal GCRO planning processes. The work laid important foundation stones for research that is now being pursued as part of GCRO's three-year strategic plan, notably projects on Metabolic Flows and Infrastructure Transitions, on the Intersection between Sustainability and Vulnerability to Disaster Risks and on Valuing Green Infrastructure and Assets.

### G2055

In late 2011, GCRO was asked by the GPC to provide research support for an emerging long-term development strategy for the city-region, known as G2055. In 2011/12, GCRO's role has involved providing intellectual inputs into working groups convened by the GPC, feeding in research findings on key trends and dynamics from various GCRO projects and acting as an initial sounding board for the strategic analysis as it develops.

Three years ago, in the run-up to the last national and provincial elections in April 2009, the Gauteng Provincial Government did preliminary thinking around a first-ever, long-term development strategy for the province. Long-term strategies had previously been done

by cities in the region but never by the provincial government with a view towards a coherent future vision for the region as a whole.

Background research in the form of some 20 'trend papers' – on everything from the future of the aerospace industry to climate change to the changing spatial structure of the city-region – was combined with expert inputs from consultative workshops and a preliminary draft of a strategic framework was compiled. This strategy work became known as Gauteng 2055, or G2055 for short, with the planning horizon set as the 100-year anniversary of the Freedom Charter.

Last year the Premier of Gauteng, Hon. Nomvula Mokonyane, called for further consultation on the draft and for the strategy to be aligned with thinking emerging from the National Planning Commission (NPC) on a national vision and long-range plan for South Africa. A Gauteng Advisory Council (GAC) of eminent persons representing a range of societal sectors and stakeholders was convened. Its role is to guide the strategy and consultation work needed in the process of finalising G2055.

The GAC has been split into four working groups, focused on the economy, infrastructure, social transformation and governance. These convened for the first time in November, where GCRO staff members allocated to each group summarized key conclusions from both



the NPC's draft national vision released on 11 November, as well as the OECD Territorial Review of the GCR, which has come to be regarded as a key diagnostic input into G2055.

The last quarter of 2011/12 kicked off with a workshop between the GPC and GCRO to look at draft work on a revised G2055 strategic framework. This draft work went through various iterations in the first part of 2012. At various points in the process, GCRO fed in research insights and findings, provided maps and graphs and sourced facts and information for the drafters. GCRO also edited selected sections of the document as it unfolded. By the end of the financial year, a substantial draft of the Discussion Document was available and the launch of the Document and an associated, wide-ranging public participation process was being planned for May 2012. The next year will see GCRO continue to provide research support to the process of formulating this key long-term development strategy that will very likely define the future of the city-region.

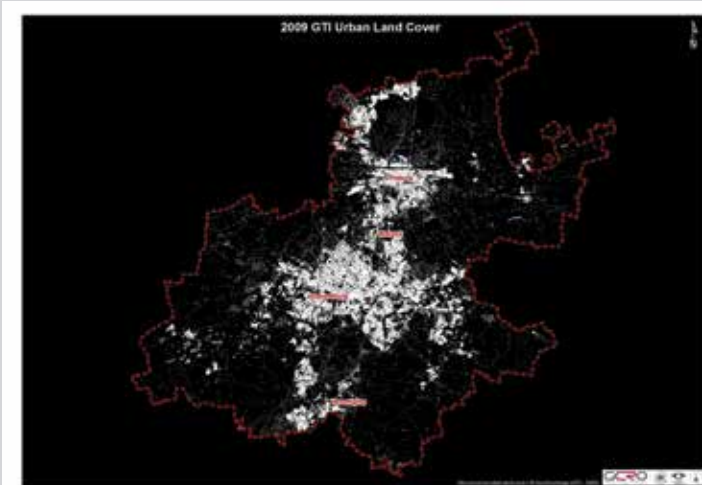
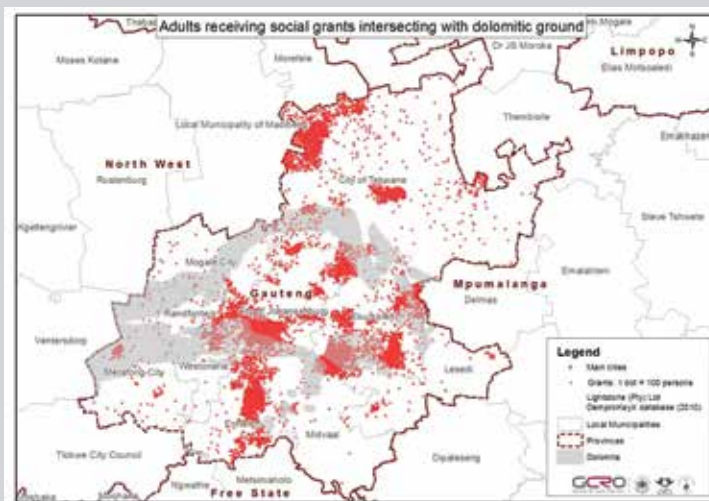
#### Other ad hoc support

A range of other smaller and shorter-term support projects were undertaken in 2011/12. In February 2011, GCRO met with the Head of Department and senior staff of the Gauteng Department of Sports, Arts, Culture and Recreation to discuss an audit of all sport and recreation facilities in Gauteng. A brief review

of an audit conducted in 2002 of GPG sports facilities revealed that the existing data was outdated, duplicated, of varying quality and required a significant amount of work to update to a current map of all the facilities. Gaps in coverage were also identified in the north eastern and south western areas of the province. The results of the review, together with a proposal for using a new source of GIS data to ascertain the location of sports facilities (which data was purchased by GCRO for the project), were presented to the HoD and MEC in July and August 2011. GCRO recommended that the department issue a tender to obtain an updated comprehensive geo-coded database of sports facilities. GCRO also proposed draft tender specifications for use by the department to commission survey expertise for such an audit.

Early in 2011, GCRO was approached by the MEC for Roads & Transport with a view to assisting in the development of a 25-year integrated transport strategy for Gauteng. GCRO expanded the transport questions in the 2011 Quality of Life survey to provide a richer, more detailed, geo-coded dataset for analysis. GCRO also became involved in trying to ensure that three imminent city-level transport surveys (in Johannesburg, Ekurhuleni and Tshwane) all use the same sample frame and the same questions, thus ensuring comparability.





As an input into the City of Johannesburg's Growth and Development Strategy (GDS) process, GCRO prepared a brief note on how the City should strategically think about, and approach, the building of a GCR.

GCRO arranged for Prof Ricky Burdett, Professor of Urban Studies and Director of the LSE: Cities Programme, to do a presentation of his work – *Living in the Endless City* – to a meeting of the Advisory Council of the Gauteng Planning Commission, on 20 September 2011.

GCRO was asked by the GPC to assist with a Mid-Term Review of the 2009-2014 Gauteng Provincial Government term of office. Starting in September 2011 and ending in February 2012, GCRO helped the GPC find and contract a principal author for the Mid-Term Review; wrote an Overview of the GCR section to introduce the Review; and assisted with commissioning a number of external evaluators of key initiatives that GPG wanted to assess as part of the Review.

## Stakeholders and partnerships

### Research Advisory Committee (RAC)

The Research Advisory Committee (RAC) acts as a portal between the governmental and academic work of GCRO. The RAC is comprised of senior academics with some representation from government, the private sector and civil society. Built into GCRO from inception, the

committee is designed to (a) help develop the research agenda; (b) provide a forward-looking perspective on policy issues and research; and (c) help develop relationships between key researchers and counterparts in government.

The RAC continued its valuable role providing input into the work of GCRO during 2011-2012. In early 2012, a review of the membership, structure and role of the RAC was undertaken and a document produced. Following discussions on the RAC and GCRO Board, it was decided that the RAC plays a valuable role in the organisation, but to enable it to retain its original functions in the context of the growth in the work of GCRO, the membership and structure of the RAC will be reviewed and updated in 2012-2013 to facilitate input by the RAC into the research process from conceptualisation to conclusion.

### Internships

Two JCSE interns, Serge Kandu-Lelo and Dibongile Kgaile, were appointed for four months in 2011 to assist with the migration of the GIS viewer to the latest Adobe Flex API. Unfortunately it was not possible to renew their contracts. Tsholofelo Diphoko and Jennifer Paul were employed on a short-term and part-time basis in 2011-2012 to assist with the generation of GIS maps to support research projects.

In early 2012 an internship programme was developed and approved by the GCRO Board



to allow GCRO to have a more structured engagement with interns. The internships provide the holders the opportunity to gain meaningful workplace experience and to develop their skills in line with the research and other work objectives of GCRO. In its first year (2012-2013), it will provide opportunities in the areas of GIS and information systems as well as urban research and analysis to three postgraduates with Masters degrees.

### Outreach and partnerships

The year 2011-2012 saw GCRO continue to develop partnerships and outreach work internationally, nationally and locally with government, research, academic as well as 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 (like the invitation to provide support to the GPC in its G2055 process), meetings have been held with the Gauteng Department of Economic Development, the Gauteng City Region Skills Academy and the Gauteng Provincial Disaster Management Centre to identify points of collaboration and the sharing of information. There has also been on-going engagement with the Gauteng Department of Transport in relation to GCRO's research on commuter patterns. Meetings were also held with representatives of the City of Johannesburg, Mogale City and

Tshwane Municipality and the Smart Cities CityLab in Johannesburg. Nationally, David Everatt attended the launch of the national Cultural Observatory in Pretoria which led to an invitation to GCRO by the national Department of Arts and Culture to participate in the development of tools to undertake cultural audits. Meetings were also held with Statistics South Africa, South African Weather Services and the South African National Space Agency around the sharing of information.

Relationships were established with a number of other learning institutions in South Africa and overseas. Internationally, an on-going relationship was established in 2011-2012 between GCRO and Prof John Fernandez and his team at Massachusetts Institute of Technology (MIT) to share information about researching urban metabolic flows and green infrastructure. Meetings were also held with the Virginia Polytechnic Institute (Virginia Tech.). This led to a research trip to MIT in March/April 2012 by Josephine Musango and Alexis Schäffler to strengthen the engagement. Josephine Musango and Alexis Schäffler were also invited to present their work on green infrastructure to Virginia Tech. on the same trip. Meetings were held with the German Development Institute (regarding low carbon policy-making processes) and the University of Stuttgart (energy research). Relationships were also established with the

LSE Cities Programme



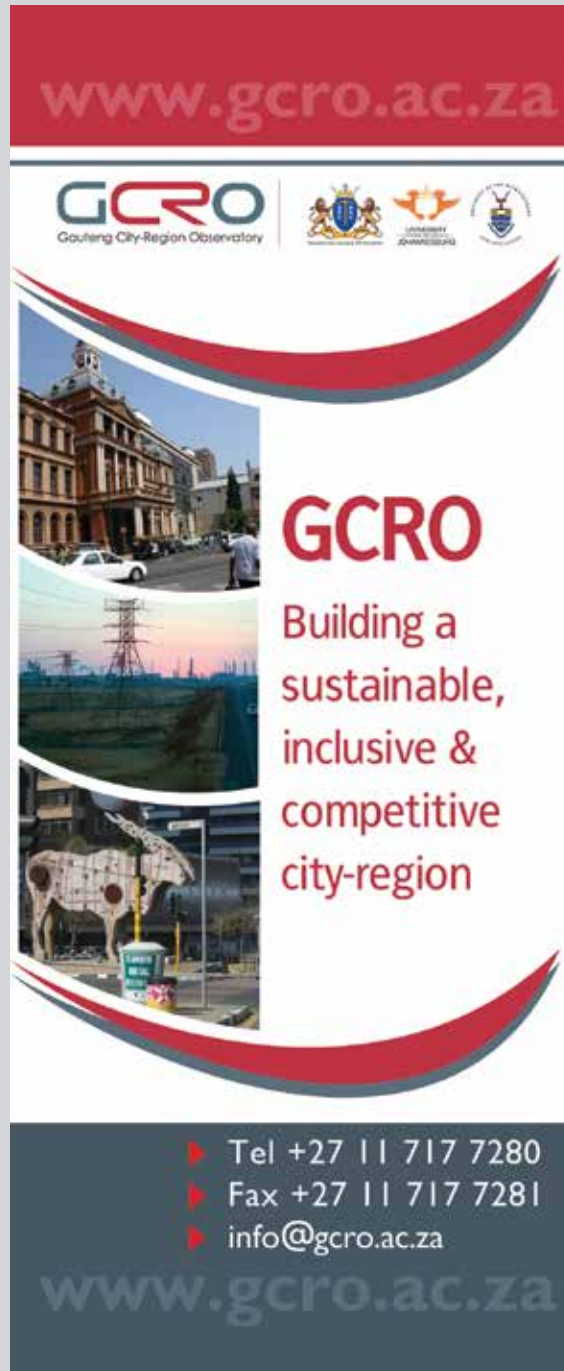
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CITY OF TSHWANE  
IGNITING EXCELLENCE



Research trip to Massachusetts Institute of Technology by Josephine Musango and Alexis Schäffler



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London School of Economics: Cities Programme, Prof Ricky Burdett, and Prof Jenny Robinson of University College London.

In South Africa, relationships have been developed with researchers in the partner institutions of the University of Johannesburg (UJ) and the University of the Witwatersrand (Wits). Joint research projects and publications have been developed with the NRF-SARChI chair team of Prof Phil Harrison in the School of Architecture and Planning at Wits. At Wits, meetings have been held in the area of flood management with the Wits Water Research Group sustainability with the Wits Global Change and Sustainability Institute; and GCRO has worked with P&DM in the areas of education (Prof Pundy Pillay) and green economy (Prof Ivor Sarakinsky). In the area of energy, meetings were held with the Sustainable Energy Technology and Research Centre (SeTAR) at UJ. Relationships were also established with Prof Hennie Stoffberg of the University of Pretoria around the work of GCRO on green infrastructure, ecosystem service valuations and assessing biomass flows in the GCR. GCRO has maintained its relationships with the African Centre for Cities at the University of Cape Town.

Relationships have also been developed with non-governmental and other organisations. These include the CSIR (environmental sustainability and metabolic flows), the Grasslands Urban Task Team of the South African

National Biodiversity Institute, the Gauteng Dolomite Working Group and the Council for Geoscience. Echoing the social research work of GCRO, relationships have been established with the Mapungubwe Institute (MISTRA), the Consortium for Refugees and Migrants in South Africa (CORMSA) and Lawyers for Human Rights. In the private sector, meetings were held with Bain Consulting.

### Workshops, conferences & seminars

As noted elsewhere, in 2011-2012 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 University. Members of staff take an active role in the seminars. Staff were also invited to participate in a variety of other forums internationally and locally. David Everatt and Graeme Gotz participated in a meeting supported by the India, Brazil and South Africa co-operation programme, organised by the African Centre for the Cities and co-sponsored by GCRO, to explore possible comparative research. GCRO staff were also invited to participate in workshops and seminars organised by the South African Cities Network, the Public Administration Research Institute, the African Centre for Migration Studies, Finmark Trust and others. The challenge is to balance requests for participation with getting our project work completed on time.



### 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 (University of Cape Town); Development Bank of Southern Africa (DBSA) Research Committee; DBSA Editorial Committee of the DBSA 'Infrastructure Barometer'; CLEAR Initiative (P&DM, Wits) Management Committee; representative of GCRO on the working group to develop a 'Cities Institute' at Wits.
- Sally Peberdy: African Migration and Development Policy Centre (AMADPOC) Advisory Board, Nairobi, Kenya.
- Maryna Storie: Disaster Management Institute of South Africa (DMISA) Tshwane Regional Chairperson; DMISA National Councillor; member ISO SABS Technical Standards Committee (223) on National Disaster Management; Disaster Management Forum representative for the City of Tshwane, City of Johannesburg and Ekurhuleni Metropolitan Municipalities; and GCRO steering committee member on the Mine Residue Areas Policy development project of the Gauteng Department of Agriculture and Rural Development.

### Input into other research processes and media appearances

Members of staff were also approached to provide input into other research processes. Prof David Everatt, for example, was interviewed for a report on innovation in South Africa for the national Department of Science and Technology.


Staff were invited to, and have taken part in, public forums to discuss the work of GCRO. Prof David Everatt was invited to speak on Radio Today to discuss his work on co-ordination and integration in government. He was also jointly interviewed with Moeletsi Mbeki regarding his work on class divisions and voting behaviour in South Africa and was interviewed about his book on non-racialism on the SAfm literature show.

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## GCRO

Building a sustainable, inclusive  
& competitive city-region

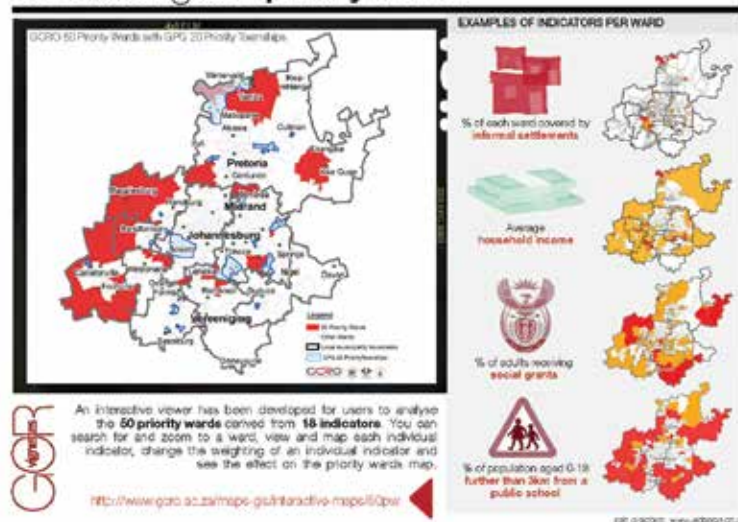


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## 06 Gauteng's 50 priority wards



## Data, data infrastructure, data visualisation, indicators and benchmarks

The focus for this area of GCRO's work is the collection of data, surveys, development of new data sources, mapping and analysis work using Geographic Information Systems (GIS) software and the assembly of information into innovative data products and interactive websites.

Building on the initial success of the GCRO GIS website that was launched in September 2010, the second year of website development concentrated on upgrading the server software (to ArcGIS Server 10), establishing a test and development server and developing a new version of the GIS application. Two interns, based at the Jo'burg Centre for Software Engineering (JCSE), were appointed to migrate the GCRO GIS viewer to the latest Adobe Flex API (Application Programming Interface) in order to provide the latest development environment for the development of new and innovative GIS tools for the GCRO GIS website. The students' focus during the initial two months of their appointment (April and May 2011) was to become familiar with the Flex development environment, with the migration programming stage originally scheduled for June and July 2011. However, due to the complexity of the GIS website programming, this was not achieved

and the JCSE interns' contract was not renewed. ESRI South Africa was appointed in September 2011 to complete the development work. The upgraded GIS viewer went live in December 2011, with new tools that included:

- a screen print option which allows a user to include graphs or legends in their map print;
- an option to download graph data into a .csv (text) file; and
- a Google Street view tool.

Two new GCRO themes were also added to the website. The first is a spatial change theme which highlights the dramatic land cover change that has occurred within Gauteng over the past two decades. The land cover layers were derived from Landsat imagery (dated 1991, 2001 and 2009), as part of Brian Mubiwa's PhD work at the University of Johannesburg. The second theme, which displays environmental layers, was developed following a request and subsequent Memorandum of Understanding (MoU) with the Gauteng Department of Agriculture and Rural Development (GDARD) to host some of the department's data.

- A further GIS website development phase was initiated in late 2011 to develop a 50 priority wards theme as the final output of GCRO's 50 priority wards project. A demo version was presented to GCRO staff in



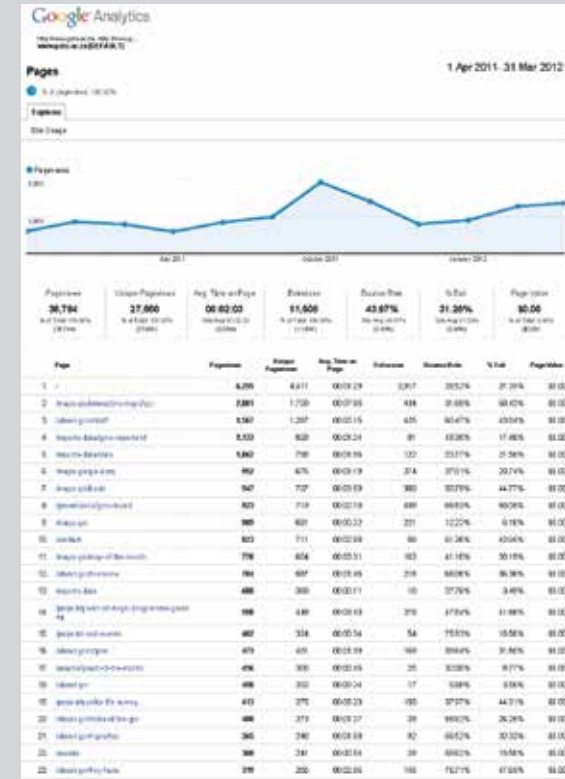
January, with the 50 priority wards viewer launched online in February 2012. The viewer, which is available under the GCRO themes tab on the GCRO GIS website, contains the results of the project in the form of an interactive table and dynamic maps. Users can interact with the 50 priority wards, or select and change indicator weightings, as well as map, print and export details of individual indicators or selected sets of indicators. The 50 priority wards theme was well received with comments from users such as, "This is how good research should be done. Very, very nice...", and "...it is nice to be able to change weightings of indicators yourself...".

- Use of the GCRO GIS website has significantly increased during the year from an average of 189 visits in April 2011 to 561 visits in March 2012, according to statistics provided by Google Analytics.
- GCRO is also interested in investigating new internet and mobile technologies that will provide innovative ways to connect government and citizens more effectively. As part of this endeavour, a project entitled 'Community facilities mobile mapping application' was submitted to the Electrical and Information Engineering Department at the University of the Witwatersrand. It was accepted by two Information

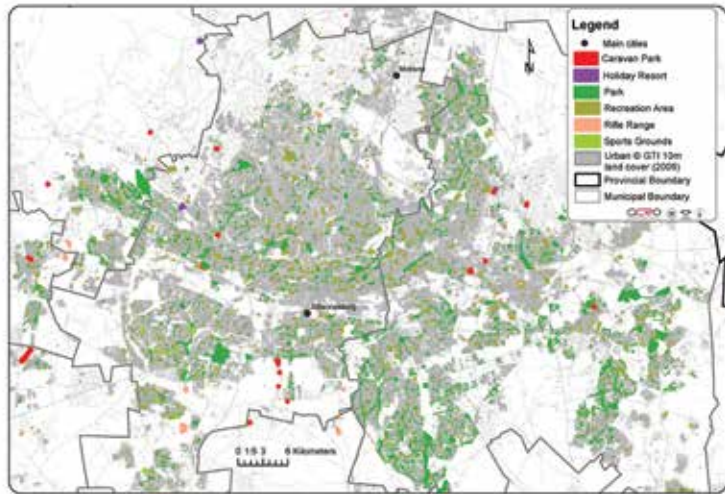
Engineering students as part of their fourth year engineering project work. The project aimed to establish the feasibility of a mobile application to provide a list of, and directions to, government community facilities in the vicinity of the citizen making the request from a cell phone. Work commenced in July 2011 and the students met with GCRO in September to review the application and web mapping data. The mobile application, accessible by any Android cell phone, generates a list of all People's Centres in the City of Jo'burg, within 5km of the user's current position and provides directions to the facility selected by the user. The system was demonstrated by the students at the Wits Electrical and Information Engineering fourth year student projects Open Day on 24 October 2011.

GCRO continues to negotiate access to, acquire and hold GIS and statistical data from a variety of private and public sector sources. The data are utilised within a number of GCRO projects and are freely accessible to students and lecturers from Wits and UJ on request. New data obtained from private data providers include:

- Growth Indicator – development initiatives from GeoTerraImage (GTI): a spatial dataset illustrating submitted, refused and approved zoning applications, and indicates







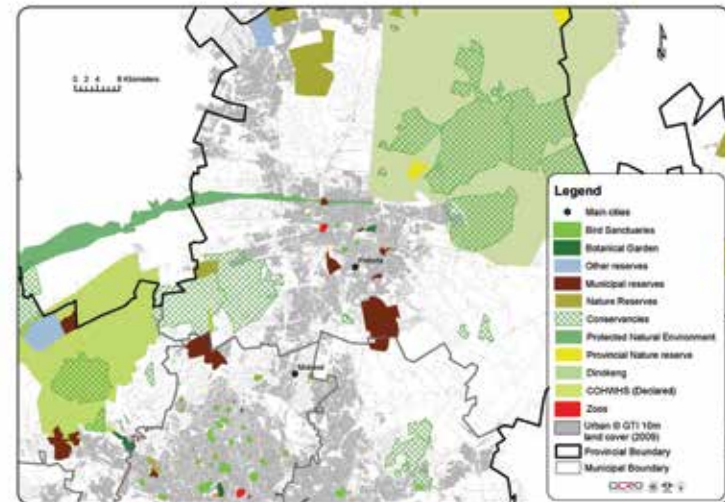
where rezoning of existing cadastre and township developments on farm portions and agricultural holdings took place in Gauteng between 2005 and 2010.

- Growth Indicator – demography from GTI: based on the official 2001 StatsSA national census, demographic statistics (such as gender, age, race and total population) are associated with each residential dwelling point to provide a fine scale analysis of the demographic situation across the central urban spine of the province. An indication of the estimated 2010 demographic population through demographic analysis and forecasting by Afriscope is provided in this dataset.
- Suburbs from Afrigis: an up to date GIS layer of all suburbs in Gauteng, purchased specifically for the GCRO 2011 Quality of Life (QoL) survey migration and transport questions.
- Gated communities from Afrigis: the latest version with significant updates of residential enclosures.

Public data obtained by GCRO during 2011/2012 include:

- Conservation plan data, Agricultural hubs and Agricultural Census data, Mine residue areas and Air quality zones from GDARD

- Selected Census 2001 statistics according to the latest 2011 Gauteng ward boundaries
- Green spaces in Gauteng. During late 2011 and early 2012, GCRO contracted EcoGIS under the Green Assets and Infrastructure project to collect a variety of green spaces data layers and features reflecting the different categories of open spaces in Gauteng. The data was provided by organisations such as the South African National Biodiversity Institute (SANBI) and GDARD, as well as all the municipalities in Gauteng, and collated into data categories that include conservation areas, protected areas, parks, open spaces etc.
- Selected 50-, 100-year indicative and 200-year flood lines as well as flood hot spots and flood danger zones were collected for areas in Gauteng. The areas that are covered include City of Tshwane (excluding the newly added area of Metsweding), City of Johannesburg, Ekurhuleni Metropolitan Municipality and areas on the West Rand. This was presented in the GCRO map of the month for February 2012.
- Land cover datasets from 1991, 2001 and 2009, from Brian Mubiwa's PhD work on generating land cover change from 1991-2009 satellite imagery
- 2010 SPOT5 imagery



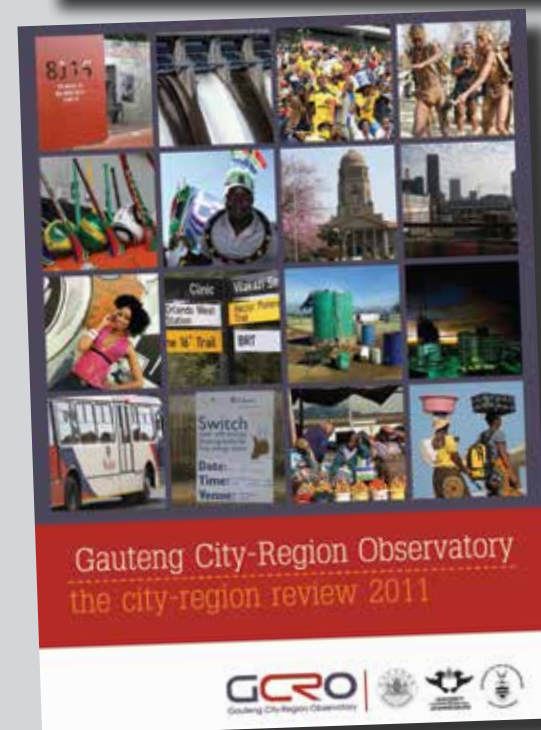


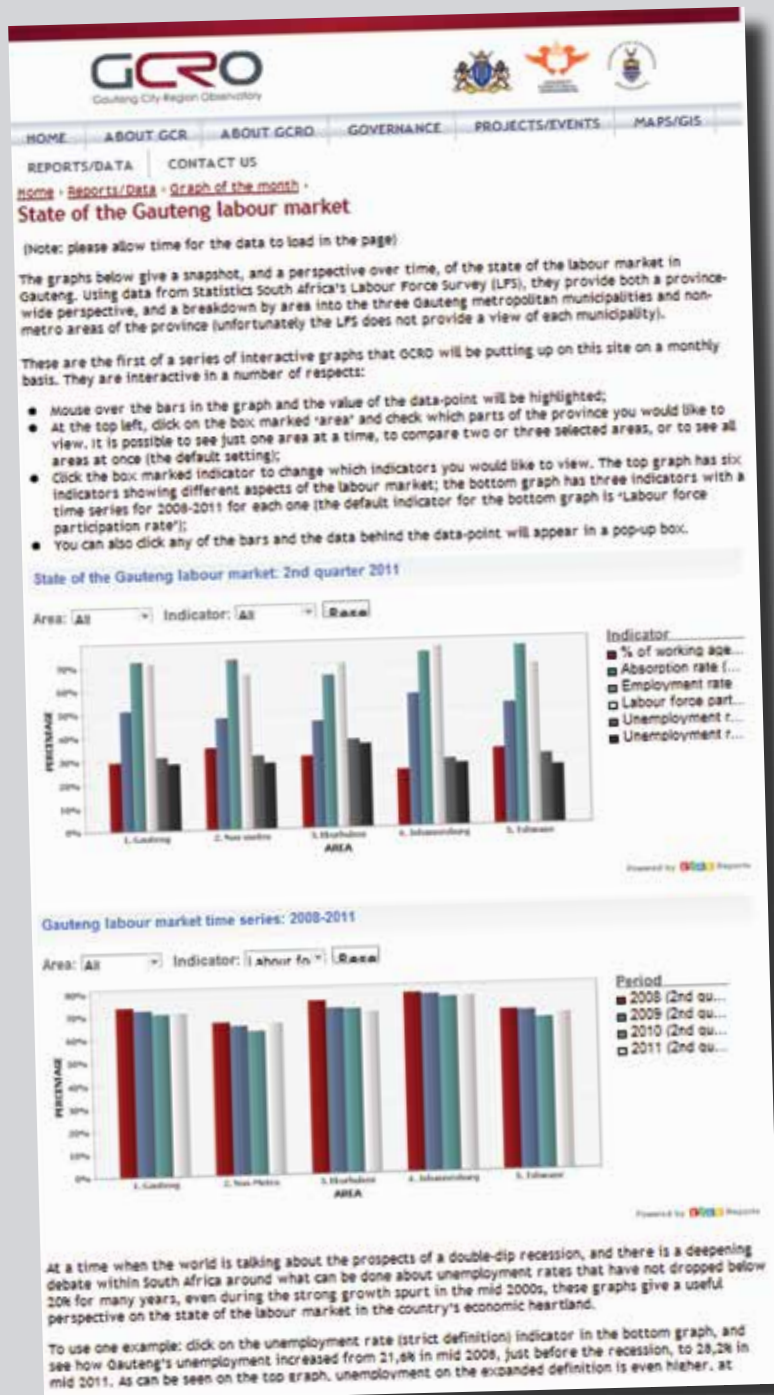
- Eskom Spot Building Count (SBC) and dense informal polygons, 2009 and 2010 versions

A key focus area for GCRO is the generation of primary data for the GCR. In 2009, GCRO commissioned a 6 600 Quality of Life (QoL) sample survey to measure the quality of life, socio-economic circumstances, attitudes to service delivery, psycho-social attitudes, value-base and other characteristics of the GCR. 2011 saw a second QoL survey being undertaken, this time with 16 729 sample points across Gauteng. A highly competitive tender process was undertaken during June 2011, eventually awarding the fieldwork contract for the survey to DataWorld. In July 2011, GCRO finalised the design of a revised questionnaire that balanced time-series data from the 2009 QoL survey with new data informing the projects in GCRO's 3-year Strategic Framework. GCRO also guided the sample frame construction and drawing of the sample for the survey, training of the fieldworkers, printing of the questionnaires and other preparatory work which culminated in the fieldwork starting in mid-August. A separate company was hired to undertake back-checking to ensure quality, and the back-check teams were in field throughout the fieldwork process. The contract with DataWorld initially provided for a sample of 15 000 respondents to be surveyed and it was intended that this be completed by September. However, the sample proved too

large for fieldwork to be completed before Census 2011 and fieldwork continued until December with 16 729 successful interviews. The 2011 wards were used as the primary sampling units, with 507 out of a possible 508 wards sampled in Gauteng – the exception being a ward in Midvaal where access was impossible. The final cleaned dataset, banner books (which provide cross-tabulations of questions, demographics and municipalities) and reports on the sampling, fieldwork and weighting approach were delivered by the end of February 2012. An html-based online cross-tabulation facility for selected indicators is being developed and will be made publicly accessible via the GCRO website by mid-2012. The SPSS data is also available on request from GCRO for research/non-financial gain purposes.

The data acquired and generated by GCRO have provided useful input into the indicators and benchmarks project. The aim of this project was to develop key indicators with which to measure the performance, development progress and 'competitiveness' of the GCR and benchmark it against city-regions elsewhere in the world, while exploring options for indicators that allow worthwhile international benchmarking and tell GCRO's own story. While indicators and benchmarks remain a core part of GCRO's daily work, cutting across all projects, one of GCRO's new researchers, Darlington Mushongera,





has taken responsibility for specific outputs developed as part of this project, namely: Data Briefs, Vignettes and the 'graph of the month':

1. A summary of key results from the 2010 General Household Survey (GHS) and changes from the 2009 GHS results was circulated as GCRO's Data Brief No. 1 of 2011 "Summary findings from the 2010 GHS Survey", first to members of the GCRO Board and then to a wider audience on GCRO's mailing list. The Data Brief was also posted on the GCRO website. Data collected during GCRO's 2009 analysis of city and city-regions' responses to the global economic crisis has also been updated. This 'anatomy of the crisis' data has been analysed and a draft of a second Data Brief has been finalised and will be published soon.
2. In late September 2011, GCRO released the first of a series of 'Vignettes' – brief 'slices of information' on aspects of life in the GCR – circulated via electronic mailshot to a database of recipients. The first Vignette presented a number of 'green statistics', covering waste and emissions outputs in the province. A second Vignette was prepared on the distribution of higher education institutions in the GCR, to coincide with discussion groups that took place in mid-November related to GCRO's research on higher education in the GCR. A third

Vignette, on Gross Domestic Product (GDP) Regional data that is released annually by StatsSA, was circulated in late November. A fourth Vignette, also serving as GCRO's end of year message for 2011, was circulated in mid-December and presented data from the 2009 QoL Survey on religious organisation and civil society participation, and the impact this has on quality of life and marginalisation. A fifth Vignette, on selected results from the OECD Territorial Review, was circulated in early February 2012. A sixth Vignette, on GCRO's new 50 priority wards interactive GIS viewer, was issued in early March.

3. Another monthly output is in the form of a 'map of the month'. Each map of the month aims to provide a unique spatial perspective of administrative, economic, social or physical aspects of the Gauteng province or selected areas in the province.
4. In late October 2011, GCRO released its first interactive graph of the month, on the results from the 2011 second quarter Labour Force Survey. The interactive graphs allow for multiple indicators to be viewed on the same online graph, changing at the click of a mouse. This enables easy comparisons across time, municipalities, etc. In February 2012, a second graph of the month on municipal financial data for the period 2006-2011 was released.



Each of these products is now a regular GCRO output that builds on the multi-media State of the Gauteng City-Region review that was launched on 17 October 2011. This 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. It is intended as both an information base and a platform for debate for all stakeholders in the region – government, business, academics and residents – around how to build on the region's advantages and address its challenges, including rapid urbanisation and migration, poverty and unequal distribution of wealth. The review has been made available in multiple formats: in the form of an interactive resource that can be accessed online (<http://www.gcro.ac.za/gcr/review/2011/home.html>) or in the form of a DVD. The review consists of image- and map-rich representations of the considerable datasets and information GCRO has collected and produced on the GCR, such as the 2009 QoL survey and the OECD Territorial Review.

To communicate the data and analysis in an interesting and appealing way, the information was divided into a number of theme areas, which include: quality of life, government & governance, migration and mobility, marginalisation, society, environment, living circumstances and the economy. The 'afropolitan'

section takes users to a snapshot of images, as well as to observations about what people love about the city-region, and is intended to be a fun, visually appealing look into the vibrancy and diversity that characterise the region. A printed version of the report is also available. Work will begin in mid-2012 on the second State of the GCR review, to be launched in mid-2013.





## 05

# Academic contribution & visitor series

## SAPSE Publications

Academic and other publications, particularly those appearing in peer reviewed journals, continue to be vital for GCRO, in order to push our research to reach (and even exceed) international standards. While some publications still reflect on what the staff have been doing prior to joining GCRO, the 2011/2012 marked an exciting time where some research outputs were based on the data gathered in the first few years of our existence. This includes outputs on non-racialism in South Africa, appearing in the Special Edition of *Politikon: South African Journal of Political Studies*, in which David Everatt once again served as a guest editor. The Special Edition was based on GCRO's work undertaken in partnership with Ahmed Kathrada Foundation.

Another key highlight is the rise in the number of peer reviewed publications, books and reviewed book chapters, both published and forthcoming (see table below). Some of the peer reviewed publications appeared (or are forthcoming) in

high impact factor journals such as *Ecological Economics* (2.754) and *Energy* (3.563).

Breakdown of SAPSE publications by category			
Category	Published	Forthcoming	Total
Peer reviewed journals	3	5	8
Books, book chapters & reviews	3	1	4
Conference proceedings	2	0	2
Other	0	2	2
<b>TOTAL</b>	<b>8</b>	<b>8</b>	<b>16</b>

The specific published works for 2011/2012, both published and forthcoming, are as follows:

## Articles in peer reviewed journals

- Storie M. (2011), 'Utilising disaster risk management as a sustainable spatial development planning tool'. *Journal of the Disaster Management Institute of South Africa* 7 (September): 6-10.

- Musango JK, Brent AC, Amigun B, Pretorius L & Müller, H. (2011), 'Technology sustainability assessment of biodiesel development in South Africa: A system dynamics approach'. *Energy* 36(12): 6992-6940.
- Musango JK, Amigun B & Brent AC. (2011), 'Sustainable electricity generation technologies in South Africa: Initiatives, challenges and policy implications'. *Energy and Environment Research* 1(1):124-138.
- Everatt D. (forthcoming 2012), Guest editor of Special Edition of *Politikon: Non-racialism in South Africa*, *Politikon* 39(1), April 2012.
- Everatt D. (forthcoming 2012), 'Non-racialism in South Africa: status and prospects' in *Politikon* 39(1), April 2012.
- Nyar A. (forthcoming 2012), 'Some new perspectives on South African Indians and "non-racialism": Findings from the AKF Non-racialism Focus Group Data"', *Politikon*, 39(1), April 2012.
- Schäffler A & Swilling M. (forthcoming 2012), 'Valuing green infrastructure in an urban environment under pressure – the Johannesburg case', *Ecological Economics* (Special edition to be published in 2012).
- Wray C & Van Olst R. (forthcoming 2012), 'Enabling g-government in the Gauteng City-Region', *African Journal of Information and Communication* (Special edition on e-governance to be published in 2012).

### Books, book chapters and reviews

- Everatt D. (2011), 'Class formation and rising inequality in South Africa: What does this mean for future voting patterns?', In: Mbeki M. (Ed.) *Advocates of Change: How to Overcome Africa's Challenges*, MacMillan, Johannesburg.
- Amigun B, Kaggwa M, Musango JK & Stafford W. (2011), 'Africa's technology options for renewable energy production and distribution', In: Simelane T. & Abdel-Rahman (Eds.) *Energy Transition in Africa*, pp. 143-171, ISBN 978-0-7983-0294-4
- Everatt D. (2011), 'In remembrance of things past?', book review of *Africa South: Viewpoints, 1956-1961*, In: Daymond MJ & Sandwith C. (Eds.) University of KwaZulu-Natal Press, Durban.
- Everatt D. (forthcoming 2012), 'Ring of fire or (commentator's) puff of smoke? Youth in Gauteng', In: Helve *et al* (Ed.s) *Youth and youth transitions*, Tufnell Press, London.

### Conference proceedings

- Wray C & van Olst R. (2011), 'Maximising user acceptance as the underlying strategy for the development of an interactive website for South Africa's citizens', published in *IEEE Africon 2011 Conference Proceedings*, Zambia, 13-15 September 2011. (ISBN 978-1-61284-991-1).
- Wray C. (2011), 'Developing a Web 2.0 GIS website for the Gauteng City-Region', published

in Proceedings of the 13th annual conference on *World Wide Web applications*, Johannesburg, 14-16 September 2011. (ISBN 978-0-620-51918-2).

### Others

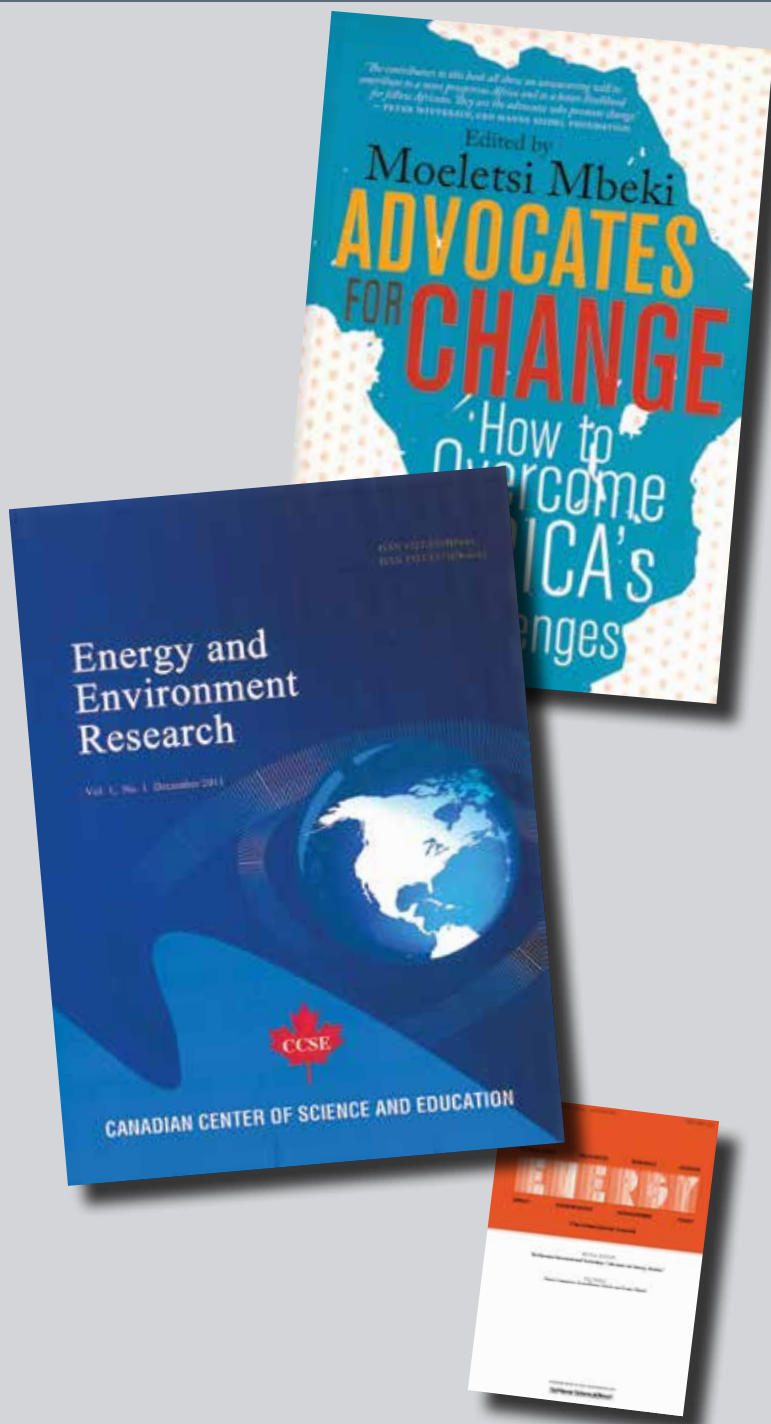
- Wray C. (forthcoming 2012), 'Promoting g-government in the Gauteng City-Region' *PositionIT, March*, pp. 33-35.
- Schäffler A. (forthcoming 2012), 'Developmental Green Economy Strategy for Gauteng'. In UN-Habitat, *Towards a Green Economy: case studies from around the world* (pending publication).

### GCRO publications

GCRO continues to work on publications series with our own cover, which includes an 'Occasional Paper' series and a 'Provocations' series. In 2011/2012, the second Provocation series focused on R&D and Innovation in Brazil, and has been finalised. This will be launched in 2012/2013, depending on the availability of the author. Other series of working papers that are based on the background reports to the Green Strategic Programme are currently in the pipeline.

### Presentations

GCRO staff are continuously contributing to academic citizenship and scholarship by presenting our work to academic and other audiences on a regular basis. This year, GCRO has stepped up our contribution in this domain, in particular, promoting the policy relevance of



our work. The various presentations undertaken included the following:

- David Everatt, Graeme Gotz, Alexis Schäffler and Maryna Storie (March 2011), 'Overview of GCRO's sustainability work', *Comparative Dialogue on Sustainable Infrastructure Transitions and Governance*, African Centre for Cities (ACC) and the Sustainability Institute, 31 March 2011.
- Chris Wray (April 2011), 'GCRO GIS website development – lessons learnt', *GeoInformation Society of South Africa* (GISSA) AGM, 8 April 2011.
- David Everatt (May 2011), 'The developmental state on the ground: Co-ordination and integration in South African governance' presented at a workshop on *States, Development and Global Governance* at the University of Wisconsin at Madison Law School, May 2011.
- Graeme Gotz and Chris Wray (May 2011), 'The Gauteng City-Region and transportation analysis', preparatory workshop on the Mobility Project with UJ Departments of Civil Engineering Science and Geography, Environmental Management and Energy Studies, 12 May 2011.
- Graeme Gotz and Alexis Schäffler (May 2011), 'Gauteng's green economy strategy', presentation to a conference organised by the national Department of Economic Development, as part of a panel on the 'Green Economy: case studies of technology developments in South Africa', 30 May 2011.
- Graeme Gotz (June 2011), 'Understanding and preserving metropolitan governance', presentation to *Metros: the key to South Africa's Growth Roundtable*, organised by the Municipal Demarcation Board, 9 June 2011.
- David Everatt served on a panel including Deputy Minister Yunus Carrim, Aubrey Matshiqui and others, convened by the Helen Suzman Foundation, to discuss the state and future of local government on the eve of the local government elections.
- Maryna Storie (September 2011), 'Representations of space: a case of karst, community and change in the urban landscape', *ACC/CUBES Cities Conference*, Cape Town, 7-9 September 2011.
- Maryna Storie (September 2011), 'Addressing urban disaster risk and resilience through a green lens', National Disaster Management Institute of South Africa (DMISA) Annual Conference, Somerset West, 13-16 September 2011.
- David Everatt presented a summary of GCRO's work to the winter political school of the tripartite alliance Provincial Executive Committees in September 2011.



- Chris Wray (September 2011), 'Developing a Web 2.0 GIS website for the Gauteng City-Region', 13<sup>th</sup> annual conference on World Wide Web applications, Johannesburg, 14-16 September 2011.
- Annsilla Nyar (October 2011), 'Some new perspectives on 'Indian' South Africans and 'non-racialism': Findings from the AKF/GCRO Focus Groups', Ahmed Kathrada Non-racialism Conference: *Non-racialism in post-apartheid South Africa: Contemporary meanings and relevance*, 13 October 2011.
- Graeme Gotz (October 2011), 'Green economy transitions: Gauteng's Green Strategic Programme', South African National Bio-Diversity Institute (SANBI) Grassland Forum conference on *Powering the Green Economy*, 19 October 2011.
- Maryna Storie successfully presented her PhD proposal to the WITS School of Architecture and Planning and external readers on 3 November 2011.
- Annsilla Nyar (October 2011), 'Inside or Outside the Academy: Examining the Possibilities for a Scholarship of Engagement', University of Fort Hare/Rhodes University/NRF/HSRC/ conference, *Community Engagement: The Changing Role of Higher Education in Development*, 7-10 November 2011.
- Alexis Schäffler, Graeme Gotz and Josephine Musango (November 2011), 'Current Research and initiatives for a Green Gauteng City Region', SACN, DBSA Infrastructure Dialogues, *Infrastructure and Greening the Future*, 16 November 2011.
- Graeme Gotz & Alexis Schäffler, (January 2012), 'Green Economy Transitions: Gauteng's Green Strategic Programme', Nedbank Sustainability Forum, 24 January 2012.
- Graeme Gotz & David Everatt, (February 2012), 'Overview of draft results from the 2011 QoL and the OECD Territorial Review of the Gauteng City Region', *Wits Colloquium on the NPC National Vision*, 7 February 2012.
- Graeme Gotz, (February 2012), 'The Gauteng City-Region and the West Rand', ANC West Rand Lekgotla, 11 February 2012.
- David Everatt presented a paper on 'Ring of fire or puff of (commentator's) smoke? Youth, unemployment and the National Planning Commission' at the second Wits Colloquium on the National Planning Commission report, March 2012.

### Key conferences, seminars and symposia attended by GCRO

As part of the day-to-day intellectual life of the observatory, GCRO staff continue to attend conferences, seminars and symposia on a



regular basis. Some of the key events attended include the following:

- David Everatt, Graeme Gotz, Maryna Storie and Alexis Schäffler attended a 'Comparative Dialogue on Sustainable Infrastructure Transitions and Governance', hosted by the African Centre for Cities (ACC) and the Sustainability Institute in Stellenbosch, from 30 March to 1 April 2011. The workshop included representatives from planning authorities and universities in South Africa, the United Kingdom, Brazil, India and China. It provided the basis for contact between the parties, and collaboration towards a book to be published in 2013/14. GCRO also funded the event.
- Alexis Schäffler attended a conference on the UNEP-SEED initiative to support entrepreneurs for sustainable development in April 2011.
- David Everatt attended a conference on 'States, Development and Global Governance' at the University of Wisconsin Law School, in early May 2011.
- Maryna Storie attended the launch of the GreenIQ Summit of the West Rand District Municipality in May, and communicated details of GPG's Green Strategic Programme to attendees.
- Maryna Storie attended a special lecture by Prof Carlota Perez, Professor of Technology and Development of the Technological University of Tallinn; Research Associate at the Centre for Financial Analysis and Policy/CERF, Judge Business School, University of Cambridge; and Hon. Research Fellow at SPRU University of Sussex. The lecture was entitled 'ICT and 'green' as drivers of full global development: A long term view'.
- Annsilla Nyar attended the launch of the South African Cities Network (SACN) report 'State of South African Cities 2011', on 20-21 April 2011.
- Maryna Storie participated in a seminar of the GeoInformatics Unit at the University of Pretoria, on Spatial Decision Support Systems, in early July 2011.
- Chris Wray attended the 'Launch of the Airport Cities Conference 2013', an event organized by the Ekurhuleni Metropolitan Municipality with a view to defining the city as Africa's Aerotropolis, at the OR Tambo International Airport on 14 July 2011.
- Annsilla Nyar attended the DFID-funded CREATE South Africa (Consortium for Research on Equity, Access and Transitions in Education) Conference, 'Getting to 2025: meeting the twin imperatives of equity and quality in education', on 25-27 July 2011.
- Maryna Storie attended a Census 2011 product development workshop in August 2011.
- Annsilla Nyar attended the 'Women in Community Leadership/Academia Convention' at the School of Hospitality, UJ, 24 August 2011. This convention showcased the contributions of leading women academics at the University of Johannesburg such as Professor Leila Patel (Faculty of Humanities), Dr Erna Bruwer (Faculty of Science), Professor Amanda Dempsey (Faculty of Economic and Financial Sciences), Professor Kim Berman (Faculty of Art, Design and Architecture) and Ms Memoona Mahomed (Faculty of Education).
- David Everatt participated in a round-table on youth development co-ordinated by the Centre for Development & Enterprise.
- Annsilla Nyar attended the Wits University Community Engagement Colloquium: Current Community Practices in South Africa, held on 14 September 2011, at Wits University, Emthonjeni Centre, East Campus. The colloquium featured leading academics and role players in the community engagement field, such as Professor Gerder Bender from the Department of Education at the University of Johannesburg and Dr Jerome Slamet, chairperson of the South African Higher Education Community Engagement Forum (SAHECEF).
- Darlington Mushongera attended an international conference on Foreign Direct

Investment organised by the Mandela Institute at the School of Law, the University of the Witwatersrand, on the 11th of October 2011.

- Alexis Schäffler participated in various events in October 2011 (International Food Security Month), including the Gauteng Food Security Summit and the DBSA's Knowledge Week on Green Infrastructure. She also became a member of the SA Food Lab forum, an interdisciplinary network addressing food security challenges.
- Josephine Musango attended a 'Sustainable energy systems and technologies' workshop held in Cape Town on 7 October 2011. This was an inception meeting for writing a book on renewable energy targeted at decision-makers at municipality level.
- Darlington Mushongera participated in a seminar on Access to Information and Access to Education organised by the Institute of Democracy in South Africa (IDASA) in Pretoria on 8 November 2011.
- Darlington Mushongera attended and participated as Rapporteur at the General Assembly of the Council for the Development of Social Science Research in Africa (CODESRIA) in Rabat Morocco, 5-9 December 2011.
- Josephine Musango and Alexis Schäffler were invited to the South African Green Economy Modelling Technical Workshop

held in Pretoria in January 2012. The workshop was a collaboration between UNEP, the Department of Environmental Affairs, Sustainability Institute, the Millennium Institute, and other key global and local partners to unpack the dynamics of modelling South Africa's transition to a green economy.

- Graeme Gotz attended a two-day workshop organised by Ivan Turok from the HSRC, on behalf of UN-Habitat, on 'Unleashing the Economic Potential of African Cities', 23-24 February 2012.
- Maryna Storie attended a two-day Human Rights Commission workshop on Acid Mine Drainage (AMD) and made contact with the main role players in the AMD debate, in preparation for GCRO's proposed work on this in 2012/13.
- Alexis Schäffler & Josephine Musango attended an Integrated Modelling Workshop at the CSIR on 16 March to establish a platform for modelling economic-energy-water-land-people links in South Africa.

### 'Faces of the City' seminar series

GCRO continues to co-organise the '*Faces of the City: Urban Form, Fabric and Function*' 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 ran from

8 March to 1 November 2011, amounting to 24 presentations, which include among others: Anton Harber – 'Diepsloot' (5 April); Jak Koseff – 'Towards Zero Deprivation: the role of spatial poverty targeting in creating a more inclusive Johannesburg' (12 April); Philip Harrison and Elsona van Huyssteen – 'Sharing an emerging narrative on South Africa's space economy: a perspective from the National Planning Commission' (28 June); Martin Murray & Claire Herbert – 'Building New Cities from Scratch: The Future of Urban Africa' (5 July); Karl von Holdt – 'The post-apartheid bureaucracy: inner dynamics of state weakness' (2 August); Alan Mabin – 'Is this our future (2)? Further learning from São Paulo' (30 August) and Marie Huchzermeyer – 'Book Launch: "Cities with slums" and Tenement Cities"' (1 November).

One key highlight is that GCRO, in partnership with the African Centre for Cities, invited Ricky Burdett, a Professor of Urban Studies and Director of the London School of Economics: Cities Programme. Ricky presented on his new book, *Living in the Endless City*, to a workshop of the Advisory Council of the GPC, and to the 'Faces of the City' seminar series, both on 20 September 2011.

The 'Faces of the City' seminar series will continue in 2012, as agreed by GCRO, the NRF-Chair and CUBES.



### Teaching and supervision

GCRO staff continues to provide teaching and supervision of Masters and Doctoral students in various Universities. The teaching and supervision activities undertaken by the various staff include the following:

- **Chris Wray** presented a lecture on Web GIS to Wits second year geography students in June 2011. He also served as an external examiner for a Wits fourth-year Electrical and Information Engineering project supervised by Prof Rex van Olst.
- **David Everatt** is supervising seven Masters and one Doctoral student at University of Witwatersrand, Johannesburg.
- **Graeme Gotz** delivered four guest lectures on various topics to different academic audiences, which include: 'Metropolitan areas & city regions: Johannesburg & Gauteng', to third year Wits School of Architecture and Planning Students, on 12 April 2011; 'Gauteng City-Region issues and challenges', to third year Wits School of Architecture and Planning Students, on 25 August 2011; and two lectures to the Urban Infrastructure Design and Management Masters Programme at University of Cape Town on 8 March 2011, one on the Phiri Water Case and the other on Johannesburg's Growth Management Strategy.
- **Josephine Musango** served as an external moderator for two Masters degree modules for Stellenbosch University – Renewable Energy Policy and Financing Renewable Energy – in November 2011. She also served as an external examiner for a Masters thesis from the University of Pretoria.
- **Maryna Storie** has been supervising two Masters Students at the University of the Free State, and co-supervising a third one at the University of Johannesburg. She also assisted various Masters students, both at University of Johannesburg and University of Witwatersrand, Johannesburg on their mini-dissertations in the many areas of work that GCRO is involved in.
- **Sally Peberdy** is appointed as an Extraordinary Professor in the Faculty of Arts, University of Western Cape. She is supervising two Masters students at the University of the Western Cape, and co-supervising a third. She served as an external examiner for Masters and PhD theses from the University of Cape Town, University of Johannesburg, UNISA and the University of Witwatersrand.

### Resource centre development

GCRO developed a Resource Centre that holds hard-copy and electronic resources, captured on an MS Access database. The resource centre continues to be filled with materials that are

relevant to GCRO's projects and have a wide readership. At the end of the year 2011/2012, 1187 items were captured and loaded on the database.

### Visitor series

It continues to be the interest of GCRO to secure visiting researchers or practitioners to reflect on, and write up, their work experiences within GCRO offices for a defined period. The last financial year saw GCRO temporarily relocating to PDH while our building was undergoing renovation. GCRO, however, continued with negotiations with various potential high-level researchers in order to secure their visits.

GCRO also initiated internal discussion on other possible modes for the Visitor Series, including targeted bursaries for masters and PhD students, visitors from government, post-docs and international short-term internships. A proposed framework for an internship programme was presented at the December GCRO Board meeting, whereafter it was further developed to clarify roles, responsibilities and remuneration levels of possible interns. An advert for securing interns was prepared and circulated within the two universities in March 2012.

The Visitor Series will be submitted to the Board in time for funding (if supported) to be allocated for the 2012/2013 year.

## Postgraduate degrees achievements

2011/2012 saw two of our staff attaining their post-graduate degrees.

- Chris Wray submitted his Master's dissertation for examination, 'A Web 2.0 GIS g-government website for the Gauteng City-Region'. The dissertation passed with distinction.
- Josephine Musango defended her PhD thesis, 'Technology assessment of renewable energy sustainability in South Africa' on 20 September 2011 at Stellenbosch University.



# GCRO: financial reports



## PRIVATE AND CONFIDENTIAL

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

Dear Sirs

### Agreed upon procedures 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 year ended 31 March 2012.

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 are summarised below:

1. Obtain a projects schedule of income and expenditure of the Institution for the year ended 31 March 2012.
2. Cast the projects schedule for mathematical accuracy.
3. Trace the total income recorded to appropriate source documentation.
4. Select a sample of 10% of the expenses recorded for the year and trace to supporting documentation to ensure the correctness and validity for these expenses.
5. Obtain a general ledger analysis of the Institution from the University of the Witwatersrand for the year ended 31 March 2012 to ensure that the accounting records of the GCRO are in accordance with that of the University of the Witwatersrand and prepare statements of Income and Expenditure and Assets and Liabilities for the year ended 31 March 2012.

We report our findings below:

1. Obtained the schedule of income and expenditure of the institution for the year ended 31 March 2012.
2. Checked the schedule for mathematical accuracy. No exception noted.
3. Traced the total income recorded to the appropriate source documentation. No exceptions noted.
4. Selected a sample of 10% of the expenses recorded for the year and traced to supporting documentation to ensure the correctness and validity of these expenses. No exceptions noted.
5. Obtained a general ledger analysis of the Institution from the University of the Witwatersrand for the year ended 31 March 2012. We ensured that the accounting records of the GCRO are in accordance with that of the University of the Witwatersrand and prepared Statements of Income and Expenditure and Assets and Liabilities for the year ended 31 March 2012 (Annexure A).

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 year ended 31 March 2012.

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.

PricewaterhouseCoopers Inc, 2 Eglin Road, Sunninghill, 2157, Private Bag X36, Sunninghill 2157 South Africa  
T: +27(11) 797 4000, F: +27 (11) 7975800, www.pwc.co.za

Executive: S P Kana (Chief Executive Officer) T P Blandin de Chalain D J Folscher P J Mothibe S Subramoney F Tonelli  
Resident Director in Charge: E R Mackeown  
The Company's principal place of business is at 2 Eglin Road, Sunninghill where a list of directors' names is available for inspection  
Reg. no. 1998/012055/21, VAT reg.no. 4950174682



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 purpose 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 records and items specified above, and does not extend to any financial statements of the Gauteng City Region Observatory, taken as a whole.



M Saboor  
Director  
Chartered Accountant (SA)  
Johannesburg

Date:

12 JUNE 2012

**GAUTENG CITY-REGION OBSERVATORY  
NOTES TO THE STATEMENT OF INCOME AND ASSETS  
AND LIABILITIES AS AT 31 MARCH 2012**

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**1. Unexpended cash**

This represents cash and cash equivalents held by the University of the Witwatersrand.

**2. Investments**

These are funds invested on behalf of the Institution which are administered by the University of the Witwatersrand, Foundation, Comprising

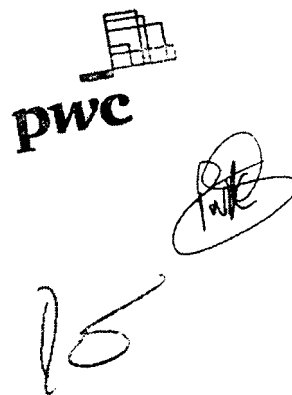
Capital	R4,900,000
Interest	R2,128,997

**3. Income**

Funds received by the project for designated specific purposes arises from contracts, grants, donations and income on specifically purposed endowments. In all cases any such revenue is brought into the income statement in the financial period in which the project is entitled to use the funds and the directors have no discretion over the use of these funds.

**4. Contributions In Kind**

The following contributions in kind were provided by the University of the Witwatersrand and the University of Johannesburg respectively R3,470,396 and R2,073,948 (2011: R3,134,655 and R1,885,408). No agreed upon procedures have been performed on these Contributions In Kind.



The image shows the PwC logo, which consists of a stylized building icon above the letters 'pwc'. Below the logo, there are two handwritten signatures. One signature is a large, bold 'P' followed by a checkmark-like stroke. The other signature is a cursive signature that appears to be 'P. K.' or similar, enclosed in a circular flourish.







## GCRO (Gauteng City-Region Observatory)

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